Final Report on the 2007 Clark County School District Teaching and Learning Conditions Survey

Submitted to the
Clark County School District
and the
Clark County Education Association

By
Barnett Berry
and Ed Fuller
with Alice Williams

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 Walter Rulffes and the Clark County Education Association (CCEA), the Clark County School District conducted a web-based survey of all school-based licensed educators in which they were asked to share their perceptions of the state of teaching and learning conditions in the district. It was the second year in a row in which a survey of this kind was administered, and nearly 9,000 educators (about 48 percent of eligible respondents) completed the survey. The Center for Teaching Quality, a non-profit research-based advocacy organization, has worked closely with the Superintendent's Office and the CCEA to assemble the results and conduct statistical analyses of the relationships between teaching and learning 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.

General Findings

Analyses of the 2007 Clark County Teaching and Learning Conditions Survey reveal several important findings:

- Teachers are committed to teaching, but they seek more support and opportunities to lead.
- Novice teachers face pressures both in and out of school that could impact retention.
- Elementary, middle, and high school educator perceptions of almost every facet of teaching and learning conditions are different.
- Administrators believe that teachers are central to decision-making, but most teachers disagree.
- Teachers in both Empowerment and (initially identified) TLC schools report much more positive teaching and learning conditions.

What We Know About Teacher Stayers, Movers, and Leavers

Teacher responses to survey items were disaggregated and analyzed based on each teacher's declared career intentions (*i.e.*, stay in current school, move to another school within the district, or leave the district or teaching entirely). Key results include the following:

- Teacher movers and leavers are most dissatisfied with school leadership and with their perceived levels of empowerment.
- Financial considerations are the greatest influence on early-career leavers.
- Many novice teachers are not mentored at all, but those who are mentored are more likely to remain in the classroom and in the district.

Domain-Specific Findings

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

- *Leadership*—Though educators perceive overall leadership conditions to be relatively positive, they are unenthusiastic about leaders' efforts to address teachers' concerns about various aspects of teaching and learning conditions.
- *Facilities and Resources*—Most CCSD educators have positive impressions of many aspects of their facilities and resources, but there are major discrepancies in impressions across regions, especially with respect to school safety.
- *Empowerment*—Educator perceptions of their empowerment tell two different stories: impressions of many aspects of school-level educator empowerment are relatively positive, but impressions of classroom-level empowerment lag.
- *Time*—More than half of all educators believe that instructional time is protected from interruptions; however, many think that their class sizes do not ensure adequate time to meet each student's needs, and several even report having to work second jobs (which can hinder their ability to become expert teachers).
- *Professional Development*—Most CCSD educators express positive impressions of the *quality* of professional development, but teachers do not believe they receive *enough* professional development in key areas.

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:

- Teachers who sense that there is an atmosphere of trust and respect at their schools and who do not face the pressures of having to work a second job are more likely to intend to stay at their current schools.

- There is promising statistical evidence that positive teaching and learning conditions are associated with student achievement, but there is also a need for additional and more refined analyses in order to better understand these connections.

Comparing Results from the 2006 and 2007 Surveys

Though changes in perception are for the most part minor, comparisons of survey results for 2006 and 2007 are promising. Respondents indicate more positive conditions for time, facilities and resources, and professional development, and these positive changes in perception are often linked to the degree to which the 2006 survey results were utilized at each school.

Next Steps

Over the last several years, the Clark County School District has made great strides toward improving teaching and learning conditions in each assessed domain: leadership, empowerment, time, professional development, and facilities and resources. There is still work to do, however, and both the research findings and educator feedback suggest the following recommendations:

- Administrators should strive to provide greater time protection for their less experienced teachers, and efforts should be made to provide those teachers and their administrators with new methods for making that possible.

- The differences among educators at different school levels and across different positions in their impressions of professional development strongly suggest that the district should conduct a thorough review or audit of the district's approaches to crafting and providing professional development.

- The district also should conduct a thorough review or audit of its mentoring efforts. Given the enormous mentoring needs of the district and the high cost of providing sound on-the-ground mentoring, it may be prudent to consider some form of virtual mentoring.

- The district 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 district should undertake an extensive case-study research and development effort to uncover exactly how teachers and administrators in targeted schools have improved their teaching and learning conditions—knowledge that cannot be gained via survey data alone.

- The district should work with the State of Nevada to develop teacher, student, and administrator data systems that can track teacher and administrator teaching and learning conditions survey responses longitudinally and link these data with actual teacher turnover figures and robust measures of student achievement.

Clark County is a school district in which administrators, union leaders, and teachers work together to make teaching the profession students deserve. These data-driven recommendations can assist the district as it continues to maximize its investment in the teaching and learning conditions that support educators in their efforts to help every child reach her or his fullest potential.

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 and their connections to teacher retention and student achievement is familiar to many educators and policymakers in Clark County. Nevada is one of the fastest-growing states in the nation, due in no small part to the growth of Clark County itself, where 68 percent (almost 16,000) of the state's 23,000 teachers work. As the fifth-largest school district in the United States, the Clark County School District (CCSD) faces significant teacher recruitment and retention challenges. The district supports well over 300 schools, divided into multiple and diverse regions that encompass the sprawling Las Vegas area. In recent years, CCSD has opened about 11 new schools annually, which, coupled with the district's teacher attrition rate, has put great pressure on the district to find enough qualified teachers. Approximately 35 percent of new hires leave within three years, and state officials estimate that 50 percent leave within five years. In 2006-07 alone, the district hired 2,400 new teachers, the vast majority of whom (80 percent) came from out of state.

The district's teacher retention problems are compounded by its teacher qualification problems. Because demand for teachers—especially core academic teachers and teachers of second language learners—far outstrips supply, district administrators often have to hire out-of-field teachers. According to the District's most recent accountability report, approximately 30 percent of the CCSD core academic teachers[5] are not "highly qualified" according to federal guidelines.[6]

The district's teacher supply problem is compounded by the need to recruit and retain teachers who are prepared to teach an increasingly diverse group of students. For the 2006-2007 school year, the district's student population was comprised of 30 percent Hispanic students, 14 percent African-American students, 9 percent Asian students, and 38 percent white students. Research shows that teachers need more preparation and on-the-job support than ever before in order to be successful with such diverse student populations, especially in terms of learning how to teach second language learners, how to incorporate new assessment tools, and how to capitalize on literacy and mathematics strategies with all learners.[7]

And yet, despite these challenges, CCSD has made noteworthy progress in closing the student achievement gap. In only a few short years, the proportion of schools meeting state Adequate Yearly Progress targets have increased from 75 percent to 86 percent in reading and from 68 percent to 88 percent in mathematics; in 2006-2007, there were even across-the-board increases in first-time pass rates on the state's High School Proficiency Exam.[8]

The district's extraordinary efforts to increase student achievement are also reflected in the fact that the district's visionary leaders have taken on the challenge of rethinking how teachers are supported. In 2006, CCSD, with the help of the Center for Teaching Quality (CTQ), conducted a pilot survey of teaching and learning conditions across the district that garnered more than 8,500 responses. Analyses of those results suggested that there were connections between the presence of positive working conditions, the future employment plans of teachers, and Nevada Criterion Referenced Test (NCRT) results.[9] In the spring of 2007, under the leadership of Superintendent Walter Rulffes and the Clark County Education Association (CCEA), Clark County conducted a second web-based population study of all school-based licensed educators in the district, making the district the first in the nation to conduct a comprehensive, population-wide survey of teacher working conditions for two straight years, and providing an opportunity for district officials to hear from educators about whether or not critical conditions of work were changing in their schools. In a message to the district's teachers, Dr. Rulffes noted:

> One of the most important ingredients to a student's success is the classroom teacher. Providing and maintaining a professional working climate for all our teachers is a top priority in the CCSD. To achieve this goal, it is important for us to better understand your needs.

In a similar vein, CCEA Executive Director John Jasonek states on the Teaching and Learning Conditions Survey website, "Teachers are the ones in the trenches every single day. A survey like this can only help enhance the working climate and help reshape the future of generations of teachers to come."[10]

Indeed, the district and its teachers' union already have responded by making educators central to the process of interest-based problem solving. The Clark County Teaching and Learning Conditions Team—comprised of practicing teachers and retired principals—has been using survey data in its work to engage in meaningful school reforms with 12 schools.

In addition, the district (with support from the Council for a Better Nevada and the CCEA) has designated several schools as Empowerment Schools—schools in which teachers and administrators have more authority to take control of teaching and learning conditions by making decisions about a variety of school components such as campus programs and staffing levels. For example, at Antonello Elementary school, teachers and administrators have leveraged addi-

tional resources to create before- and after-school tutoring programs in reading and math. Teachers at Empowerment schools also have access to expanded professional development offerings, as well as more time to collaborate. Impressed by these efforts, Governor Jim Gibbons and the state's legislature crafted a $60 million Empowerment school plan in the summer of 2007 that supports 29 new Empowerment schools statewide.[11]

All of these issues—extraordinary student enrollment growth, high teacher turnover, teaching vacancies filled by underprepared teachers, relentless efforts to close the student achievement gap, and district leadership that offers administrators and teachers more flexibility to design innovative programs—form the complex backdrop that informs the analyses of the 2007 Teaching and Learning Conditions Survey data presented herein. CTQ is proud to partner with the Clark County School District in its efforts to come to a deeper understanding of the ways in which teaching and learning conditions impact teacher retention and student achievement. By hearing directly from school-based educators who intimately experience and understand the issues surrounding teaching and learning conditions, policymakers have the opportunity to make data-driven policies that will make Clark County schools better places to work and learn. The issues raised in this report have implications for how the nation's fastest-growing school district organizes its schools and supports the profession that makes all others possible.

About the 2007 Survey

For the second year in a row, educators in schools across the district spoke out on teaching and learning conditions by participating in a web-based survey that addressed key conditions related to time, empowerment, school leadership, professional development, and facilities and resources. Thanks to the efforts of the CCEA and the CCSD, nearly 9,000 educators (8,959 out of 18,602, or about 48 percent of eligible respondents) responded to the latest Clark County Teaching and Learning Conditions Survey. Of those respondents, 8,101 were classroom teachers, 153 were principals, 180 were assistant principals, and 505 were education professionals serving in other capacities.[12] More than 240 of the district's schools achieved response rates of 35 percent or higher, and individual reports for those schools are now available online for faculty and staff,[13] providing critical information for making school- and district-level decisions about policies and practices that affect teaching and learning conditions in Clark County (See **Appendix A** for response rates by site).

Because not every school in Clark County met the school-level response rate threshold of 35 percent, it is important to bear in mind the degree to which the respondents reflect the diversity of the entire population of Clark County educators before making statements about how survey responses inform our understanding of teaching and learning conditions across the district. While there are some areas in which the survey respondents as a group appear to be somewhat different from the full complement of Clark County educators, in many respects the survey response group is reflective of Clark County educators as a whole. For example:

- About 77 percent of the survey respondents are female and about 23 percent are male; in Clark County in 2007, about 75 percent of all educators were female and 25 percent male.

- As in most districts, the distribution of teachers in Clark County heavily favors the earlier grades (about 54 percent at the elementary school level, 20 percent at the middle school level, and 22 percent at the high school level), and the proportion of survey respondents

from each school level reflects that distribution: 56 percent, 21 percent, and 19 percent, respectively.

However:

- There appear to be a disproportionate number of very early career and very late career respondents, relative to the general population of CCSD educators: whereas the proportion of educators in CCSD with more than 20 years of experience is about 9 percent, nearly 20 percent of the survey respondents have 20 or more years of experience; also, while only about 2 percent of CCSD educators are first-year teachers, about 8 percent of survey respondents are in their first year.

- Survey respondents are more likely to hold a graduate degree than are educators in the general CCSD education population: 69 percent of survey respondents report holding a degree higher than a bachelor's degree, while only about 62 percent of the entire CCSD educator population holds a graduate degree.

Consequently, readers of this report are encouraged to exercise caution when attributing the results presented herein to the entire population of Clark County 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 Clark County educators in 2007. The first report presented an overview of initial findings based on a preliminary review 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 teaching and learning conditions domains. Additional sections included here for the first time or expanded from the previous report are:

- A more detailed examination of how survey responses differ by teacher career intentions (defined below);
- A review of how survey response patterns differ based on the participation of new teachers in mentoring programs;
- Analyses of how teacher working conditions may influence teacher attrition and student achievement; and
- A comparison of 2006 and 2007 survey responses.

Some of the patterns revealed are intriguing and suggest directions for further analyses in subsequent years.

Comparisons to 2006 Survey Results

In 2006, Clark County School District (CCSD) and the Clark County Education Association (CCEA) forged a unique agreement to use a survey to begin to understand differences in teaching and learning conditions across the district. As in 2007, approximately 48 percent (or about 8500) of the district's 17,341 school-based licensed educators responded to that first survey. Based on an analysis of results from that survey, CTQ recommended investing in support for teachers and principals in utilizing survey data and improving teaching and learning conditions in their schools,[14] and the district responded. A district-sponsored Teaching and Learning Con-

ditions (TLC) Team, comprised of released teachers and retired principals trained by the Federal Mediation and Conciliation Services, has used survey data to engage in interest-based problem solving with schools. The district and union have created incentives and supports (*e.g.*, professional development credits, training, and substitutes) to encourage and allow teachers and administrators the time necessary to begin unpacking what the teaching and learning conditions data mean for improving student learning.

With this 2007 report, CTQ can contribute to these efforts by offering updated data that provide insight into the extent to which teaching and learning conditions have been impacted by these laudable initial efforts. In this final report, we continue the analysis begun in the interim report of examining differences in how Clark County educators in 2006 and 2007 perceive the teaching and learning conditions in which they teach and in which students learn.

Definitions Used in this Report

Educator

Most items 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 (over 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 either:

- **Stayers**, or teachers who intend to continue working at their current school;
- **Movers**, or teachers who intend to continue teaching but who are unsure of where they will teach next or who plan to move to another school within the district; or
- **Leavers**, or teachers who plan to leave CCSD or 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 teaching and learning conditions. The domains addressed in the Clark County Teaching and Learning Conditions Survey include time, facili-

ties 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** refer 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. In this report, two types of empowerment are discussed: empowerment at the individual classroom level (referred to throughout as the *Classroom-Level Strand*) and empowerment at the whole-school level (referred to throughout as the *School-Level Strand*).

- **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

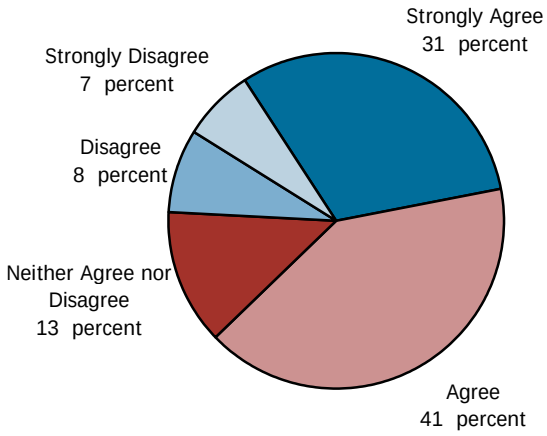
The following findings are updated from the 2007 Clark County Teaching and Learning Conditions Survey report on preliminary data trends (released in August 2007), and they also now include references to issues influenced by the state's specific teacher supply and demand dynamics. We begin with general findings, followed by findings specific to teachers' different career intentions. Next, we address how Clark County teachers with different mentoring and induction experiences view their teaching and learning conditions, followed by brief analyses of the domain-specific responses that inform these findings.

General Findings

1. Teachers are Committed to Teaching, But They Seek More Support and Opportunities to Lead

There is good news in the survey results. Approximately three-quarters (72 percent) of CCSD educators believe that their schools are good place to work and learn, and almost one-third (31 percent) of them 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 domain (Table 1). Eighty-three percent of educators report that faculty are committed to helping every student learn, and 74 percent claim that opportunities are available for parents and the community to contribute to school success. In addition, at least one-half of all educators have positive impressions of all but two aspects of leadership behav-

ior, more than 55 percent of educators agree with all of the professional development items, and responses to questions about the quality of facilities and resources are uniformly strong.

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 have time available to collaborate with their colleagues.	46%	11%	57%
Teachers are allowed to focus on educating students with minimal interruption.	42%	12%	55%
Domain: Facilities and Resources			
Teachers have access to reliable communication technology, including phones, faxes and email.	57%	27%	84%
Teachers and staff work in a school environment that is safe.	50%	25%	75%
Domain: Teacher Empowerment (Classroom-Level Strand)			
Teachers play a large or primary role in:			
Devising teaching techniques	37%	16%	53%
Setting grading and student assessment practices	36%	14%	51%
Domain: Teacher Empowerment (School-Level Strand)			
Parents and community members have opportunities to contribute to students' success.	58%	16%	74%
In this school we take steps to solve problems.	46%	17%	63%
Domain: Leadership			
The faculty are committed to helping every student learn.	51%	32%	83%
Teacher performance evaluations are fair in my school.	46%	24%	70%
Domain: Professional Development			
Professional development has provided you with strategies that you have incorporated into your instructional delivery methods.	58%	12%	70%
Sufficient resources are available to allow teachers to take advantage of professional development activities.	53%	16%	69%

* Some totals are larger due to rounding

On the other hand, there are several areas in which district 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 a majority of questions about time usage, and fewer than 33 percent of educators believe that teachers play a large or primary role in any area of school-level decision-making. Except in the domains of professional development and facilities and resources, there are areas in each domain for which fewer than 50 percent of CCSD educators perceive that positive working conditions are present in their schools or that teachers play a large or primary role in decision-making (Table 2).

Table 2: Survey Responses with the Lowest Levels of Educator Agreement for Selected Domains

	Percent Agreeing:		Both Agree/ Strongly Agree*
	Agree	Strongly Agree	
Domain: Use of Time			
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	31%	7%	38%
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	33%	8%	41%
Domain: Teacher Empowerment (Classroom-Level Strand) Teachers play a large or primary role in:			
Determining the requirements of lesson plans	27%	9%	36%
Selecting instructional materials and resources	28%	10%	38%
Domain: Teacher Empowerment (School-Level Strand) Teachers play a large or primary role in:			
Providing input on how the school budget will be spent	14%	2%	16%
Determining the content of in-service professional development programs	17%	3%	21%
Domain: Leadership			
School leaders consistently address teacher concerns about leadership issues	35%	10%	45%
The school improvement team provides effective leadership at this school.	36%	12%	48%

* Some totals are larger due to rounding

As reported in Table 2, only about 40 percent of educators believe that class sizes are reasonable and that efforts are made to reduce the amount of required administrative paperwork. With respect to decision-making, less than one quarter of all educators believe that teachers are centrally involved in budget decisions (16 percent) or in determining professional development content (21 percent). In fact, when decisions involve *any* type of school-level concern, educators believe that teachers are not particularly likely to play a significant role (only 42 percent of all educators believe that teachers are centrally involved in decision-making about educational issues). In addition to the low percentage of educators who believe that teachers are involved in professional development content and budgeting decisions, only 29 percent report that teachers play a primary or large role in setting student discipline policies, and only 32 percent think that teachers are similarly involved in school improvement planning. CCSD educators' perceptions of teacher empowerment within their own classrooms are more positive, with 53 percent agreeing that teachers play a large or primary role in devising teaching techniques and 51 percent indicating that teachers play a strong role in student assessment practices, but even these marginally positive results are cause for some concern: nearly half of all CCSD teachers express reservations about their ability to play a large role in two key aspects of the teaching profession.

Relevant Domain Analyses: Leadership (p. 27), Facilities and Resources (p. 29), Empowerment (p. 30), Time (p. 32), Professional Development (p. 33)

2. Novice Teachers Face Pressures both In and Out of School that Could Impact Retention

Of the more than 8,100 classroom teacher respondents in 2007, 23 percent have less than four years of teaching experience and 44 percent have more than 10 years of teaching experience.[15]

In this report, we define teachers with less than four years of experience as novice teachers and those with more than 10 years of experience as experienced teachers. One reason for looking specifically at teacher data by experience level—rather than at data by the experience levels of all educators—is that CCSD, like many other districts across the nation, tends to suffer from high attrition rates among its novice teacher. Research on teacher attrition has found that, next to teachers who are eligible for retirement, novice teachers have the highest attrition rates.[16] Once teachers have been employed for five years, their odds of leaving the profession drop considerably.

Overall Findings

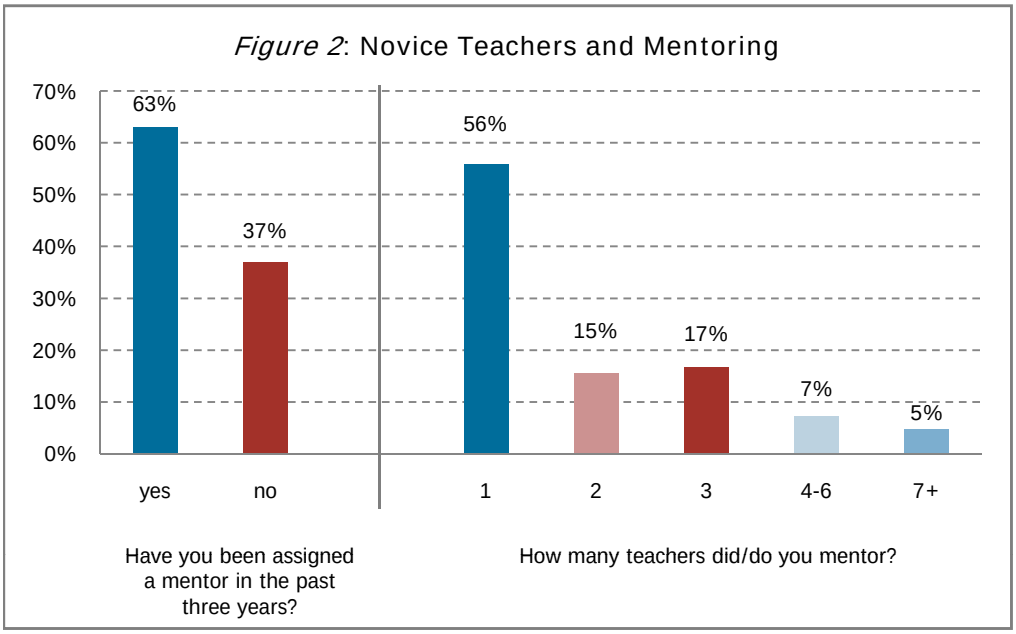
In general, experienced teachers hold more positive views of the teaching and learning conditions in their schools than do novice teachers (on a little more than 60 percent of survey items), but in most cases the differences are not large (less than 8 percentage points). There are a few items, however, for which differences in responses warrant a closer look, and Table 3 summarizes these items.

Table 3: Differences in Perceptions of Novice and Experienced Teachers

	Percent Agreeing by Experience: 1-3 yrs	11+ yrs	Difference in Percentage Points
Domain: Time			
It is necessary for me to work a second job during the regular school year.	48%	38%	10
In a typical year, I spend 11 or more non-paid days beyond my current contract devoted to school and professional responsibilities.	53%	44%	9
Teachers are protected from duties that interfere with their essential role of educating students.	47%	55%	-8
Domain: Facilities & Resources			
Teachers have sufficient access to appropriate instructional materials and resources.	64%	73%	-9
Teachers and staff work in a school environment that is clean and well maintained.	76%	67%	9
Domain: Teacher Empowerment (Classroom- and School-level)			
Teachers play a large or primary role in:			
Selecting instructional materials and resources	31%	40%	-9
Determining the content of in-service professional development programs	14%	22%	-8
Use of 2006 Survey Results			
At this school we utilize results from the 2006 Teaching and Learning Conditions survey.	17%	25%	8

Time

The most critical differences between the perceptions of novice and experienced teachers are in the area of time, where novice teachers appear to experience more in-school and out-of-school pressures than do their veteran peers. In school, for example, fewer novice teachers than experienced teachers agree with the statement, "Teachers are protected from duties that interfere with their essential role of educating students" (47 percent versus 55 percent). One of those duties that may be interfering with their role as educators is mentoring. Despite still being novices themselves, there is a small but notable number of early career teachers in CCSD who are given responsibility for mentoring new teachers. One hundred and forty-seven of the novice teachers surveyed (about one in thirteen) report being mentors, and more than one-fourth of them (37)[17] report being responsible for mentoring multiple novice teachers. At the same time, 37 percent of novice teachers report not having been assigned any mentor at all at any point over the past three years (Figure 2).



Novice teachers appear to experience a greater degree of time pressures outside of their regular day as well. To begin with, a sizeable minority of all CCSD teachers, regardless of years of experience, indicate that they have to work second jobs, but the rate is noticeably higher for novice teachers (48 percent versus 38 percent). In addition, though the amount of time novice teachers spend on schoolwork outside of school is not vastly greater than it is for experienced teachers—53 percent of novice teachers and 44 percent of experienced teachers report spending 11 or more days a year beyond their contracted time on school and professional duties (Table 3, above), and 72 percent and 68 percent, respectively, report that they spend more than an hour a day on school work outside of school hours—the time pressure does appear to be greater for the novice teachers. To be sure, some of these differences occur because many novice teachers have not developed the classroom and time management skills of their more experienced colleagues; however, given that novice teachers already face a number of obstacles to becoming effective teachers (including maximizing the use of instructional time in their classes), the differences in teacher perceptions of these conditions may be significant.

Other Notable Differences

Novice teachers tend to believe that they work in cleaner school environments, but experienced teachers tend to be more positive about the teaching resources available to them (especially the availability of instructional materials) and their control over the selection of those resources—though admittedly only marginally so in most cases (Table 3, above). The differences between novice and experienced teachers in this area 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.[18] Coupled with these research findings, the results from the 2007 Teaching and Learning 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.

Finally, several of the issues discussed above are related to levels of teacher empowerment, both at the classroom and the school levels. For example, in addition to being less likely than experienced teachers to believe that they are empowered to select materials for their classrooms, novice teachers also are less likely to believe that they can help to determine the content of their professional development (Table 3, above) and, to a lesser extent, that they can take part in school improvement planning (26 percent versus 33 percent). To some extent, these findings come as no surprise, given that experienced teachers are more likely than novice teachers to be members of decision-making committees or to be consulted by principals, and that they are more likely to have the institutional and practical knowledge to make important decisions about organizational structures and instruction. However, there are empowering roles that novices can play that may help them to develop professional skills more quickly and, more importantly, encourage them to remain in teaching.

Relevant Domain Analyses: Empowerment (p. 30), Facilities and Resources (p. 29), Time (p. 32)

3. Elementary, Middle, and High School Educator Perceptions of Almost Every Facet of Teaching and Learning Conditions Are Different

There is a long history of school studies that show how diverse cultures at different grade levels affect educators' work life and sense of self-efficacy.[19] The following analyses examine the differences in the proportion of elementary, middle, and high school respondents who have positive impressions of various aspects of the teaching and learning conditions in their schools. Highlighted here are responses for which the differences between educators at two or more levels are 10 percentage points or greater.

Of the nearly 9,000 survey respondents, about 57 percent work in elementary schools, 21 percent work in middle schools, and 19 percent in high schools (about 3 percent work in mixed-level schools).[20] Across all but one of the domains, elementary educators tend to respond more positively to most statements about teaching and learning conditions than do high school educators, the notable exception being the classroom level strand of the empowerment domain, where high school responses are more positive. Middle school responses are higher than both elementary and high school responses for the most part only for questions about the availability of teaching resources.

Time and Facilities & Resources

Compared to their elementary and middle school colleagues, high school educators report that teachers have less reasonable class sizes and less time to collaborate with colleagues, while also noting more interruptions and administrative distractions, such as paperwork. Also, they and middle school educators are less likely than elementary educators to report that teachers have sufficient access to communication technology and to other professionals who can assist them in their jobs. In addition, middle school educators are less likely than either elementary or high school educators to believe that their schools are clean, well-maintained, and safe (Table 4).

The multiple possible reasons behind all of these differences are worth exploring, given their importance in educators' decision-making about whether to stay or leave a particular school. To be sure, in some cases the differences cannot be addressed directly by schools because they are a result of differences inherent in schooling at different grade levels. For example, it is perhaps not surprising to learn that fewer elementary school teachers view student misbehavior as a

problem (61 percent cite it as having an impact on their career decisions, compared to 65 percent of high school teachers and 69 percent of middle school teachers), which could influence their perceptions of working in safer school environments. Similarly, the perceptions of better maintained and clean elementary schools might result from the fact that these schools tend to be smaller (and therefore more easy to maintain) buildings, or that they also tend to be newer buildings—a possibility that is especially likely in a community like Clark County, in which the ongoing population explosion continues to impact young student population numbers.[21] It is also quite possible, however, that the findings indicate that leaders at different levels of schooling are more effective at establishing certain teaching and learning conditions than are their colleagues at other levels. Unfortunately, the survey data do not allow us to discern the underlying reasons behind these differences, but school administrators with intimate knowledge of their school settings can use the data to investigate potential causes for these differing views. Case studies at the school level may also help CCSD to uncover some of the reasons behind these and other differences across schools.

Table 4: Perceptions of Time and Facilities & Resources Conditions, by School Level

	Percent Agreeing:			Range of percentage points:
	Elementary	Middle	High	
Time				
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	46%	30%	24%	22
Teachers have time available to collaborate with their colleagues.	63%	51%	44%	19
Teachers are allowed to focus on educating students with minimal interruption.	59%	53%	43%	16
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	44%	39%	33%	11
Teachers are protected from duties that interfere with their essential role of educating students.	55%	54%	45%	10
Facilities and Resources				
Teachers and staff work in a school environment that is safe.	79%	67%	71%	12
Teachers and staff work in a school environment that is clean and well maintained.	77%	66%	68%	11
Teachers have sufficient access to a broad range of professional personnel.	71%	68%	60%	11
Teachers have sufficient access to appropriate instructional materials and resources.	74%	74%	64%	10

Professional Development*

About 70 percent of all teachers believe that their professional development experiences have provided them with strategies that they actually incorporate into their instruction. Even so, evidence of concern across school levels exists as well. Elementary and middle school teachers are more positive than are high school educators, with over three-quarters of elementary school teachers and nearly seven out of ten middle school teachers reporting that professional development activities are incorporated into their classrooms, compared to only about 57 percent of high school teachers. In addition, a sizeable majority of elementary and middle school teachers believe that their professional development experiences are useful in trying to improve achievement (70 percent and 60 percent, respectively), but less than half of all high school teachers hold the same view (Table 5).

Table 5: Teacher Perceptions of Professional Development, by School Level

Professional Development Issue:	Percent Agreeing: Elementary	Middle	High	Range of percentage points
School-based PD provides teachers with knowledge and skills most needed to teach effectively.	67%	54%	39%	28
Professional development has proved useful to you in your efforts to improve student achievement.	70%	60%	49%	21
Professional development has provided you with strategies that you have incorporated into your instructional delivery methods.	76%	69%	57%	19
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	61%	52%	43%	18
Sufficient resources are available to allow teachers to take advantage of professional development activities.	72%	68%	60%	12

Consistent with other statements about professional development, there is a large disparity between the perceptions of lower-grade and high school teachers about the efficacy of school- and district-based professional activities as well (Table 5, above). The difference in perceptions about the degree to which the district's professional development activities enhance teacher skills as instructional leaders (reported in Table 8, below) seems to support these impressions. Given that the alignment of professional development activities with district instructional initiatives is a system-wide goal,[22] this disparity suggests that further work may be needed in this area to improve secondary school professional development offerings.

Leadership

There are once again fairly substantial differences between elementary and high school respondents regarding the quality of school leadership, but unlike response patterns in many other areas, middle school responses more generally resemble high school rather than elementary responses. For all statements about leadership, a greater percentage of elementary than high school respondents register positive impressions, and for nearly all of the statements, the differences are 10 percentage points or greater. The greatest disparities across elementary and secondary levels come in the areas of enforcement of student conduct, efficacy of school improvement

* **Note:** Because many of the survey items that address professional development were directed toward classroom teachers only, the analyses in this section are limited to teacher responses; differences in the perceptions of some professional development areas among teachers, administrators, and other education professionals are discussed in more detail in the **Domain-Specific Findings** section, below.

teams, and establishment of a shared vision among administration and faculty (Table 6), all of which are important for establishing a culture in which teachers sense that they are valued components of the school leadership process.

Table 6: Perceptions of Leadership, by School Level

Leadership Issue:	Percent Agreeing: Elementary	Middle	High	Range of Percentage Points
The school leadership consistently enforces rules for student conduct.	64%	51%	48%	16
The school improvement team provides effective leadership at this school.	53%	43%	37%	16
The school administration and teachers have a shared vision.	61%	52%	45%	16
Opportunities are available for members of the community to contribute actively to this school's success.	73%	58%	58%	15
The school leadership communicates clear expectations to students and parents.	71%	63%	59%	12
Teachers receive feedback that can help them improve teaching.	70%	63%	58%	12
The faculty is committed to helping every student learn.	87%	79%	76%	11
The leadership effectively communicates policies.	65%	56%	54%	11

Teacher Empowerment: School-Level Strand

As shown in Table 7, when it comes to empowerment on school-wide issues, there are once again large differences between the responses of elementary and secondary educators. In almost all cases, elementary educators are more likely to be positive about teachers' opportunities to be recognized, developed, and utilized for the unique skills they have in solving educational problems. In general, they are more likely than their middle and high school counterparts to perceive that teachers are empowered by school leaders to be school-level decision-makers. It is also worth noting that a relatively low percentage of all educators—regardless of level—perceive that teachers play a substantial role in establishing and implementing policies and discipline. Research suggests that this type of decision-making is often associated with keeping teachers in the profession,[23] yet teachers appear to have limited involvement in this area.

Table 7: Perceptions of School-Level Teacher Empowerment, by School Level

Empowerment Issue:	Percent Agreeing: Elementary	Middle	High	Range of Percentage Points
Professional development activities enhance teacher skills as instructional leaders.	69%	58%	46%	23
Teachers are supported by the community in which they teach.	55%	38%	36%	19
Teachers are recognized as educational experts.	58%	50%	42%	16
The faculty has an effective process for making group decisions and solving problems.	53%	42%	37%	16
Establishing and implementing policies and student discipline	35%	22%	20%	15
Teachers are centrally involved in decision-making about educational issues.	45%	41%	32%	13
Parent and community members have opportunities to contribute to students' success.	79%	68%	69%	11
In this school we take steps to solve problems.	66%	60%	56%	10

Teacher Empowerment: Classroom-Level Strand

Finally, as shown below in Table 8, high school and middle school educators are more likely to report greater teacher involvement in classroom-level decision-making than are elementary educators. These results may seem to contradict the indications above that elementary educators are more likely to believe that teachers are centrally involved in decision-making about educational issues (Table 7, above), but it is important to bear in mind that the four items in Table 8 are *classroom-level* decisions only; while elementary educators may feel that teachers are more involved overall in the governance of their schools, it is not surprising to learn that secondary educators believe that teachers have a greater sense of control within the confines of their own classrooms, perhaps in part because they have more direct control over their curricula than do elementary teachers.

Table 8: Perceptions of Classroom-Level Teacher Empowerment, by School Level

Teachers play a large or primary role in:	Percent Agreeing: Elementary	Middle	High	Range of Percentage Points
Setting grading and student assessment practices	44%	55%	63%	19
Determining the requirements of lesson plans	31%	37%	48%	17
Devising teaching techniques	46%	59%	62%	16
Selecting instructional materials and resources	32%	45%	45%	13

Relevant Domain Analyses: Leadership (p. 27), Facilities and Resources (p. 29), Empowerment (p. 30), Time (p. 32), Professional Development (p. 33)

4. Administrators Believe that Teachers Are Central to Decision-Making, but Most Teachers Disagree

The disparity in perceptions of teaching and learning conditions between administrators (principals and assistant principals) and non-administrative educators (classroom teachers and other education professionals) is sometimes very large in CCSD (see **Appendix C** for a complete table of teacher, principal, assistant principal, and other education professional responses to survey items). A substantially greater proportion of the 333 administrators than of the 8,606 teachers and other education professionals who responded to the survey[24] note that positive teaching and learning conditions are in place in many domain areas, and that leadership is making efforts to improve them. 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 teaching and learning conditions domains that teachers identify as being most important to them in deciding their future employment plans (see **Findings from Analyses of Responses of Teacher Stayers, Movers, and Leavers**, below, and **Appendix B** for additional information about survey responses from teachers with different career intentions).

Administrators are more likely 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 less than half of all teachers (39 percent) and other education professionals (45 percent) believe that teachers are centrally involved in decision-making on educational issues, 94 percent of principals and 75 percent of assistant principals believe that teachers are involved. Even more disconcertingly, less than 40 percent of non-administrative educators (30 percent of teachers, 39 percent of other education professionals) report that they believe that teachers play a significant role in school improvement planning, while nearly 9 out of 10 principals (89 percent) believe that teachers do (Table 9).

The sizeable perception gap persists in other areas of empowerment as well. Administrators are much more likely than teachers and other education professionals to agree that there is an effective school-wide process for making decisions and solving problems and that the school improvement team provides effective leadership. Gaps are also evident in several leadership areas, including perceptions that there is an atmosphere of respect and trust, consistent enforcement of student conduct rules, and a shared vision at each school.

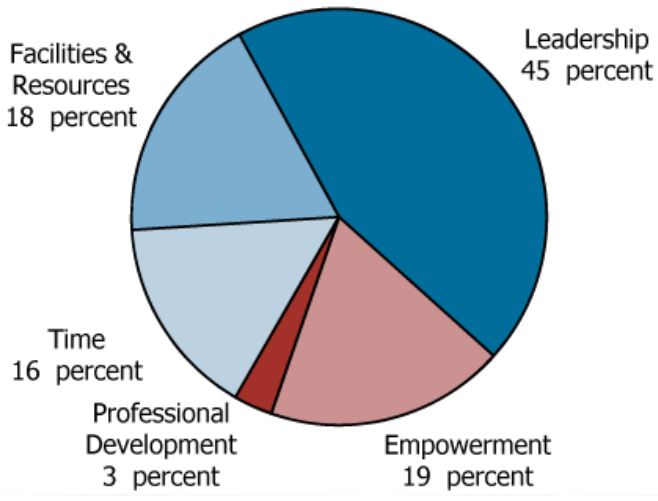
Table 9: Perceptions of Empowerment and Leadership, by Position

	Percent Agreeing:				Range of Percentage Points
	Teachers	Other Educ. Professionals	Assistant Principals	Principals	
Teachers play a large or primary role in school improvement planning	30%	39%	64%	89%	59
Teachers are centrally involved in decision-making about educational issues	39%	45%	75%	94%	55
The school improvement team provides effective leadership at this school	46%	53%	77%	92%	46
The faculty has an effective process for making group decisions and solving problems	46%	52%	77%	91%	45
Teachers are recognized as educational experts	51%	58%	81%	93%	42
Teachers feel comfortable raising issues and concerns that are important to them	52%	58%	85%	93%	41
The school leadership consistently enforces rules for student conduct	56%	66%	93%	95%	39
The school administration and teachers have a shared vision	55%	55%	76%	93%	38
There is an atmosphere of trust and mutual respect	57%	59%	77%	94%	37

Administrators are not only more likely to believe that positive working conditions are present, but also that school leadership makes sustained efforts to address faculty concerns.

To fully appreciate the significance of this finding, it may help to note that educators believe that leadership and empowerment conditions are the two most critical influences on teachers' future career plans (Figure 3).

***Figure 3*: Teaching and Learning Conditions that Affect Teachers' Willingness to Stay at their Current School**



Add to that the finding that the greatest gaps between administrator and non-administrative educator perceptions are in the area of improving leadership and empowerment concerns; administrators are much more likely than non-administrative educators to believe that sustained efforts are being made to address concerns in both areas (Table 10).

Table 10: Perceptions of Leadership's Efforts to Address Concerns, by Position

The School Leadership Makes a Sustained Effort to Address Teacher Concerns About:	Percent Agreeing: Teachers	Other Educ. Professionals	Assistant Principals	Principals	Range of Percentage Points
Leadership issues	43%	49%	86%	93%	50
Empowering teachers	48%	57%	89%	94%	46
The use of time in my school	51%	58%	91%	95%	44
New teacher support	58%	64%	93%	98%	40
Facilities and resources	60%	64%	94%	96%	36
Professional development	60%	65%	92%	95%	35

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-half of all principals (46 percent) and over one-third of all assistant principals (37 percent) believe that teachers have access to at least five hours of non-instructional time during the school day in an average week, while less than one-fifth (19 percent) of all teachers and an even smaller proportion of other education professionals (16 percent) agree. These differences in perceptions of the non-instructional time available to teachers may also explain why only 12 to 14 percent of administrators estimate that teachers spent 10 hours or more, on average, every week working on school related activities outside of the school day, even though more than one-third of teachers (37 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. 27), Empowerment (p. 30), Time (p. 32); see also a complete table of responses by position in **Appendix C.**

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

As is true in many other places across the country, one of the greatest challenges Clark County faces is stemming the tide of teacher attrition, especially in hard-to-staff schools. A recent study analyzing 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.[25] 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.[26] 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 Clark County educators are satisfied with several aspects of their current working conditions, and these positive perceptions are reflected in the fact that more than four out of five (84 percent) of the teacher respondents on the 2007 Clark County Teaching and Learning Conditions Survey intended to stay in the district at the end of the school year.[27] However, only about 65 percent intended to stay in their *current schools* at the end of the school year ("stayers"). Relatively even numbers of respondents indicate that they planned either to move to another school within the district ("movers," 19 percent) or to leave the district or leave teaching entirely ("leavers," 16 percent).[28] Contrary to what might be expected, these breakdowns are relatively consistent across gender lines (with 62 percent of all male teachers and 65 percent of all female teachers reporting that they would stay at their current schools) as well as across teacher preparation lines (with 65 percent of all teachers prepared in a bachelor's-level program, 63 percent of those prepared in a master's-level program, and 65 percent of those prepared in an alternative certification program indicating that they would stay in their current schools). Similar patterns hold even when data are broken down by highest degree earned and by whether a teacher holds advanced certification from the National Board of Professional Teaching Standards, offering evidence that the decisions of Clark County teachers to move or leave may not be related solely to factors outside of CCSD 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. Furthermore, school movers tend to have lower perceptions of their schools than do leavers (but this discrepancy is due in part to the fact that not all leavers leave as a result of dissatisfaction with the work environment alone[29]). 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.

5. Teacher Movers and Leavers Are Most Dissatisfied with School Leadership and with Their Perceived Levels of Empowerment

Stayers and movers express the greatest disagreement over measures of leadership and empowerment, the two factors educators believe are most critical to teachers in making their employment decisions (Figure 3, above). As is the case in many CTQ analyses of teaching and learning conditions surveys in other states as well as in the 2006 CCSD survey analysis, leadership plays

the most pivotal role in teachers' thinking about future employment plans. As shown in Table 11, four-fifths (80 percent) of all teachers report that support from school administration influences their career intentions, a higher proportion than for any other item.

Table 11: Primary Factors Influencing Career Intentions

Most Frequently Cited Factor:	Percent Indicating Factor is Very or Extremely Important: Stayers	Movers	Leavers	Combined
Support from school administration	82%	85%	68%	80%
Effectiveness with students I teach	80%	71%	61%	75%
Teaching assignment (class size, subject, students)	77%	69%	67%	74%
Time to do my job during the work day	73%	70%	68%	71%
Collegial atmosphere amongst the staff	72%	71%	55%	69%
Salary	69%	61%	77%	69%
Cost of living	68%	62%	78%	69%
Comfort with the students I teach	74%	61%	49%	68%
Demand of overall expectations on teachers	65%	67%	69%	66%

But impressions of school leadership cut both ways. Stayers are almost three times as likely as movers to agree that their school leadership is effective and that an atmosphere of trust and respect is present in their schools. In addition, many more stayers than movers feel comfortable raising issues and concerns and believe that teachers and principals have a shared vision for their schools. Stayers and non-stayers also disagree about the extent to which school leaders make efforts to *improve* teaching and learning conditions. As shown in Table 12, teachers who want to stay in their school are far more likely to believe that school leaders work to improve teaching and learning conditions than are those who do not intend to stay. For example, while 60 percent of stayers believe that leadership makes a sustained effort to address teacher concerns about empowerment and about one-half agree that is the case for leadership issues (53 percent), only about one-fifth of movers agree with these same statements (23 percent and 19 percent, respectively).

Table 12: Perceptions of Leadership's Efforts to Address Concerns, by Career Intent

The School Leadership Makes a Sustained Effort to Address Teacher Concerns About:	Percent Indicating Factor is Very or Extremely Important: Stayers	Movers	Leavers	Range of Percentage Points
Empowering teachers	60%	23%	35%	37
Leadership issues	53%	19%	31%	34
The use of time in the school	62%	28%	38%	34
Facilities and resources	69%	38%	51%	31
Professional development	69%	40%	49%	29
New teacher support	67%	38%	48%	29

Differences in perceptions of empowerment among the three career-intent groups are no less glaring (there is at least a 16-percentage-point difference between stayers and non-stayers on every empowerment issue), with the greatest differences coming in the area of professionalism. Movers are much less likely than are stayers to believe that steps are taken to solve problems at the school level (34 percent to 73 percent), that an effective problem-solving process even exists in the first place (22 percent to 56 percent), that teachers are trusted to make sound professional decisions (34 percent to 66 percent), or that teachers are recognized as educational experts (30 percent to 61 percent; Table 13).

Table 13: Perceptions of Empowerment, by Career Intent

Empowerment Issue:	Percent Indicating Factor is Very or Extremely Important: Stayers	Movers	Leavers	Range of Percentage Points
There is an atmosphere of trust and mutual respect within the school.	69%	26%	44%	43
Overall, the school leadership in my school is effective.	69%	27%	36%	42
The school administration and teachers have a shared vision.	67%	26%	41%	41
Teachers feel comfortable raising issues and concerns that are important to them.	64%	25%	39%	39
In this school we take steps to solve problems.	73%	34%	48%	39
The leadership effectively communicates policies.	71%	33%	48%	38
The school leadership communicates clear expectations to students and parents.	76%	41%	54%	35
The faculty has an effective process for making group decisions and solving problems.	56%	22%	33%	34
Teachers receive feedback that can help them improve teaching.	75%	42%	53%	33

6. Financial Considerations Are the Greatest Influence on 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 diverse 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 retirement age ("early-career leavers," who make up more than 1,000 of the nearly 1,300 CCSD teachers who indicate that they did not plan to return to CCSD schools), those who leave at around retirement age ("retirement-age leavers"), and the general population of movers.

Early-career leavers and their retirement-age peers express similar opinions about most survey items, but one critical issue on which they diverge is the impact of financial considerations on their decisions to leave, which is consistent with some recent research on reasons for teacher attrition.[30] Leavers of all ages tend to leave primarily for financial reasons (77 percent of leavers

cite salary as an important factor in their decision, and 78 percent cite the cost of living), but the rate for both is higher for early-career leavers than it is for retirement-age leavers (78 percent and 79 percent versus 71 percent and 72 percent, respectively). The difference in the importance of financial issues is about the same or even greater between early-career leavers and school movers, who are otherwise much more negative about most teacher working conditions than are early-career leavers; only 61 percent of movers cite salary and 62 percent cite cost of living (Table 14).

Table 14: Financial and Time Pressure, Movers and Leavers

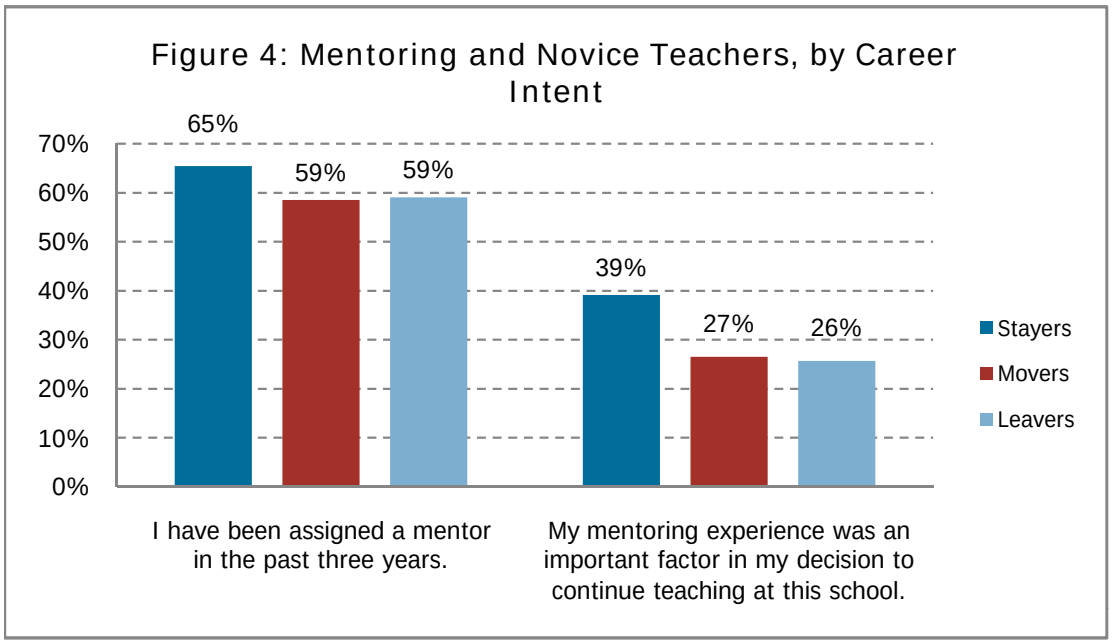
	Percent Indicating Factor is Very or Extremely Important:		
	Movers	Early-Career Levers	Retirement-Age Leavers
Factors Influencing Career Intentions:			
Cost of Living	62%	79%	72%
Salary	61%	78%	71%
Time Issues:			
It is necessary for me to work a second job during the regular school year.	48%	59%	38%
In a typical year, I devote 11 or more non-paid days beyond my current contract to school and professional responsibilities.	50%	54%	43%

Some of these financial concerns may be linked to important differences between early-career leaver perceptions and the perceptions of their retirement-age peers about two key time issues. First, early-career leavers are much more likely than any other group to note that they have to work a second job (nearly 60 percent, compared to 48 percent of movers and only 38 percent of retirement-age leavers), and more than half of them (54 percent) report working at least 11 days beyond their annual contract, more than any other group (Table 14, above). However, early-career leavers tend to be no less negative or even more positive than their retirement-age peers about many other teacher working conditions, highlighting the importance of financial support in keeping these teachers onboard.

7. Many Novice Teachers Are not Mentored at All, but Those Who Are Mentored Are More Likely to Remain in the Classroom and in the District.

In addition to some of the factors associated with teacher retention discussed above, another critical component of the teacher retention puzzle is the quality and availability of mentoring and induction for new teachers, the importance of which is suggested by the imbalance in its availability to all new CCSD teachers.

CCSD policy states that only first-year teachers are assigned "formal" mentors, though informal mentoring may continue into year two and beyond. It is interesting and perhaps revealing to note that, while a sizeable proportion of novice teachers (teachers with less than four years of experience) in all three career-intent groups notes not having access to a mentor, both novice leavers and movers alike are more likely than are novice stayers to indicate that they did not have a mentor (41 percent of each, versus about 35 percent of novice stayers). For those who received mentoring, novice stayers are more likely than are either novice movers or leavers to report positive impressions of both the content and the frequency of that mentoring. While it is true that only about 40 percent of all novice stayers believe that the mentoring experience played an important role in their decision to continue teaching at their current schools, an even smaller proportion of novice movers and leavers agree (only about one-quarter; Figure 4).



Mentor support provides novice teachers with advice and help from experienced teachers in a number of areas, many of which directly support novice teachers in the areas of empowerment, professional development, and time. Readers are reminded that teaching and learning conditions in one of these areas—empowerment—is frequently cited by CCSD educators as important to teachers' career decisions (Figure 3, above). Of particular note is the large difference in the proportion of novice teachers who indicate that their mentors helped them to navigate school and district policies; about half of all novice stayers (51 percent) received this kind of help, compared to only 34 percent of novice movers and 40 percent of novice leavers (Table 15). Similarly, perceptions of support and encouragement for novice teachers are relatively low across the board, but they are lowest for novice movers and leavers.

Table 15: Mentoring Experiences, Novice Teachers, by Career Intent

	Domain(s) Impacted	Percent Indicating Mentor Support was Important: Stayers	Movers	Leavers	Range of Percentage Points
My mentor was effective in providing support in:					
Instructional strategies	E, PD	49%	38%	37%	12
Curriculum and content I teach	E, PD	45%	32%	35%	13
Classroom management/discipline strategies	E, PD	46%	34%	35%	12
School and/or district policies and procedures	E	51%	34%	40%	17
Completing products or documentation required of new teachers	T	44%	32%	37%	12
Completing other school or district paperwork	T	42%	28%	38%	14
Social support and encouragement	E	64%	55%	52%	12
Other (general support)	E	55%	39%	42%	16
		Percent Indicating more than Once a Month:			
I planned during the school day with my mentor	T, PD	34%	23%	21%	13
I was observed teaching by my mentor	PD	18%	14%	12%	6
I observed my mentor teaching	PD	13%	8%	9%	5
I planned instruction with my mentor	T, PD	29%	19%	18%	11
I had discussions with my mentor about teaching	PD	53%	45%	47%	8

Domain Key: E = Empowerment; PD = Professional Development; T = Time

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 are more detailed assessments of the stories the data in these domains reveal. In this section, we also provide more detail about how different groups of educators—defined by their positions (*i.e.*, classroom teachers, administrators, and other education professionals) and by the regions in which their schools are located—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 CCSD non-administrator perceptions of various working conditions range from very positive to very negative, depending upon the issue, administrators expressed favorable views of *almost every aspect of teaching and learning conditions*.[31] **Appendix C**, an extension of Tables 9 and 10 (above), contains a complete table of responses by position to all of the major survey questions, and that table is referred to throughout this section. At the least, CCSD should consider taking steps to better understand the reasons behind this clear and sometimes pronounced disconnect.

Also as noted earlier, differences between elementary and secondary educators are not always as dramatic, but 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 twenty percentage points or more. Particularly notable differences have all been highlighted in the **General Findings** section and are not repeated here.

Leadership

Overall, though educators perceive conditions associated with most areas of school leadership to be relatively positive, they are more impressed with school leadership policies and practices than they are with leadership's efforts to address teachers' concerns about various aspects of teaching and learning conditions. For example, while a healthy majority of educators believe that teacher performance evaluations are handled fairly (70 percent), that staff members are recognized for their accomplishments (68 percent), and that school leaders clearly communicate expectations to students and parents (67 percent), most educators do not believe that school leaders make sustained efforts to address teacher concerns about issues with leadership itself (only 45 percent agree that leaders do so), and only half believe that school leaders make efforts to address concerns about empowerment issues. Similarly, fewer than half of all educators (48 percent) believe that their School Improvement Teams provide effective school leadership (Table 16).

Table 16: Overall Perceptions of Leadership Conditions

	Percent Agreeing:
Leadership Issue:	
Teacher performance evaluations are fair in my school.	70%
Staff members are recognized for accomplishments.	68%
The school leadership communicates clear expectations to students and parents.	67%
The school improvement team provides effective leadership at this school.	48%
The School Leadership Makes a Sustained Effort to Address Teacher Concerns About:	
Leadership issues	45%
Empowering teachers	50%

It is no surprise that administrators rate their leadership higher than do teachers and other non-administrative education professionals, but it is the size of the difference on some items that is worth noting. For instance, administrators are much more enthusiastic about the impact of their school improvement teams than are non-administrators (92 percent of principals and 77 percent of assistant principals think the teams are effective, while only 46 percent of teachers and 53 percent of other education professionals agree). Likewise, administrators tend to think that faculty feel comfortable raising issues with them (93 percent of principals, 85 percent of assistant principals), though only a little more than half of all teachers and other education professionals (52 percent and 58 percent, respectively) agree. That discrepancy may be due in part to a difference in perceptions about the degree to which school leadership addresses problems raised by faculty. For all areas surveyed, the gap in positive perceptions between administrators and non-administrators of leadership attentiveness to areas of teacher concern is between 26 and 37 percentage points, with an even greater gap when the unit of analysis is teachers and principals only (**Appendix C**).

Perceptions of leadership are relatively stable across all regions, with the most positive perceptions in the Northwest and the least positive in the Southwest. Perceptions of leadership are highest, however, among Education Services/Student Support Services educators,[32] especially in the areas of the fairness of teacher performance evaluations and of the availability of feedback to improve teaching (with 74 percent of these educators agreeing that these conditions are in place). A complete table of survey responses disaggregated by region is included in **Appendix D**.

Facilities and Resources

No domain garners more positive educator impressions than that of facilities and resources. Other than lukewarm perceptions of the availability of technology training (with about 57 percent of all educators indicating that such training is available in sufficient quantities), a large majority of educators (at least 68 percent) have positive impressions of all other areas of facilities and resources. The highest rating is for the availability of communication technology (84 percent), with school safety and the availability of instructional technology (75 percent each), appropriate instructional materials (72 percent), and a clean (72 percent) working environment not far behind (Table 17).

Table 17: Overall Perceptions of Facilities and Resources Conditions

Facilities and Resources Issue:	Percent Agreeing:
Teachers have access to reliable communication technology, including phones, faxes and email.	84%
Teachers and staff work in a school environment that is safe.	75%
Teachers have sufficient access to instructional technology, including computers, printers, software and internet access.	75%
Teachers and staff work in a school environment that is clean and well maintained.	72%
Teachers have sufficient access to appropriate instructional materials and resources.	72%
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	69%
Teachers have sufficient access to a broad range of professional personnel.	68%
Teachers have sufficient training and support to fully utilize the available instructional technology.	57%

Despite being a domain for which overall ratings are high, there are several major discrepancies in impressions across regions. Positive impressions of school safety range from a high of 83 percent in the Northwest region to a low of 64 percent in Education Services/Student Support Services schools, and perceptions of cleanliness are even more diverse, with as many as 77 percent of educators within two different regions (Northwest and Southeast) believing that their schools are clean, compared to only 54 percent of all Education Services/Student Support Services educators (**Appendix D**).

Empowerment

Educator perceptions of their empowerment tell two different stories, depending upon whether one looks at school-level empowerment issues or classroom-level empowerment issues, but it is not the story typically told in other states that have completed teaching and learning conditions survey. In most states, impressions of classroom empowerment are higher than are impressions of school-level empowerment, but for CCSD educators, the four highest empowerment ratings are all for school-level empowerment issues: a majority of CCSD educators believe that teachers are entrusted to make sound professional decisions about instruction (57 percent), that professional development helps teachers to become better instructional leaders (62 percent), that school faculty take steps to solve problems (63 percent), and that parents and community members have opportunities to contribute to students' success (74 percent; Table 18).

However, not every school-level empowerment item garners such positive impressions. For example, as is common in most other states in which CTQ has conducted similar surveys, the lowest ratings for any item on the survey are those where educators rate their ability to influence school-level budget decision (with only 16 percent believing that teachers can do so). Other low ratings are perhaps more surprising and may be of greater concern. Only 21 percent of all educators believe that they can help to determine the content of professional development (Table 18), and this low perception is all the more interesting in light of the generally unbalanced availability of professional development topics (see **Professional Development**, below).

At the classroom level, where educator ratings of empowerment are typically higher in other states, only a slim majority of educators perceive positive conditions in their ability to devise teaching techniques (53 percent) and grading policies (51 percent); less than two out of five (38 percent) believe that teachers are able to select instructional materials and resources for their classes, and a mere 36 percent believe that they are able to determine the requirements of lesson plans (Table 18).

Table 18: Overall Perceptions of Empowerment Conditions

Empowerment Issue:	Percent Agreeing:
School-Level Strand	
Parents and community members have opportunities to contribute to students' success.	74%
In this school we take steps to solve problems.	63%
Professional development activities enhance teacher skills as an instructional leaders.	62%
Teachers are trusted to make sound professional decisions about instruction.	57%
Determining the content of in-service professional development programs	21%
Providing input on how the school budget will be spent	16%
Classroom Level Strand	
Teachers play a large or primary role in:	
Devising teaching techniques	53%
Setting grading and student assessment practices	51%
Selecting instructional materials and resources	38%
Determining the requirements of lesson plans	36%
Use of 2006 Data	
At this school, we utilize results from the 2006 Teaching and Learning Conditions (TLC) Survey.	22%

As noted earlier, while administrators and non-administrators appear to be at odds with respect to their views on every aspect of teacher empowerment, the greatest discrepancies are with respect to school-level empowerment. In addition to the differences discussed in the **General Findings** section above, administrators are much more likely to believe that teachers in their schools are treated as educational experts (93 percent of principals and 81 percent of assistant principals, compared to 51 percent of teachers and 58 percent of other education professionals) and that teachers play large or primary roles in several leadership activities, including determination of the content of professional development (67 percent and 47 percent versus 19 percent and 26 percent, respectively), and provision of input on the school budget (60 percent and 32 percent versus 14 percent and 19 percent, respectively; **Appendix B**).

As with leadership, perceptions of school-level empowerment across geographic regions are relatively stable, with the greatest variance coming in the area of a sense of community support (54 percent in the Northwest and Southeast regions, but only 39 percent in the East region).

As in other domains, however, discrepancies are broader when the impressions of non-geographic regions are included as well, with the greatest divisions again coming in the areas of a sense of community support (which reaches a low of only 37 percent of educators in the Education Services/Student Support Services region indicating positive perceptions) and of a belief that parents and the community have opportunities to contribute to students' success (where a full 19 percentage points separates Education Services/Student Support Services educator responses from those of educators in the Southeast). Interestingly, the exact opposite pattern is present in the area of classroom-level empowerment, where Education Services/Student Support Services educators consistently indicate that they can exercise more professional judgment than can their colleagues in other regions. (**Appendix D**).

Time

Though there are few aspects of time usage to which CCSD educators give a low rating, time is the only domain in which there are no comfortably positive impressions, either (items for which 60 percent or more of all respondents report positive impressions). Educators' impressions of the time available to them range from marginally positive to very negative, with a majority of educators reporting marginally favorable impressions of only three survey items: protection of instructional time from too many duties (53 percent) and from too many interruptions (55 percent), and availability of time to collaborate with colleagues (57 percent). Of greatest concern to educators is class size, with only 38 percent indicating that teachers' class sizes were appropriate for ensuring enough time to meet the educational needs of all students. As noted in several earlier sections of this report, the proportion of educators who report having to work a second job during the school year (43 percent overall) is troublingly high (Table 19).

Table 19: Overall Perceptions of Time Conditions

Time Issue:	Percent Agreeing:
Teachers have time available to collaborate with their colleagues.	57%
Teachers are allowed to focus on educating students with minimal interruption.	55%
Teachers are protected from duties that interfere with their essential role of educating students.	53%
The non-instructional time provided for teachers in my school is sufficient.	49%
It is necessary for me to work a second job during the regular school year.	43%
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	41%
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	38%

The most important discrepancy in this domain may be in administrator and non-administrator perceptions of non-instructional time available during the day at school. As noted in the **General Findings** section, above, almost half (46 percent) of all principals believe that teachers have between five and 10 hours a week, while more than four out of five teachers (81 percent) report that they have less than an hour a day. There is a similar discrepancy in perceptions of time spent on schoolwork outside of the school day, with 68 percent of teachers reporting that they spend an hour or more a day on schoolwork outside of school and just under half of all principals (49 percent) and assistant principals (48 percent) believing that teachers do so, but it is important to note that these figures also indicate that many administrators appear to be aware of the amount of time that many of their faculty report spending on schoolwork outside of school (**Appendix B**).

Differences in perceptions of time usage across geographic regions are minor, with the greatest difference again being principals' perceptions of the amount of time teachers spend on school-related activities outside of the regular school day (with a high of 59 percent of principals in the East region and a low of 47 percent of principals in the Northeast region believing that teachers dedicate five or more hours a week in this area). When the non-geographic regions are included, differences are much greater. Education Services/Student Support Services division educators have much lower perceptions of many areas of time usage (the greatest discrepancy being in the area of collaboration time, with only 45 percent indicating that they have time to collaborate with colleagues, compared to 57 percent overall), and they also are the most likely to indicate the need to work a second job (52 percent; **Appendix D**).

Professional Development

There is an interesting contradiction in the responses to questions about professional development. While the majority of educators express positive impressions of every facet of professional development surveyed (with 70 percent reporting that professional development has provided them with strategies that they use in instruction, and 69 percent indicating that sufficient professional development resources are available), there appears to be a significant mismatch not only between the professional development that teachers say they receive and believe they need, but also between teachers' and other educators' (including principals, assistant principals, and other education professionals) perceptions of the professional development that is available.

Teachers indicate that their greatest professional development needs are training for working with special needs populations and for closing the achievement gap, but administrators and other education professionals are much more likely than are teachers to believe that teachers need professional development in classroom management and in working with Limited English Proficient students. It is also worth noting the disparities—sometimes great—between what teachers think they need and what they actually get (Table 20).

Table 20: Perceived Professional Development Needs and Availability, Classroom Teachers versus Non-Classroom Educators

Professional Development Area:	Percent indicating a need: Teachers	Percent indicating a need: Admins. & Other Ed. Profs.	Percent of teachers receiving 10+ clock hours, past 2 years:
Special Education (Students with Disabilities)	50%	74%	23%
Closing the Achievement Gap	45%	50%	20%
Reading	27%	33%	48%
Classroom Management	21%	55%	25%
Limited English Proficiency (LEP)	19%	49%	17%
Student Assessment	19%	27%	40%
Special Education (Academically Gifted Students)	16%	26%	5%
Methods of Teaching	16%	30%	56%
Content-Area Professional Development	12%	9%	50%

Analysis 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 teaching and learning conditions and teacher career decisions, factoring in several additional variables not included in the Teaching and Learning Conditions Survey itself, such as federal Adequate Yearly Progress status and student body characteristics. The second model begins the longer and more difficult task of estimating the impact of teaching and learning conditions on student learning. Due to data limitations and the short length of the timeframe under scrutiny (one academic year), this second model cannot fully estimate the impact of teaching and learning conditions on student learning, but it does lay the groundwork for future in-depth studies of this vital connection.

Teaching and Learning Conditions and Teacher Attrition

The first set of analyses for this 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 Teaching and Learning Conditions

Teacher perceptions of many teaching and learning 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 21 at the end of the section.

Of particular note are the consistent and strong associations between two teaching and learning conditions—school atmosphere and financial stability—and teacher career intentions. Least surprising of all is the finding that financial stability appears to be a major contributor to teachers' intent to remain at their current schools. Elementary school teachers who work second jobs are about 70 percent as likely to say that they will stay as those who do not, but the biggest differences are at the secondary level, where middle school teachers who work second jobs are only 62 percent as likely to say they will stay, and high school teachers who work second jobs are merely 52 percent as likely to intend to stay. Counteracting the influence of financial instability are teacher perceptions of their school environment in terms of the level of trust and respect in the school. When teachers sense that there is an atmosphere of trust and respect in their school, they are between 42 percent (elementary) and 84 percent (high school) more likely to intend to stay as are their peers who do not sense the presence of such an atmosphere. This finding corresponds to a growing theoretical and empirical research base that shows that trust and respect are critical factors in improving schools.[33]

There are other strong associations between perceptions of teaching and learning conditions and career intent that, while not consistent across grade levels, are worth noting here. For instance, and as will be discussed further in our analysis of differences between responses to the 2006 and the 2007 Teaching and Learning Conditions Surveys, below, there appears to be a strong connection between school-level use of the data provided by the 2006 survey and teacher career intentions. The connection is only statistically significant at the elementary and high school levels, but the results for high school in particular are dramatic: high school teachers are over 200 percent more likely to report an intent to stay at their current schools if 25 percent or more of the teachers at their school report that results from the 2006 survey were utilized at their schools. Also, perceptions of fair performance evaluations at both the elementary and middle school levels appear to be related to career decisions, as do elementary and high school teacher perceptions of a willingness on the part of school leaders to address teacher concerns about time usage.

Finally, and quite puzzlingly, there is a strong and inconsistent relationship between career intent and perceptions of the existence of parent and community opportunities to contribute to student success. While at the middle school level teachers who sense that parents and community members have opportunities to contribute to student success are about 26 percent *more* likely to intend to stay, at the elementary and high school levels, the outcome is reversed. At the elementary level, and controlling for all other factors, teachers who believe such opportunities are present are only about 74 percent *as* likely to stay, and at the high school level, they are only about 72 percent *as* likely. This finding is especially difficult to unpack given that at all levels, teachers are more likely to intend to stay when they sense that they have support from their communities (27 percent more likely for middle school teachers, 35 percent more likely for elementary teachers, and 65 percent more likely for high school teachers). It may be very important for CCSD to investigate further how those opportunities for parents and community members are coordinated and managed, and why their presence appears to lead to such unexpected and negative teacher career intention outcomes at the elementary and high school levels.

Impact of Other Teacher and School Characteristics

The main focus of this section of the report is the impact of teaching and learning conditions on teacher attrition, but a few of the 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 21. First, it is interesting to note that teachers at schools that meet federal *NCLB*

Annual Yearly Progress targets are more likely to stay than are those at schools that do not, though results are only significant at the elementary and middle school levels. Second, and perhaps not surprisingly, when compared to mid-career teachers, novice teachers (teachers with three or fewer years of experience) are less likely to indicate that they intend to stay in their current school, a finding that is consistent across all three school levels (though only statistically significant at the middle school level). Similarly, teachers who are approaching retirement age (those with over 20 years of experience) are more likely to intend to stay, especially at the elementary school level (where the results are statistically significant). Finally, and encouragingly, there appear to be positive and significant associations across school levels between the proportion of economically disadvantaged students at a school and teacher career intent. In other words, teachers at schools with a larger proportion of economically disadvantaged students appear to be more likely to stay. This relationship holds at the high school level even when the proportion of such students at a school *grows* across years.

Two other factors also are significantly associated with career intentions, but not consistently across all levels. First, the regional designation of most schools does not generally appear to be significantly related to career intent, but teachers in the Northeast region are much less likely to indicate that they intend to stay than are teachers in the comparison region (the Southeast region), with significant and particularly negative associations between this region and career intent at the high school level. Second, and perhaps more interestingly, gender appears to play a role in career intent, but in different ways at different school levels. Female elementary and middle school teachers appear to be more likely to intend to stay in their current schools than are their male counterparts, all else being equal. This finding is consistent with research that suggests that male teachers are more likely to pursue and be awarded non-teaching administrative promotions, [34] or even to leave the profession altogether to seek greater remuneration in other fields or administrative positions. However, at the high school level, female teachers are much less likely to stay than are their male peers (only 79 percent as likely). The discrepancy does not appear to be because of a difference in career opportunities at that school level (similar proportions of male and female high school teachers—40 percent and 43 percent, respectively—believe that opportunities for advancement within the teaching profession are available to them), nor are there clear differences in where the non-stayers intend to go (relatively equal proportions of male and female high school teachers report that they intend to move to another school [14 percent and 17 percent, respectively], move to another district [10 percent each], or leave teaching altogether [9 percent each]). Because gender was not considered in the 2006 analyses, we cannot assert that this finding constitutes a trend, but it may still be valuable to CCSD to examine further this interesting outcome.

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 21.

Table 21: 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 →				65%	62%	66%
Factor or Characteristic:						
Teacher Characteristics						
Female	1.359 *	1.281 *	0.793 *	72%	67%	61%
Less than 4 years of experience	0.936	0.722 *	0.927	64%	54%	64%
More than 20 years of experience	1.474 *	1.278	1.067	73%	67%	67%
Student Characteristics						
Percent econ. disadvantaged students	1.005 *	1.019 *	1.028 *	65%	62%	67%
Change in pct. econ. disadv. students, '06-'07	0.997	0.981	1.065 *	65%	61%	67%
Percent mobile students	0.137 *	0.032 *	0.677	20%	5%	57%
Change in school size, '06-'07	0.999	0.999 *	1.000	65%	62%	66%
School met AYP	1.196 *	1.504 *	1.164	69%	71%	69%
Region (compared to Region IV, Southeast)						
Region II (N'east)	0.797	0.623	0.401 *	60%	50%	44%
Teaching and Learning Conditions (Positive vs. Negative Impression)						
Teachers protected from non-teaching duties	1.159 *	1.016	1.067	68%	62%	67%
Teachers experience minimum interruptions	1.228 *	1.006	0.960	70%	62%	65%
Teacher must work second job	0.699 *	0.617 *	0.516 *	57%	50%	50%
Safe school environment	1.115	1.153	1.315 *	68%	65%	72%
Community supports teachers	1.352 *	1.266	1.646 *	72%	67%	76%
Par./commun. contribute to stdt. success	0.743 *	1.262 *	0.719 *	58%	67%	58%
School level: 25%+ believe school uses 2006 TLC	1.199 *	0.902	2.086 *	69%	59%	80%
Atmosphere of trust and respect	1.424 *	1.844 *	1.555 *	73%	75%	75%
Admin. and teachers have shared vision	1.260 *	1.215	1.270	70%	66%	71%
Performance evaluations are fair	1.424 *	1.369 *	0.922	73%	69%	64%
Staff are recognized for accomplishments	0.989	1.261	1.466 *	65%	67%	74%
Leadership addresses concerns about leadership	1.031	1.213 *	1.143	66%	66%	69%
Leadership addresses concerns about time	1.152 *	0.996	1.316 *	68%	62%	72%
Leadership addresses concerns abt. empowerment	1.178 *	1.108	0.939	69%	64%	65%
Leadership addresses concerns abt. new tchr. supt.	1.081 *	1.055	1.114	67%	63%	68%

* = result is statistically significant

Teaching and Learning Conditions and Student Achievement

The second analysis for this final part of the 2007 study is designed to identify some of the links between multiple school factors (including teaching and learning conditions) and student achievement. It is relatively common to encounter analyses 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 these scores and various explanatory factors with some degree of *causal explanation for* those scores.[35]

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

In an effort to partially counter this potential misinterpretation, the analysis below examines the relationship between student achievement levels (as measured by the proportion of students achieving at levels 3 and 4 on the Nevada Criterion Referenced Test[36]), teaching and learning conditions, and other factors, while simultaneously accounting for the achievement levels of students before the start of the 2006-2007 school year. In other words, the analyses attempt to make links between *changes* in overall student achievement from year to year and several factors that might make those changes more likely, including teaching and learning conditions.[37] The analysis is 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 student achievement scores). Unlike the analyses employed for examining a binary choice of staying or leaving, the outcome this analysis attempts to explain is continuous (*i.e.*, the outcome for any given school is any point along a range of possible proportions of students achieving at levels 3 and 4), and the specific procedure used is called a multiple regression. Even though Clark County is a very large school district, there are only a sufficient number of schools at the elementary level to conduct this procedure with a respectable level of accuracy; thus, the regression procedure was applied to math achievement pass-rates at only the elementary level. A full explanation of this procedure, along with an explanation of the choice to use math instead of reading scores and all of the numerical results, can be found in **Appendix E: Methodology.**

Results

One of the main differences between this analysis of student achievement and the analysis conducted in 2006 is the measure of teaching and learning conditions used. For this analysis, the proxy for teaching and learning conditions is the proportion of teachers in a school who indicate that they will return to their school the following year. Because it distinguishes between a teacher's specific 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 teaching and learning conditions at a school.[38] The apparent relationship between teaching and learning conditions as measured in this manner on elementary school math achievement is both positive and statistically significant—that is, the greater the proportion of teachers who indicate that

they will stay at their current schools, the greater the proportion of students who achieve at levels 3 and 4 on the math NCRT—suggesting that better teaching and learning conditions are strongly associated with better schoolwide math achievement, *even after taking into account prior levels of student math achievement and current levels of student reading achievement.*

That said, it is important to temper this finding with a brief consideration of three additional aspects of the results. First, the level of statistical significance for this result is strong, but not quite at a level typically considered to be overwhelmingly convincing in studies of this type. Second, while teaching and learning conditions appear to explain about 16 percent of the differences in scores across schools (generally considered to be an impressive level of explanatory power), other factors included in the model– namely, school and teacher characteristics, prior student math achievement scores, and current student academic ability—explain a great deal more (about 74 percent). Finally, by being limited to conducting an analysis of the relationship between teaching and learning conditions and elementary achievement only, we are not able to generalize the results to all school levels.

What do these results tell us? At best, they suggest a link between teaching and learning conditions and student achievement at one level of schooling (elementary); at the same time, they also offer directions for critical future research. Our preceding analysis and analyses conducted for other research projects both suggest that teaching and learning conditions do indeed have an impact on student achievement across school levels, but such an impact is not likely to be definitively detectable in a single-year, snapshot study such as this one, especially when the available measures of student achievement (cross-grade school-level achievement pass-rates) are so imprecise. A more sophisticated, longitudinal study that accounts for gradual changes in teaching and learning conditions over time, that factors in other time-sensitive variables (such as administrator turnover and relative changes in student demographics), and that includes much more rigorous and precise measures of student achievement (such as grade-level scaled scores, or even student-level scores, which will allow for rigorous analyses at middle and high school levels as well, despite the low number of schools) will provide an opportunity to identify more convincingly these important but often indirect or gradual effects.

A Note on Empowerment and TLC Schools

CCSD is in the process of conducting two bold experiments with a handful of schools that could eventually have an impact on both teacher attrition and student achievement. The first of these experiments is in the designation of four Empowerment schools, or schools in which teachers and administrators have more authority to take control of teaching and learning conditions by making decisions about a variety of school components such as campus programs and staffing levels. The second experiment is the creation of a Clark County Teaching and Learning Conditions Team—comprised of practicing teachers and retired principals—which has been using survey data in its work to engage in meaningful school reforms with 16 schools and thus make educators central to the process of interest-based problem solving.

While neither of these initiatives has been in effect long enough or in a large enough number of schools to warrant the inclusion of either designation as a variable in one of the statistical models described above,[39] we believe that it is important to offer here a brief overview of some of the differences in responses on the Clark County Teaching and Learning Conditions Survey between teachers who work in Empowerment and/or TLC schools and teachers who do not work in these schools. There are several noticeable differences in the responses of educators at Empowerment schools in comparison to the responses of educators at non-Empowerment and non-TLC schools, but readers are urged to take all due precautions when interpreting the results presented below: there are only four Empowerment schools to begin with, so comparisons and contrasts are only nominally meaningful.

Empowerment Schools

There are large differences in responses (*i.e.*, differences of 10 or more percentage points) on at least two items in each domain, and in most cases, differences in responses to many items are quite large (15 percentage points or more). The greatest differences are in educator perceptions of time, professional development, leadership, and empowerment (See **Appendix F** for a complete list of all items on which there are differences of 10 points or more).

In many ways, educators at Empowerment schools believe that their time with students and colleagues is more protected, and teachers and administrators both sense less pressure to spend out-of-school time on schoolwork. Similarly, Empowerment school educators are more positive about the provision of and effectiveness of the professional development they receive.

The greatest differences, however, are in educator perceptions of the quality of leadership at their schools and in the amount of empowerment they believe they have. While Empowerment school educators are more positive about all aspects of leadership than are their non-TLC and non-Empowerment school colleagues, they are most enthusiastic about leadership's efforts to address teacher concerns, most especially in the areas of time and empowerment. Educator impressions of leadership's willingness to address concerns in these areas are reflected in the high ratings Empowerment school teachers give to items in these domain areas.

More so than in any other areas, Empowerment school teachers (appropriately) rate their empowerment—in both classroom-level and school-level arenas—higher than do their colleagues in other schools. Of particular note are their positive feelings about decision-making power and the process for making those decisions, especially in the areas of selection of classroom instructional materials, school improvement planning, and student discipline policies.

TLC Schools

Initial analyses of all 12 TLC schools revealed very few differences between educator responses at these schools and those at non-TLC and non-Empowerment schools. Where differences exist, they are in the areas of leadership and empowerment. Educators at TLC schools are less likely to sense an atmosphere of trust and respect (-13 percentage points), to feel comfortable raising issues (-13), to believe that teachers and administrators have a shared vision (-11), to note that leadership effectively communicates policy (-10), or to believe that teachers receive useful feedback about their teaching (-10). Regarding empowerment, teachers at TLC schools feel less empowered to make sound professional decisions about instruction (-12 percentage points) and to set grading and student assessment practices (-11; **Appendix F**).

In many ways, these findings are not unexpected; after all, the schools designated as TLC schools were so identified because they volunteered for the program, indicating an awareness on the part of the faculty at those schools of a need for additional work on the state of some or all of their teaching and learning conditions.

However, when the analyses focused just on the initial TLC schools (Sewell, Knudson, Deskin, Culley, and Bendorf), a slightly different, but noteworthy story arose. In examining these five TLC schools (which have been supported by district officials for two years, instead of one like the others), educators are indeed more positive about teaching and learning conditions than are their peers in other TLC schools on most issues. In particular, they are more positive about time, school-level empowerment, and leadership issues; they are also more positive about all professional development items. While some of the differences are minimal (less than ten percentage points), there are several survey items where educators in "initial TLC" schools are far more positive than their peers in the "later TLC" schools. For instance, "initial" TLC teachers are more likely to indicate that they will stay in teaching, and their faculties are more likely to have used the 2006 TLC data in promoting school improvement this past year.

Comparison of 2006 and 2007 Survey Results

In 2006, Clark County School District (CCSD) and the Clark County Education Association (CCEA), with the aid of CTQ, administered the first Teaching and Learning Conditions survey to all Clark County educators. In that initial survey, approximately 48 percent (or about 8500) of the district's 17,341 school-based licensed educators responded, and analyses of the 2006 report revealed, among a large range of important findings, several findings that are similar to 2007 findings reported above:

1. When responses from teachers and principals were compared, it was found that the two groups held very different perceptions about the quality of their schools' teaching and learning conditions—with teachers expressing far more concerns than their supervisors;

2. When teachers reported that an atmosphere of trust and mutual respect was present within their schools, then they were more likely to claim they would continue working in their current teaching positions; and

3. Positive teaching and learning conditions appeared to be associated with positive student achievement.

Comparing specific responses of the teaching and learning conditions survey participants in 2006 and 2007 is not a straightforward matter of comparing numbers across years, however. To begin with, we do not know whether an educator in 2007 who completed the survey also completed one in 2006, and, even if we did, we would not be able to match that educator's 2006 responses to her or his 2007 responses, since all surveys are anonymous. We can, however, begin to assess changes in the perceptions of educators by comparing the responses for educators who are at schools that met a minimum response rate of 35 percent of all eligible respondents in both 2006 and 2007.

Signs of Progress: Respondents Indicate More Positive Conditions for Time, Facilities and Resources, and Professional Development

To complete the following analyses, we first identified all schools that reached a response rate of at least 35 percent of all eligible educators for *both* survey years; schools with a response rate of less than 35 percent in either year were removed from the analysis. Next, we calculated the proportion of all educators and of teachers only who responded positively to the primary teaching and learning conditions statements in the five domain areas that were included in both surveys.

Across all domains, educators' perceptions about working conditions remained about the same from 2006 to 2007; however, educators did report notable progress in some areas of time usage, facilities and resources, and professional development. Indeed, with one important exception (see below), all items in these three domains were rated higher in 2007 than in 2006, and in many cases by 5 percentage points or more. There were promising positive changes of 9 percentage points or more for the following six items:

Time

- Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.
- Teachers have time available to collaborate with their colleagues.
- The non-instructional time provided for teachers in my school is sufficient.
- Teachers are protected from duties that interfere with their essential role of educating students.

Facilities & Resources

- Teachers have sufficient training and support to fully utilize the available instructional technology.

Professional Development

- Sufficient resources are available to allow teachers to take advantage of professional development activities.

With respect to professional development, educators reported progress on all 3 of the items that were on both surveys. In addition to the statement above, the proportion of educators who agreed with the two other statements in this domain increased 7 percentage points each. Likewise, on most matters of facilities and resources, educators reported progress, with one important exception: responses to the question about the level of safety at the respondent's school experienced a minor but still troubling decline of 3 percentage points. When the responses of teachers only for all of these items are examined, all of the changes in response are slightly less positive, indicating that the gulf between teachers and administrators has not only remained stable across both years but has also widened marginally (Table 22).

Table 22: Comparing Impressions of Time, Facilities and Resources, and Professional Development, 2006 and 2007

	Percent Agreeing: All Educators 2006	All Educators 2007	All Educators Change	Teachers Only 2006	Teachers Only 2007	Teachers Only Change
Time						
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	29%	40%	11	29%	40%	11
Teachers have time available to collaborate with their colleagues.	48%	59%	11	48%	58%	10
The non-instructional time provided for teachers in my school is sufficient.	40%	49%	9	39%	49%	9
Teachers are protected from duties that interfere with their essential role of educating students.	45%	53%	9	45%	53%	8
Facilities and Resources						
Teachers have sufficient training and support to fully utilize the available instructional technology.	50%	59%	9	49%	58%	9
Teachers have sufficient access to appropriate instructional materials and resources.	66%	74%	7	66%	73%	7
Professional Development						
Sufficient resources are available to allow teachers to take advantage of professional development activities.	62%	71%	9	62%	70%	8
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	50%	57%	7	49%	56%	6

Note: All figures are calculated only for schools with response rates of *35 percent or higher* for both 2006 and 2007

Evidence of positive change in the two critical domains of empowerment and leadership are not as evident, with no positive changes in either domain of more than 6 points, and with some statistically negligible but still negative changes. The one important exception to this pattern is in the area of leadership responses to issues affecting new teacher support, which saw an improvement over 2006 responses of about 7 percentage points. Again, as was the case with the other three domains, changes in teacher responses for all of these items are slightly less positive (Table 23).

Table 23: Comparing Impressions of Leadership and Empowerment, 2006 and 2007

	Percent Agreeing: All Educators 2006	All Educators 2007	All Educators Change	Teachers Only 2006	Teachers Only 2007	Teachers Only Change
Empowerment						
Teachers are recognized as educational experts.	48%	54%	6	47%	52%	5
Teachers play a large role in setting grading and student assessment practices.	44%	50%	6	44%	50%	6
Leadership						
School leadership makes a sustained effort to address teacher concerns about new teacher support.	53%	61%	7	53%	59%	6

Note: All figures are calculated only for schools with response rates of *35 percent or higher* for both 2006 and 2007

In both 2006 and 2007, about 72 percent of all educators agreed that their school is a good place to work and learn. However, it should be noted that middle and high school teacher responses for this item declined between 2006 and 2007 by about 3 percentage points. As before, such small movement on one item for only a subset of teachers is not conclusive grounds for concern, but it may be further evidence of the importance of the trends noted earlier in this report of less positive perceptions of teaching and learning conditions in middle and high school facilities.

Readers are urged to keep two caveats in mind as they consider the data presented in this section. First, school faculty populations change from year to year, and, just because a school's response rate for both years was above the minimum rate of 35 percent, that neither means that the same teachers who were present at the school in 2006 were also present in 2007, nor does it mean that the same teachers who responded in 2006 responded again in 2007. Second, and perhaps more importantly, while there are some teaching and learning conditions that can be changed virtually overnight (such as the frequency with which school leaders communicate with parents and community members), most teaching and learning conditions are the result of years of practice and policy that might not be so easily overturned. Consequently, the changes noted in this section are for the most part relatively small. In addition, since they are calculated based on only two years of data, they do not technically count as trends, but they might perhaps more accurately be read as implied directions in which CCSD appears to be headed.

Evidence of Impact: Use of 2006 TLC Survey Results and Changes in Perceptions of Teaching and Learning Conditions

It is striking that a mere 22 percent of all educators believe that the results of the 2006 Teaching and Learning Conditions Survey are being utilized at their schools (Table 18, above).[40] As we explored in earlier sections, in some cases there appears to be a relationship between use of the 2006 data and teacher attrition. We provide additional information here about survey data usage and changes in perceptions of teaching and learning conditions.

To explore these relationships, we employed a simple statistical method called an *independent sample t-test* to compare changes in perceptions of teaching and learning conditions between 2006 and 2007 at two types of schools to determine if those differences were meaningful or merely random. For the comparison, we placed each school that met the minimum 35 percent response rate in both 2006 and 2007 into one of two groups, based on the proportion of educators at that school who believe that 2006 TLC Survey data were utilized at their schools. The two groups are: (a) schools in which fewer than 25 percent of educators believe the data were used, and (b) schools in which 25 percent or more of educators believe the data were used. Readers should note that, because of the relatively small number of middle and high schools that met the minimum response threshold, we generated comparisons for elementary schools only; thus, readers should exercise all due caution when interpreting the results.

The results suggest that schools that used TLC Survey data experienced greater changes in educators' perceptions of teaching and learning conditions. As shown in Table 24, there are several statistically meaningful differences between schools that did and did not use the data in changes in educators' perceptions of teaching and learning conditions between 2006 and 2007. Overall, changes in educators' perceptions are larger and more positive in schools in which more educators believe the 2006 results were used. On the other side of the spectrum, schools that report *infrequent* use of 2006 survey data saw the proportion of educators with positive perceptions of teaching and learning conditions actually *decrease* in a majority of cases.

More specifically, schools in which a larger proportion of educators believe that the data were used saw positive and large changes in educator perceptions of such areas of empowerment as group problem-solving and the trust placed in teachers to make sound professional decisions. There were even more significant differences in the area of leadership, with educators in schools that utilized the data indicating positive changes in levels of trust and mutual respect, comfortableness in raising concerns and in the degree to which leaders are perceived to address those concerns, and in many areas of leadership communication. Perhaps most importantly, the overall perception of leadership in general increased in schools in which educators perceive that the 2006 data were utilized. While an analysis of this type alone does not definitively demonstrate that data usage and improvement in perceptions of teaching and learning conditions are directly linked, it does offer a compelling argument for encouraging the use of the 2007 survey results and for continuing the work of the Teaching and Learning Conditions Team.

Table 24: Difference in Changes in Elementary Educator Perceptions of Working Conditions, by Use of 2006 TLC Data

Percent in a School Indicating that 2006 TLC Survey Results are Used*	Less than 25 Percent	25 Percent or More	Difference	Sig.
Number of Schools	74	51		
	Average change in response:			
Empowerment				
Teachers are trusted to make sound professional decisions about instruction.	0.001	0.105	0.104	**
In this school we take steps to solve problems.	-0.076	0.059	0.134	***
The faculty has an effective process for making group decisions and solving problems.	-0.044	0.082	0.126	***
Leadership				
There is an atmosphere of trust and mutual respect within the school.	-0.058	0.068	0.126	***
Teachers feel comfortable raising issues and concerns that are important to them.	-0.044	0.067	0.111	***
The school leadership consistently enforces rules for student conduct.	-0.081	0.050	0.131	***
The school administration and teachers have a shared vision.	-0.070	0.057	0.128	***
Teacher performance evaluations are fair in my school.	-0.021	0.094	0.115	***
School leaders effectively communicate policies.	-0.083	0.049	0.132	***
Teachers receive feedback that can help them improve teaching.	-0.033	0.073	0.107	***
Teachers are recognized for accomplishments.	-0.017	0.088	0.105	***
The school leadership makes a sustained effort to address teacher concerns about:				
Leadership issues	-0.050	0.077	0.126	***
Facilities and resources	-0.036	0.076	0.112	***
Overall, the school leadership in my school is effective.	-0.067	0.077	0.144	***

* *Overall elementary rate = 23 percent*

** = p<0.01
*** = p<0.001

Conclusions

The survey data and analyses presented herein suggest that the Clark County School District has developed a solid foundation on which to continue to improve teaching and learning conditions that will support teacher retention and increased student achievement. CCSD—the fastest-growing district in the nation (and the fifth-largest)—faces a number of extraordinary challenges as a result of growth in the student population as well as increasing ethnic and linguistic diversity. Extraordinary efforts are yielding solid results for students, and continued efforts to improve teaching and learning conditions will enable more of the district's educators to be successful.

Indeed, we found many positive trends in each domain assessed, but there is still much room for growth. For example, educators are least likely to note the presence of positive teaching and learning conditions in the areas of time and empowerment. In addition, the district's least experienced teachers view their teaching and learning conditions less favorably than do their more experienced peers. The most critical differences between the perceptions of novice and experienced teachers are in the area of time, where novice teachers appear to experience more in-school and out-of-school pressures than do their veteran colleagues. We were surprised at the small but not insignificant number of inexperienced teachers who actually serve in mentoring roles, and we were concerned by the finding that almost half of the new teachers surveyed—48 percent—report having to work second jobs. If novices are working second jobs, they will have even more difficulty learning the knowledge and skills needed to teach the district's diverse students.

No less important is the fact that perceptions of many teaching and learning conditions appear to be quite different across various segments of the CCSD educator population. For example, elementary teachers tend to hold more positive views than their secondary counterparts (except in the area of empowerment), and in some areas the differences are quite considerable. For example, 69 percent of the district's elementary teachers agree that "professional development activities enhance teacher skills as instructional leaders," but only 46 percent of the district's high school teachers agree. Furthermore, administrator and teacher perceptions of teaching and learning conditions also vary widely—with administrators seeing the teachers' "world" much more positively than do teachers themselves. As with differences across school levels, these differences across positions can be dramatic, such as in the case of the 59 percentage points that separate principal and teacher perceptions of the role that teachers play in school improvement planning. There are also several differences of opinion across positions in the area of professional development: what teachers say they need, what administrators believe they need, and what teachers actually receive in terms of professional development rarely coincide.

We were also interested in learning whether different views exist among district educators by virtue of their region or whether they taught in TLC or Empowerment schools, and whether

perceptions of conditions changed between 2006 and 2007. While we found few substantial differences across these divisions, it was encouraging to learn that educators in the Education Services/Student Support Services region—who often work with the district's most challenging students—hold very positive impressions of their empowerment at the classroom level, and that Empowerment school educators report generally more positive teaching and learning conditions in the area of leadership and empowerment. There are as yet few changes in perception across survey years, but it will take more than one year to improve teaching and learning conditions in any one school, and the connections we found between positive growth in perceptions and the use of survey data at a school is heartening. Indeed, there appears to be a strong connection between school-level use of the data provided by the 2006 survey and teacher career intentions. Unfortunately, only one in five district educators report that the results of the 2006 survey are being utilized at their schools.

Our statistical analyses of the data reveal for the second year in a row that teaching and learning conditions, teacher retention, and student achievement often go hand-in-hand — findings that stood up even though our analyses in both cases were somewhat more rigorous than they were in 2006. However, 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 detailed student achievement data, the connections between teaching and learning conditions, student achievement, and teacher retention suggested by many of these analyses will remain less powerful than they can be.

Next Steps

Both the research findings and educator feedback suggest the following recommendations:

- Administrators should strive to provide greater time protection for their less experienced teachers, and efforts should be made to provide those teachers and their administrators with new methods for making that possible.

- The differences among educators at different school levels and across different positions in their impressions of the state of professional development strongly suggest that the district should conduct a thorough review or audit of the district's approaches to crafting and providing professional development.

- Mentoring appears to matter for teacher retention, but both the quality and quantity of mentoring appears to vary widely. Thus, the district also should conduct a thorough review or audit of its mentoring efforts. Given the enormous and constantly expanding mentoring needs of the district and the high cost of providing sound on-the-ground mentoring, it may be prudent to consider some form of virtual mentoring.

- The wide disparities between the perceptions of administrators and teachers documented in CCSD is not unusual; we have found similar disparities in our other state teaching and learning conditions studies as well. It is an important finding—a finding that calls for school-based, data-driven teaching and learning conditions conversations and professional development for administrators and teacher leaders alike. The district 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. 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 data suggest that the district has made some progress in improving teaching and learning conditions, perhaps most notably in the Empowerment schools. We recommend that the district undertake an extensive case-study research and development effort to uncover exactly how teachers and administrators in targeted schools have improved their teaching and learning conditions—knowledge that cannot be gained via survey data alone.

- The results of statistical analyses conducted for this report and for the 2006 report are both encouraging and informative, but they suffer from a dearth of precise and detailed data. The district should work with the State of Nevada to develop teacher, student, and administrator data systems that can track teacher and administrator teaching and learning conditions survey responses longitudinally and link these data with actual teacher turnover figures and robust measures of student achievement.

Finally, as teaching and learning conditions continue to improve in Clark County, it will become very important for district educators to begin to determine what constitutes "positive" results. In other words, when 53 percent of the district's teachers agree that they play a large or primary role in devising teaching techniques, is this a "good" or "positive" outcome, or not? Fifty-three percent agree, but nearly as many do not, and only about 16 percent of the district's teachers strongly agree with this statement. If is this is a negative survey result, what would a positive one look like?

Clark County district administrators and the TLC team should be commended for their efforts to improve teaching and learning conditions. Our two years of data collection and analyses have uncovered many positive trends in addition to the areas in which the district needs to continue to focus. CCSD is showing how administrators and union leaders can and must work together to make teaching the profession students deserve, and the ongoing tradition of committed educators and comprehensive, sustained efforts to improve teaching and learning conditions will ensure that the district's educators are able to help every child reach her or his fullest potential.

Appendix A. Response Rates by School

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
ACADEMY FOR INDIVIDUALIZED INSTRUCTION	15	7	47%
ADAMS ES	45	27	60%
ADCOCK ES	45	35	78%
ADULT EDUCATION	11	5	45%
ADULT EL ACQ SVS (AELAS)	7	1	14%
ADVANCED TECH ACADEMY	67	37	55%
ALAMO TONY ES	68	32	47%
ALLEN ES	54	11	20%
ANTONELLO ES	57	51	89%
ARBOR VIEW HS	106	64	60%
ATKINSON GATES CDC	13	0	0%
ATTC	27	14	52%
BARTLETT ES	53	12	23%
BASIC HS	116	88	76%
BASS ES	60	11	18%
BATTERMAN ES	60	37	62%
BEATTY ES	55	20	36%
BECKER MS	71	57	80%
BECKLEY ES	61	20	33%
BELL ES	82	43	52%
BENDORF ES	55	36	65%
BENNETT ES	32	11	34%
BILBRAY ES	61	24	39%
BILTMORE CONTINUATION HIGH SCHOOL	14	7	50%
BOB BAILEY MS	77	11	14%
BONANZA HS	116	22	19%
BONNER ES	52	23	44%
BOOKER ES	30	20	67%
BOULDER CITY HS	43	28	65%
BOWLER GRANT ES	47	8	17%
BOWLER JOSEPH ES	38	34	89%
BRACKEN MAGNET ES	41	19	46%
BRIDGER MS	89	68	76%
BRINLEY MS	62	29	47%
BROOKMAN EILEEN ES	58	37	64%
BROWN MS	55	16	29%
BRUNER ES	53	42	79%
BRYAN, RICHARD ES	46	43	93%
BRYAN, ROGER ES	53	45	85%
BUNKER ES	50	36	72%
BURK ACAD PREP CNT	21	5	24%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
CADWALLADER MS	85	41	48%
CAHLAN ES YRS-EDISON SCH	56	24	43%
CAMBEIRO ES	52	29	56%
CANARELLI MS	83	38	46%
CANNON MS	59	37	63%
CANYON SPRINGS HS	127	4	3%
CARL ES	54	27	50%
CARSON PR6	31	29	94%
CARTWRIGHT ES	50	8	16%
CASHMAN MS	63	41	65%
CENTENNIAL HS	140	58	41%
CHAPARRAL HS	132	45	34%
CHEYENNE HS	120	19	16%
CHILD HAVEN	31	1	3%
CHRISTENSEN ES	45	33	73%
CIMARRON-MEMORIAL HS	146	57	39%
CLARK HS	138	66	48%
COMMUNITY COLL EAST HS	5	3	60%
COMMUNITY COLL SOUTH HS	4	4	100%
COMMUNITY COLL WEST HS	7	4	57%
CONNERS ES	50	25	50%
CORONADO HS	121	71	59%
CORTEZ ES	63	27	43%
CORTNEY JHS	80	32	40%
COWAN ACAD CNT	16	12	75%
COWAN ACAD CNT CRED RETRV	1	0	0%
COX CLYDE ES	72	41	57%
COX DAVID ES	51	7	14%
COZINE ES	60	33	55%
CRAIG ES	65	26	40%
CRAM MS	82	34	41%
CRESTWOOD ES YRS-EDISON SC	63	5	8%
CULLEY ES	69	61	88%
CUNNINGHAM ES	69	34	49%
DAILEY ES	53	32	60%
DARNELL MARSHALL C ES	45	12	27%
DEARING ES	63	19	30%
DECKER ES	59	16	27%
DEL SOL HS	119	65	55%
DEL WEBB MS	61	41	67%
DERFELT ES	39	20	51%
DESERT PINES HS	158	88	56%
DESERT ROSE ADULT HS	20	19	95%
DESKIN ES	53	47	89%
DETWILER ES	71	46	65%
DISKIN ES	55	20	36%
DONDERO ES	49	30	61%
DOOLEY ES	37	20	54%
DURANGO HS	134	33	25%
EARL IRA ES	64	24	38%
EARL MARION ES	52	40	77%
EDWARDS ES	57	25	44%
EISENBERG ES	47	20	43%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
ELDORADO HS	158	64	41%
ELIZONDO ES	60	6	10%
ESCOBEDO MIDDLE SCHOOL	3	2	67%
FERRON ES	56	32	57%
FERTITTA MS	80	35	44%
FINDLAY MS	68	35	51%
FITZGERALD ES	43	11	26%
FONG ES	53	32	60%
FOOTHILL	110	39	35%
FREMONT MS	61	36	59%
FRENCH ES	40	5	13%
FRIAS ES	58	25	43%
FYFE ES	52	22	42%
GALLOWAY ES	52	12	23%
GAREHIME ES	52	46	88%
GARRETT MS	36	15	42%
GARSIDE MS	78	41	53%
GEHRING ES	49	24	49%
GIBSON ES	47	39	83%
GIBSON MS	65	27	42%
GILBERT MAGNET ES	39	18	46%
GIVENS ES	50	14	28%
GLOBAL COMM HS - MORRIS	18	1	6%
GOLDFARB ES	51	21	41%
GOOLSBY ES	46	22	48%
GOYNES ES	72	57	79%
GRAGSON ES	69	46	67%
GRAY ES	39	16	41%
GREEN VALLEY HS	131	52	40%
GREENSPUN MS	76	34	45%
GRIFFITH ES	47	36	77%
GUINN MS	54	29	54%
GUY ES	49	39	80%
HANCOCK ES	43	15	35%
HARMON ES	64	49	77%
HARNEY MS	87	34	39%
HARRIS ES	48	13	27%
HAYDEN ES	49	26	53%
HAYES ES	52	16	31%
HEARD ES	45	11	24%
HECKETHORN ES	44	29	66%
HERR ES	47	31	66%
HERRON ES	75	28	37%
HEWETSON ES	66	45	68%
HICKEY ES	56	45	80%
HIGH DESERT CORRECT CNT	9	2	22%
HILL ES	43	11	26%
HINMAN ES	42	19	45%
HOGGARD MAGNET ES	35	12	34%
HOLLINGSWORTH ES	70	34	49%
HUGHES MS	32	17	53%
HUMMEL ES	55	10	18%
HYDE PARK MS	86	53	62%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
INDIAN SPRINGS ES	12	5	42%
INDIAN SPRINGS HS	15	11	73%
INDIAN SPRINGS MS	8	5	63%
IVERSON MERVIN ES	67	23	34%
JACOBSON ES	40	20	50%
JEFFERS ES	57	24	42%
JEFFREY ACAD CNTR BEH PROG	11	0	0%
JOHNSON MS	69	20	29%
JOHNSTON, CARROLL	65	28	43%
JYDSTRUP ES	49	13	27%
KAHRE ES	42	26	62%
KATZ ES	44	24	55%
KELLER MS	77	32	42%
KELLY ES	36	14	39%
KESTERSON ES	47	8	17%
KIM ES	52	26	50%
KING MARTHA P ES	34	15	44%
KING ML JR ES	39	15	38%
KNUDSON MS	74	50	68%
LAKE ES	75	32	43%
LAMPING ES	76	28	37%
LAS VEGAS ACADEMY	82	38	46%
LAS VEGAS HS	149	68	46%
LAUGHLIN HS	33	15	45%
LAWRENCE JHS	71	38	54%
LEAVITT MS	88	53	60%
LEGACY	95	32	34%
LIBERTY HS	90	44	49%
LIED MS	78	38	49%
LINCOLN ES-EDISON SCH	56	25	45%
LONG ES	57	48	84%
LOWMAN ES	60	27	45%
LUMMIS ES	41	22	54%
LUNT ES	54	20	37%
LYNCH ES YRS-EDISON SCH	56	10	18%
LYON MS	32	21	66%
MACK ES	44	17	39%
MACK MS	80	68	85%
MACKEY MAGNET ES	43	18	42%
MANCH ES	46	36	78%
MANNION MS	97	72	74%
MARTIN MS	77	56	73%
MARTINEZ ES	58	15	26%
MAY ES	50	32	64%
MCCALL PR6	44	44	100%
MCCAW ES	51	25	49%
MCDONIEL ES	49	15	31%
MCMILLAN ES	52	24	46%
MCWILLIAMS ES	54	19	35%
MENDOZA ES	53	40	75%
MILEY ACH CTR SEC	21	0	0%
MILLER	26	15	58%
MILLER MS	80	66	83%
MILLER SANDY MAGNET ES	44	27	61%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
MITCHELL ES	29	18	62%
MOAPA VALLEY HS	39	25	64%
MOJAVE HS	121	50	41%
MOLASKY JHS	78	26	33%
MONACO MS	85	55	65%
MOORE ES	65	41	63%
MORRIS ACAD SUNSET PROG	2	0	0%
MORRIS BEHAVIOR JR/SR	10	3	30%
MORROW ES	57	30	53%
MT VIEW ES	47	18	38%
NEAL ES	51	25	49%
NEWTON ES	46	18	39%
O'CALLAGHAN MS	72	32	44%
OBER ES	50	33	66%
ORR MS	58	53	91%
PALO VERDE HS	152	45	30%
PARADISE ES	52	24	46%
PARK ES EDISON SCH	60	55	92%
PARSON ES	42	28	67%
PERKINS ES	21	15	71%
PETERSEN D PROF DEV YRS	61	39	64%
PETERSON CNT BEH PROG	15	14	93%
PIGGOTT ES	38	19	50%
PITTMAN ES	51	32	63%
PRIEST ES	57	21	37%
RANCHO HS	175	79	45%
RED ROCK ES	43	26	60%
REED ES	58	42	72%
REID ES	3	3	100%
RHODES ES	54	32	59%
RIES ES	56	11	20%
ROBERTS ES	55	28	51%
ROBISON MS	70	42	60%
ROGERS ES	53	2	4%
ROGICH MS	78	30	38%
RONNOW ES YRS-EDISON SCH	65	32	49%
RONZONE ES	60	39	65%
ROWE ES	51	37	73%
RUNDLE ES	68	38	56%
SANDY VALLEY ES	31	17	55%
SAVILLE MS	77	35	45%
SAWYER MS	74	17	23%
SCHERKENBACH ES	58	24	41%
SCHOFIELD MS	77	48	62%
SCHORR, STEVEN ES	43	16	37%
SEDWAY MS	80	55	69%
SEWELL ES	47	42	89%
SHADOW RIDGE HS	112	61	54%
SIERRA VISTA HS	157	60	38%
SILVERADO HS	126	76	60%
SILVESTRI JHS	78	23	29%
SIMMONS ES	67	44	66%
SMITH HAL ES	54	24	44%
SMITH HELEN M ES	38	31	82%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
SMITH JD MS	66	44	67%
SNCC HS @JEAN	15	0	0%
SNVTC	108	46	43%
SNWCC-SO NV WOMEN\'S COR CTR	7	0	0%
SNYDER ES	66	25	38%
SOUTH CONTINUATION @870	13	0	0%
SOUTHERN DESERT CORR CNT	9	0	0%
SPRING MT YO CAMP	14	2	14%
SPRING VALLEY HS	122	34	28%
SQUIRES ES	60	25	42%
ST SUPPORT PROG	16	0	0%
STANFORD ES	50	16	32%
STATON ES	55	12	22%
STEELE, JUDITH	53	15	28%
STEWART	35	6	17%
SUMMIT VIEW YO CORR CNT	12	6	50%
SUNRISE ACRES ES	64	51	80%
SW BEH PROG	12	2	17%
SWAINSTON MS	80	58	73%
TANAKA ES	53	17	32%
TARKANIAN, LOIS & JERRY	49	26	53%
TARR ES	42	37	88%
TARTAN ES	87	35	40%
TATE ES	60	26	43%
TAYLOR GLEN ES	53	27	51%
TAYLOR, ROBERT ES	46	24	52%
THIRIOT ES	42	27	64%
THOMAS ES	60	17	28%
THOMPSON ES	51	31	61%
THORPE ES	59	28	47%
TOBLER ES	39	29	74%
TOMIYASU ES	48	8	17%
TREEM ES	41	26	63%
TWIN LAKES ES	44	22	50%
TWITCHELL ES	58	4	7%
ULLOM ES	52	26	50%
VALLEY HS	166	72	43%
VANDERBURG ES	53	16	30%
VARIETY ES	33	1	3%
VEGAS VERDES ES	58	27	47%
VIRGIN VALLEY ES	55	29	53%
VIRGIN VALLEY HS	42	21	50%
VIRTUAL HIGH SCHOOL	12	7	58%
VON TOBEL MS	74	22	30%
WALKER J MARLAN ES	87	49	56%
WARD ES	61	38	62%
WARD, KITTY	54	30	56%
WARREN ES	51	14	27%
WASDEN ES	40	18	45%
WASHINGTON CONT	13	3	23%
WATSON ES	52	23	44%
WENGERT ES	53	28	53%
WEST PREP MS/HS	65	43	66%
WESTERN HS	123	52	42%

Appendix A. Response Rates by School (continued)

District / Site Name Clark County	Number of Educators 18,602	Number Who Completed Survey 8,959	Percent who Completed Survey 48%
WHITE MS	76	45	59%
WHITNEY ES	49	30	61%
WIENER ES	47	27	57%
WILHELM ES	70	11	16%
WILLIAMS TOM ES	64	35	55%
WILLIAMS WENDELL ES	40	14	35%
WOLFE EVA ES	53	32	60%
WOLFF ELISE ES	54	14	26%
WOODBURY MS	56	26	46%
WOOLLEY ES	50	25	50%
WRIGHT, WILLIAM ES	77	23	30%
WYNN ES	64	30	47%

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

Domain:	Stayer	Mover	Leaver	Range of Percentage Points
Time				
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	41%	32%	29%	12
Teachers have time available to collaborate with their colleagues.	61%	46%	46%	15
The non-instructional time provided for teachers in my school is sufficient.	55%	36%	37%	19
Teachers are protected from duties that interfere with their essential role of educating students.	59%	37%	39%	22
Efforts are made to minimize the amount of routine administrative paperwork* I am required to do.	48%	26%	30%	22
Teachers are allowed to focus on educating students with minimal interruption.	62%	39%	40%	23
It is necessary for me to work a second job during the regular school yea	40%	48%	56%	16
Facilities and Resources				
Teachers have sufficient access to appropriate instructional materials and resources.	76%	58%	62%	18
Teachers have sufficient access to instructional technology, including computers, printers, software and internet access.	78%	64%	67%	14
Teachers have sufficient training and support to fully utilize the available instructional technology.	61%	45%	50%	16
Teachers have access to reliable communication technology, including phones, faxes and email.	87%	77%	78%	10
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	74%	54%	59%	20
Teachers have sufficient access to a broad range of professional personnel.	74%	55%	56%	19
Teachers and staff work in a school environment that is clean and well maintained.	76%	58%	65%	18
Teachers and staff work in a school environment that is safe.	81%	58%	66%	23

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

Domain:	Stayer	Mover	Leaver	Range of Percentage Points
Empowerment - Classroom Level Strand				
Teachers play a large or primary role in:				
Selecting instructional materials and resources	43%	23%	27%	20
Devising teaching techniques	60%	34%	43%	26
Setting grading and student assessment practices	58%	35%	40%	23
Determining the requirements of lesson plans	41%	23%	29%	18
Empowerment - School-Level Strand				
Teachers are recognized as educational experts.	61%	30%	37%	31
Opportunities for advancement within the teaching profession (other than administration) are available to me.	54%	38%	35%	19
Teachers are centrally involved in decision-making about educational issues.	48%	21%	28%	27
Teachers are trusted to make sound professional decisions about instruction.	66%	34%	44%	32
In this school we take steps to solve problems.	73%	34%	48%	39
The faculty has an effective process for making group decisions and solving problems.	56%	22%	33%	34
Professional development activities enhance teacher skills as an instructional leaders.	68%	46%	47%	22
Teachers are supported by the community in which they teach.	53%	32%	31%	22
Parents and community members have opportunities to contribute to students' success.	79%	63%	65%	16
Teachers play a large or primary role in:				
Determining the content of in-service professional development programs	24%	7%	13%	17
Establishing and implementing policies and student discipline	34%	15%	20%	19
Providing input on how the school budget will be spent	18%	6%	10%	12
School improvement planning	37%	15%	22%	22

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

Domain:	Stayer	Mover	Leaver	Range of Percentage Points
Leadership				
There is an atmosphere of trust and mutual respect within the school.	69%	26%	44%	43
The school leadership communicates clear expectations to students and parents.	76%	41%	54%	35
The faculty are committed to helping every student learn.	88%	74%	76%	14
Teachers feel comfortable raising issues and concerns that are important to them.	64%	25%	39%	39
The school leadership consistently enforces rules for student conduct.	66%	35%	43%	31
Opportunities are available for members of the community to contribute actively to this school's success.	73%	48%	56%	25
The school improvement team provides effective leadership at this school.	56%	25%	32%	31
The school administration and teachers have a shared vision.	67%	26%	41%	41
The leadership effectively communicates policies.	71%	33%	47%	38
Teacher performance evaluations are fair in my school.	79%	46%	58%	33
Teachers receive feedback that can help them improve teaching.	75%	42%	53%	33
Staff members are recognized for accomplishments.	77%	44%	56%	33
School leadership makes a sustained effort to address teacher concerns about:				
Leadership issues	53%	19%	31%	34
Facilities and resources	69%	38%	51%	31
The use of time in my school	62%	28%	38%	34
Professional development	69%	40%	49%	29
Empowering teachers	60%	23%	35%	37
New teacher support	67%	38%	48%	29
Overall, the school leadership in my school is effective.	69%	27%	46%	42

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

Domain:	Stayer	Mover	Leaver	Range of Percentage Points
Professional Development				
Sufficient resources are available to allow teachers to take advantage of professional development activities.	75%	55%	60%	20
School-based PD provides teachers with knowledge and skills most needed to teach effectively.	66%	43%	46%	23
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	60%	51%	41%	19
Professional development has provided you with strategies that you have incorporated into your instructional delivery methods.	75%	62%	62%	13
Professional development has proved useful to you in your efforts to improve student achievement.	70%	53%	52%	18

Appendix C. Perceptions of Teaching and Learning Conditions, by Position

Domain:	Teachers	Other Educ. Pro-fessionals	Assistant Principals	Principals	Difference between Principals and Teachers
Time					
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	37%	33%	56%	65%	27
Teachers have time available to collaborate with their colleagues.	56%	54%	79%	79%	23
The non-instructional time provided for teachers in my school is sufficient.	48%	48%	66%	73%	25
Teachers are protected from duties that interfere with their essential role of educating students.	52%	50%	79%	86%	34
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	41%	37%	44%	58%	17
Teachers are allowed to focus on educating students with minimal interruption.	54%	52%	78%	88%	34
It is necessary for me to work a second job during the regular school year.	44%	43%	13%	12%	-32
Facilities and Resources					
Teachers have sufficient access to appropriate instructional materials and resources.	70%	75%	92%	99%	28
Teachers have sufficient access to instr. tech., incl. computers, printers, software and internet access.	74%	79%	89%	92%	19
Teachers have sufficient training and support to fully utilize the available instructional technology.	56%	64%	73%	75%	19
Teachers have access to reliable communication technology, including phones, faxes and email.	84%	86%	92%	93%	10
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	68%	76%	90%	94%	26
Teachers have sufficient access to a broad range of professional personnel.	67%	73%	88%	89%	22
Teachers and staff work in a school environment that is clean and well maintained.	71%	75%	86%	93%	23
Teachers and staff work in a school environment that is safe.	74%	74%	93%	96%	22

Appendix C. Perceptions of Teaching and Learning Conditions, by Position (continued)

Domain:	Teachers	Other Educ. Pro-fessionals	Assistant Principals	Principals	Difference between Principals and Teachers
Empowerment - School Level					
Teachers are recognized as educational experts.	51%	58%	81%	93%	42
Opportunities for advancement within the teaching profession (other than admin.) are available to me.	48%	47%	54%	71%	23
Teachers are centrally involved in decision-making about educational issues.	39%	45%	75%	94%	55
Teachers are trusted to make sound professional decisions about instruction.	56%	57%	88%	93%	37
In this school we take steps to solve problems.	61%	69%	93%	96%	35
The faculty has an effective process for making group decisions and solving problems.	46%	52%	77%	91%	45
Professional development activities enhance teacher skills as an instructional leaders.	60%	69%	90%	97%	36
Teachers are supported by the community in which they teach.	46%	52%	72%	77%	32
Parents and community members have opportunities to contribute to students' success.	74%	75%	87%	95%	21
Teachers play a large or primary role in:					
Determining the content of in-service professional development programs	19%	26%	47%	67%	48
Establishing and implementing policies and student discipline	28%	27%	40%	62%	34
Providing input on how the school budget will be spent	14%	19%	32%	60%	46
School improvement planning	30%	39%	64%	89%	59
At this school we utilize results from the 2006 Teaching and Learning Conditions (TLC) survey.	21%	27%	35%	47%	26
My school would benefit from addnl. supt. from the TLC team in utilizing TLC data for school improvement.	42%	39%	43%	32%	-10
Empowerment - Classroom Level					
Teachers play a large or primary role in:					
Selecting instructional materials and resources	37%	42%	60%	76%	40
Devising teaching techniques	52%	50%	71%	83%	31
Setting grading and student assessment practices	50%	43%	62%	73%	23
Determining the requirements of lesson plans	36%	36%	43%	51%	15

Appendix C. Perceptions of Teaching and Learning Conditions, by Position (continued)

Domain:	Teachers	Other Educ. Pro-fessionals	Assistant Principals	Principals	Difference between Principals and Teachers
Leadership					
There is an atmosphere of trust and mutual respect within the school.	57%	59%	77%	94%	38
The school leadership communicates clear expectations to students and parents.	66%	70%	94%	97%	32
The faculty are committed to helping every student learn.	83%	78%	85%	93%	10
Teachers feel comfortable raising issues and concerns that are important to them.	52%	58%	85%	93%	40
The school leadership consistently enforces rules for student conduct.	56%	66%	93%	95%	39
Opps. are available for members of the community to contribute actively to this school's success.	65%	72%	86%	92%	27
The school improvement team provides effective leadership at this school.	46%	53%	77%	92%	46
The school administration and teachers have a shared vision.	55%	55%	76%	93%	39
The leadership effectively communicates policies.	59%	66%	89%	96%	37
Teacher performance evaluations are fair in my school.	69%	65%	96%	98%	29
Teachers receive feedback that can help them improve teaching.	65%	64%	95%	98%	33
Staff members are recognized for accomplishments.	67%	70%	94%	97%	30
School leadership makes a sustained effort to address teacher concerns about:					
Leadership issues	43%	49%	86%	93%	50
Facilities and resources	60%	64%	94%	96%	36
The use of time in my school	51%	58%	91%	95%	43
Professional development	60%	65%	92%	95%	35
Empowering teachers	48%	57%	89%	94%	46
New teacher support	58%	64%	93%	98%	40
Overall, the school leadership in my school is effective.	57%	62%	87%	91%	34
Professional Development					
Sufficient resources are available to allow teachers to take advantage of professional development activities.	68%	70%	88%	88%	20
School-based PD provides teachers with knowledge and skills most needed to teach effectively.	58%	63%	89%	90%	32
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	55%	64%	79%	78%	23

Appendix D. Perceptions of Teaching and Learning Conditions, by School District Region

Region designations are for the 2007-2008 school year; some schools were in different regions at the time of the 2007 survey.

Domain:	East	N'east	N'west	S'east	S'west	Supt's	Ed. Svcs. / St. Supt.
Time							
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	35%	36%	41%	34%	38%	43%	37%
Teachers have time available to collaborate with their colleagues.	61%	54%	59%	52%	61%	54%	45%
The non-instructional time provided for teachers in my school is sufficient.	47%	49%	54%	46%	48%	50%	47%
Teachers are protected from duties that interfere with their essential role of educating students.	52%	53%	56%	51%	52%	52%	55%
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	37%	41%	45%	40%	40%	40%	46%
Teachers are allowed to focus on educating students with minimal interruption.	53%	51%	59%	52%	59%	53%	54%
It is necessary for me to work a second job during the regular school year.	43%	42%	42%	41%	44%	45%	52%
Teachers: I have more than 5 hours of non-instructional time available a week.	17%	18%	20%	16%	18%	23%	18%
Teachers: I spend more than 5 hours a week on school-related activities outside of the regular school day.	67%	68%	67%	70%	68%	73%	56%
Non-Teachers: Teachers spend more than 5 hours of non-instructional time available a week.	27%	22%	33%	24%	30%	25%	17%
Non-teachers: Teachers spend more than 5 hrs./wk on school-related activities outside the reg. school day.	59%	47%	52%	57%	57%	48%	39%
Teachers: More than 5 hrs ./wk outside the workday are spent on school activities involving student interaction.	11%	11%	13%	15%	10%	19%	18%
Teachers: More than 5 hrs./week outside workday are spent on non-student-contact school-related activities.	54%	55%	54%	56%	57%	56%	44%
In a typical year, more than 11 days/yr. beyond current contract devoted to school and prof. responsibilities.	47%	46%	47%	49%	46%	49%	39%
Facilities and Resources							
Teachers have sufficient access to appropriate instructional materials and resources.	68%	70%	77%	75%	70%	68%	64%
Teachers have sufficient access to instr. tech., incl. computers, printers, software and internet access.	70%	73%	79%	78%	74%	71%	74%
Teachers have sufficient training and support to fully utilize the available instructional technology.	51%	55%	59%	64%	57%	56%	63%
Teachers have access to reliable communication technology, including phones, faxes and email.	83%	83%	87%	87%	85%	78%	81%
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	65%	66%	74%	78%	66%	61%	78%
Teachers have sufficient access to a broad range of professional personnel.	64%	68%	73%	72%	69%	62%	67%

Appendix D. Perceptions of Teaching and Learning Conditions, by School District Region (continued)

Domain:	East	N'east	N'west	S'east	S'west	Supt's	Ed. Svcs./ St. Supt.
Facilities and Resources (cont.)							
Teachers and staff work in a school environment that is clean and well maintained.	69%	70%	77%	77%	75%	66%	54%
Teachers and staff work in a school environment that is safe.	70%	68%	83%	80%	78%	69%	64%
Empowerment - School Level							
Teachers are recognized as educational experts.	51%	53%	56%	51%	51%	54%	53%
Opportunities for advancement within the teaching profession (other than admin.) are available to me.	48%	52%	48%	47%	47%	49%	47%
Teachers are centrally involved in decision-making about educational issues.	40%	41%	43%	41%	41%	42%	43%
Teachers are trusted to make sound professional decisions about instruction.	54%	59%	60%	58%	54%	59%	63%
In this school we take steps to solve problems.	64%	62%	66%	62%	61%	62%	66%
The faculty has an effective process for making group decisions and solving problems.	51%	45%	50%	47%	45%	46%	50%
Professional development activities enhance teacher skills as an instructional leaders.	63%	63%	63%	61%	61%	60%	59%
Teachers are supported by the community in which they teach.	39%	41%	54%	55%	51%	43%	37%
Parents and community members have opportunities to contribute to students' success.	69%	73%	78%	80%	76%	71%	61%
Teachers play a large or primary role in:							
Determining the content of in-service professional development programs	19%	17%	23%	25%	20%	20%	16%
Establishing and implementing policies and student discipline	28%	27%	33%	29%	29%	28%	24%
Providing input on how the school budget will be spent	14%	14%	17%	17%	15%	16%	15%
School improvement planning	32%	29%	37%	32%	31%	34%	30%
At this school we utilize results from the 2006 Teaching and Learning Conditions (TLC) survey.	23%	17%	25%	23%	22%	23%	21%
My school would benefit from addnl. supt. from the TLC team in utilizing TLC data for school improvement.	41%	47%	38%	39%	44%	43%	37%

Appendix D. Perceptions of Teaching and Learning Conditions, by School District Region (continued)

Domain:	East	N'east	N'west	S'east	S'west	Supt's	Ed. Svcs. / St. Supt.
Empowerment - Classroom Level							
Teachers play a large or primary role in:							
Selecting instructional materials and resources	29%	33%	43%	43%	36%	41%	52%
Devising teaching techniques	46%	49%	54%	58%	50%	56%	67%
Setting grading and student assessment practices	47%	47%	53%	54%	46%	53%	64%
Determining the requirements of lesson plans	32%	31%	38%	40%	32%	37%	51%
Leadership							
There is an atmosphere of trust and mutual respect within the school.	58%	55%	62%	59%	55%	56%	59%
The school leadership communicates clear expectations to students and parents.	68%	65%	72%	67%	64%	64%	70%
The faculty are committed to helping every student learn.	79%	82%	86%	84%	85%	83%	79%
Teachers feel comfortable raising issues and concerns that are important to them.	54%	53%	56%	56%	50%	52%	61%
The school leadership consistently enforces rules for student conduct.	57%	58%	62%	56%	55%	59%	58%
Opps. are available for members of the community to contribute actively to this school's success.	64%	67%	68%	69%	66%	64%	59%
The school improvement team provides effective leadership at this school.	50%	47%	52%	47%	44%	47%	45%
The school administration and teachers have a shared vision.	59%	55%	59%	53%	53%	54%	59%
The leadership effectively communicates policies.	62%	60%	67%	59%	56%	58%	68%
Teacher performance evaluations are fair in my school.	71%	70%	72%	71%	65%	69%	74%
Teachers receive feedback that can help them improve teaching.	67%	67%	67%	65%	62%	64%	74%
Staff members are recognized for accomplishments.	70%	66%	69%	70%	68%	65%	73%
School leadership makes a sustained effort to address teacher concerns about:							
Leadership issues	46%	43%	47%	46%	43%	42%	52%
Facilities and resources	61%	61%	63%	63%	61%	60%	64%
The use of time in my school	53%	52%	55%	54%	51%	51%	60%
Professional development	64%	62%	64%	62%	59%	58%	60%
Empowering teachers	50%	50%	53%	50%	48%	49%	57%
New teacher support	63%	67%	60%	58%	56%	56%	61%
Overall, the school leadership in my school is effective.	61%	56%	62%	56%	56%	57%	63%

Appendix D. Perceptions of Teaching and Learning Conditions, by School District Region (continued)

Domain:	East	N'east	N'west	S'east	S'west	Supt's	Ed. Svcs. / St. Supt.
Professional Development							
Sufficient resources are available to allow teachers to take advantage of professional development activities.	69%	66%	74%	70%	69%	66%	66%
School-based PD provides teachers with knowledge and skills most needed to teach effectively.	61%	62%	63%	57%	60%	54%	58%
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	55%	57%	61%	56%	55%	55%	47%

Appendix E. Methodology

Teaching and Learning 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 = 4,527), middle school teachers (n = 1,686), and high school teachers (n = 1,505)[41]—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 $\ln(P/(1\text{-}P))$—as a function of independent variables. Thus, a generic equation for this model looks like:

$$\ln(P/(1\text{-}P)) = \alpha + \beta_1(T) + \beta_2(S) + \beta_3(R) + \beta_4(TLC)$$

where P = the probability of staying, α = a constant, T = several teacher characteristics variables, S = several school characteristics variables, R = school region, and TLC = 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, the school's regional association, and that teacher's perceptions of teaching and learning 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 Clark County Teaching and Learning Conditions Survey; and a school-level data set comprised of demographic information about each school that was prepared specifically for this study by the Clark County School District. Since this analysis focused on factors that impact an *individual* teacher's decision to stay at a school, all teachers were included in the analysis, regardless of the overall survey response rate of the school that employed the teacher.[42] The independent variables included in the model are:

Individual Teacher Characteristics (obtained from survey responses):

- Gender (female = 1)
- Experience (novice [<4 years], experienced [>20 years]; mid-career [4-20 years] is excluded category)
- Preparation route (Alternative = 1; Traditional = 0)
- Highest degree earned (Bachelor's = 1; all other = 0)
- National Board of Professional Teaching Standards certification status (1 = NBPTS-certified)

School Characteristics (obtained from the Clark County School District):

- Percent of economically disadvantaged students at the school, 2007
- Change in the proportion of economically disadvantages students at the school, 2006 to 2007
- Percent of African-American students at the school
- Student mobility—percent of students who leave a school during the school year
- Change in school size from 2006 to 2007 (a measure of school growth)
- School met federal *No child Left Behind* Adequate Yearly Progress (AYP) goals, 2007 (=1)
- School-level 2007 Teaching and Learning Conditions Survey response rate

Region (as defined by the Clark County School District):

- Region I (East Region) (1/0)
- Region II (Northeast Region) (1/0)
- Region III (Northwest Region) (1/0)
- Region V (Southwest Region) (1/0)
- Region VI (Superintendent Schools Region) (1/0)

Note: Region IV (Southeast Region) is the excluded category and is thus the region to which other regions are compared. Choosing Region IV as the excluded category in no way biases the results either in favor of or against Region IV; it merely provides a point of reference for comparing and contrasting regions relative to each other.

Note: Region VII is excluded from these analyses altogether because all Region VII schools with 2007 survey respondents were mixed grade-level schools.

Perceptions of Teaching and Learning Conditions (obtained from survey responses):
A teacher response of "agree" or "strongly agree" for each of the Clark County Teaching and Learning Conditions Survey items below was coded as a 1; responses of "neither disagree nor agree," "disagree," and "strongly disagree" were coded as 0:

- "Teachers are protected from duties that interfere with their essential role of educating students."
- "Teachers are allowed to focus on educating students with minimal interruption."
- "It is necessary for me to work a second job during the regular school year."
- "Teachers and staff work in a school environment that is safe."
- "Teachers are recognized as educational experts."
- "Teachers are supported by the community in which they teach."
- "Parents and community members have opportunities to contribute to students' success."
- "At my school, we utilize results from the 2006 Teaching and Learning Conditions (TLC) Survey." [This variable is introduced as a binary variable, where 1 = 25 percent or more of the educators at an individual teacher's school responded positively to this statement, and 0 = fewer than 25 percent of teachers responded positively to this statement.]
- "There is an atmosphere of trust and mutual respect within the school."
- "Teachers feel comfortable raising issues and concerns that are important to them."
- "The school leadership consistently enforces rules for student conduct."
- "The school administration and teachers have a shared vision."
- "Teacher performance evaluations are fair in my school."
- "Staff members are recognized for accomplishments."
- "The school leadership makes a sustained effort to address teacher concerns about leadership issues."

- "The school leadership makes a sustained effort to address teacher concerns about time issues."
- "The school leadership makes a sustained effort to address teacher concerns about empowerment issues."
- "The school leadership makes a sustained effort to address teacher concerns about new teacher support."

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 teaching and learning 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 1.281 for the variable "Female" indicates that the odds of a female choosing to stay are 1.281 times greater than they are for a male with otherwise similar characteristics. For categorical variables (such as region), 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 0.401 for the variable "Region II (N'east)" indicates that the odds that a teacher who teaches in a school located in the Northeast region will stay in her or his school are only 0.401 times the odds of a teacher in a comparison region (in this case, region IV, the Southeast region). 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 1.005 for the variable "Percent economically disadvantaged students" means that for every unit (percent) increase in the proportion of economically disadvantaged students in a school, the *odds* of staying for an individual teacher increase by 5 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 Clark County Teaching and Learning Conditions Survey, the overall probability that a Clark County teacher chosen at random is a "stayer" is already around 65 percent (more than 6 out of 10 report that they will stay); therefore, a positive change in the likelihood of staying only impacts the probability range between 65 and 100 percent. The regression equations provide a way for adjusting those probabilities, given certain individual teacher conditions or opinions. See Table 21, above, for conversion of some of the changes in odds reported in the tables below to changes in probability.

Elementary School (n = 4,527)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-1.632	0.295	30.618	0.000	0.196	
Teacher Characteristics						
Female	0.307	0.113	7.418	0.006	1.359	**
Less than 4 years of experience	-0.066	0.100	0.439	0.508	0.936	
More than 20 years of experience	0.388	0.115	11.403	0.001	1.474	**
Traditional preparation route	0.021	0.158	0.018	0.892	1.022	
Highest degree earned	0.113	0.089	1.587	0.208	1.119	
National Board Certified†	-0.036	0.111	0.103	0.749	0.965	
School Characteristics						
Percent economically disadvantaged students	0.005	0.002	5.070	0.024	1.005	**
Change in percent econ. disadv. Students, '06-'07	-0.003	0.008	0.205	0.651	0.997	
Percent African-American students	-0.002	0.005	0.167	0.683	0.998	
Percent mobile students	-1.985	0.609	10.615	0.001	0.137	**
Change in school size, '06-'07	-0.001	0.001	2.355	0.125	0.999	
School met AYP	0.179	0.090	3.941	0.047	1.196	**
Schoolwide survey response rate	0.000	0.002	0.017	0.895	1.000	
Region (Excl. Cat. = Region V, Southwest)						
Region I (East)	-0.006	0.164	0.001	0.971	0.994	
Region II (N'east)	-0.227	0.171	1.771	0.183	0.797	
Region III (N'west)	0.061	0.146	0.175	0.675	1.063	
Region V (S'west)	0.205	0.152	1.818	0.178	1.227	
Region VI (Superintendent's Schools)	-0.246	0.192	1.640	0.200	0.782	
Teaching and Learning Conditions						
Teachers protected from non-teaching duties	0.148	0.086	2.984	0.084	1.159	*
Teachers experience minimum interruptions	0.205	0.088	5.463	0.019	1.228	**
Teacher must work second job	-0.358	0.078	21.047	0.000	0.699	**
Safe school environment	0.109	0.099	1.215	0.270	1.115	
Teachers recognized as educ. professionals	0.209	0.092	5.141	0.023	1.233	
Community supports teachers	0.301	0.086	12.248	0.000	1.352	**
Parents/community contribute to student success	-0.297	0.101	8.619	0.003	0.743	**
School level: 25%+ believe school uses 2006 TLC data	0.182	0.086	4.429	0.035	1.199	**
Atmosphere of trust and respect	0.354	0.103	11.830	0.001	1.424	**
Teachers feel comfortable raising concerns	0.159	0.103	2.370	0.124	1.173	
Rules for student conduct consistently enforced	0.096	0.092	1.096	0.295	1.101	
Admin. and teachers have shared vision	0.231	0.104	4.900	0.027	1.260	**
Performance evaluations are fair	0.353	0.100	12.580	0.000	1.424	**
Staff are recognized for accomplishments	-0.011	0.099	0.012	0.913	0.989	
Leadership addresses concerns about leadership	0.030	0.062	0.235	0.628	1.031	
Leadership addresses concerns about time	0.142	0.054	6.881	0.009	1.152	**
Leadership addresses concerns abt. empowerment	0.164	0.062	7.024	0.008	1.178	**
Leadership addresses concerns abt. new tchr. supt.	0.078	0.045	2.941	0.086	1.081	*

* p<0.10

** p<0.05

† CCSD has identified about 310 National Board Certified teachers in CCSD, but nearly 1,200 survey respondents indicated that they were National Board Certified. Relative unfamiliarity with the certification may have led many teachers to incorrectly indicate that they have this certification. Therefore, results associated with this variable are suspect at best.

Middle School (n = 1,686)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-1.302	0.527	6.093	0.014	0.272	
Teacher Characteristics						
Female	0.247	0.144	2.951	0.086	1.281	*
Less than 4 years of experience	-0.325	0.175	3.446	0.063	0.722	*
More than 20 years of experience	0.245	0.173	2.018	0.155	1.278	
Traditional preparation route	0.319	0.259	1.520	0.218	1.376	
Highest degree earned	0.145	0.152	0.913	0.339	1.156	
National Board Certified†	0.081	0.204	0.156	0.693	1.084	
School Characteristics						
Percent economically disadvantaged students	0.018	0.006	8.655	0.003	1.019	**
Change in percent econ. disadv. Students, '06-'07	-0.019	0.015	1.668	0.196	0.981	
Percent African-American students	0.007	0.016	0.200	0.655	1.007	
Percent mobile students	-3.439	1.922	3.203	0.074	0.032	*
Change in school size, '06-'07	-0.001	0.001	3.133	0.077	0.999	*
School met AYP	0.408	0.175	5.417	0.020	1.504	**
Schoolwide survey response rate	-0.005	0.005	1.110	0.292	0.995	
Region (Excl. Cat. = Region V, Southwest)						
Region I (East)	-0.094	0.251	0.141	0.707	0.910	
Region II (N'east)	-0.473	0.329	2.065	0.151	0.623	
Region III (N'west)	-0.345	0.244	2.012	0.156	0.708	
Region V (S'west)	-0.072	0.250	0.083	0.773	0.930	
Region VI (Superintendent's Schools)	-0.618	0.385	2.573	0.109	0.539	
Teaching and Learning Conditions						
Teachers protected from non-teaching duties	0.016	0.147	0.012	0.914	1.016	
Teachers experience minimum interruptions	0.006	0.151	0.002	0.967	1.006	
Teacher must work second job	-0.483	0.127	14.370	0.000	0.617	**
Safe school environment	0.142	0.151	0.883	0.347	1.153	
Teachers recognized as educ. professionals	0.118	0.156	0.577	0.448	1.125	
Community supports teachers	0.236	0.155	2.324	0.127	1.266	
Parents/community contribute to student success	0.233	0.139	2.791	0.095	1.262	*
School level: 25%+ believe school uses 2006 TLC data	-0.103	0.182	0.320	0.571	0.902	
Atmosphere of trust and respect	0.612	0.173	12.507	0.000	1.844	**
Teachers feel comfortable raising concerns	-0.082	0.174	0.220	0.639	0.921	
Rules for student conduct consistently enforced	0.245	0.151	2.658	0.103	1.278	
Admin. and teachers have shared vision	0.195	0.175	1.237	0.266	1.215	
Performance evaluations are fair	0.314	0.156	4.073	0.044	1.369	**
Staff are recognized for accomplishments	0.232	0.158	2.161	0.142	1.261	
Leadership addresses concerns about leadership	0.193	0.098	3.850	0.050	1.213	**
Leadership addresses concerns about time	-0.004	0.091	0.002	0.963	0.996	
Leadership addresses concerns abt. empowerment	0.102	0.099	1.071	0.301	1.108	
Leadership addresses concerns abt. new tchr. supt.	0.053	0.068	0.621	0.431	1.055	

* p<0.10
** p<0.05
† CCSD has identified about 310 National Board Certified teachers in CCSD, but nearly 1,200 survey respondents indicated that they were National Board Certified. Relative unfamiliarity with the certification may have led many teachers to incorrectly indicate that they have this certification. Therefore, results associated with this variable are suspect at best.

High School (n = 1,505)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-0.730	0.699	1.091	0.296	0.482	
Teacher Characteristics						
Female	-0.232	0.139	2.781	0.095	0.793	*
Less than 4 years of experience	-0.076	0.188	0.164	0.686	0.927	
More than 20 years of experience	0.065	0.175	0.137	0.711	1.067	
Traditional preparation route	0.020	0.246	0.006	0.937	1.020	
Highest degree earned	0.037	0.162	0.052	0.819	1.038	
National Board Certified†	0.312	0.214	2.136	0.144	1.367	
School Characteristics						
Percent economically disadvantaged students	0.028	0.011	6.083	0.014	1.028	**
Change in percent econ. disadv. Students, '06-'07	0.063	0.026	5.704	0.017	1.065	**
Percent African-American students	0.012	0.020	0.377	0.539	1.012	
Percent mobile students	-0.390	1.615	0.058	0.809	0.677	
Change in school size, '06-'07	0.000	0.001	0.002	0.968	1.000	
School met AYP	0.152	0.263	0.333	0.564	1.164	
Schoolwide survey response rate	-0.009	0.008	1.206	0.272	0.991	
Region (Excl. Cat. = Region V, Southwest)						
Region I (East)	-0.303	0.359	0.710	0.400	0.739	
Region II (N'east)	-0.913	0.427	4.574	0.032	0.401	**
Region III (N'west)	-0.285	0.276	1.063	0.303	0.752	
Region V (S'west)	0.295	0.353	0.697	0.404	1.343	
Region VI (Superintendent's Schools)	-0.005	0.355	0.000	0.989	0.995	
Teaching and Learning Conditions						
Teachers protected from non-teaching duties	0.065	0.159	0.169	0.681	1.067	
Teachers experience minimum interruptions	-0.041	0.164	0.061	0.804	0.960	
Teacher must work second job	-0.661	0.138	22.967	0.000	0.516	**
Safe school environment	0.274	0.163	2.834	0.092	1.315	*
Teachers recognized as educ. professionals	0.137	0.170	0.654	0.419	1.147	
Community supports teachers	0.499	0.175	8.144	0.004	1.646	**
Parents/community contribute to student success	-0.330	0.156	4.444	0.035	0.719	**
School level: 25%+ believe school uses 2006 TLC data	0.735	0.271	7.382	0.007	2.086	**
Atmosphere of trust and respect	0.442	0.186	5.666	0.017	1.555	**
Teachers feel comfortable raising concerns	0.285	0.181	2.475	0.116	1.329	
Rules for student conduct consistently enforced	-0.059	0.167	0.126	0.722	0.942	
Admin. and teachers have shared vision	0.239	0.190	1.586	0.208	1.270	
Performance evaluations are fair	-0.081	0.161	0.253	0.615	0.922	
Staff are recognized for accomplishments	0.383	0.162	5.585	0.018	1.466	**
Leadership addresses concerns about leadership	0.134	0.107	1.574	0.210	1.143	
Leadership addresses concerns about time	0.275	0.096	8.113	0.004	1.316	**
Leadership addresses concerns abt. empowerment	-0.063	0.109	0.335	0.563	0.939	
Leadership addresses concerns abt. new tchr. supt.	0.108	0.078	1.906	0.167	1.114	

* p<0.10

** p<0.05

† CCSD has identified about 310 National Board Certified teachers in CCSD, but nearly 1,200 survey respondents indicated that they were National Board Certified. Relative unfamiliarity with the certification may have led many teachers to incorrectly indicate that they have this certification. Therefore, results associated with this variable are suspect at best.

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
- Leave this school, continue working in education, but am unsure of where
- Leave this school, but continue working in this district
- Leave this school and this district, but continue working in education
- Leave education

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 Teaching and Learning 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.

Teaching and Learning Conditions and Student Achievement

While it is reasonable to make direct links between a teacher's responses to survey items and to her or his *individual* declared career intention—between personal perceptions of teaching and learning 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 individual teacher perceptions of teaching and learning conditions with school-wide achievement gains, our approach for this part of the analysis was to include a teaching and learning conditions explanatory variable that best approximates the ultimate impact of those teaching and learning 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 teaching and learning 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 teaching and learning 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 the teaching and learning conditions at their schools, independent of other options.

Our dependent variable for our elementary school-level model is the proportion of students schoolwide who reached achievement levels 3 or 4 (the highest levels) on the 2007 math component of the Nevada Criterion Referenced Test (NCRT). We use math scores rather than reading scores because math scores tend to be less "noisy"; 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.[43] For this reason, we use 2007 NCRT reading scores as an additional control variable to help account for academic differences among students due to differences in academic characteristics of their home environments.

The ordinary least squares regression model for the student achievement component of this study was applied only to elementary schools that met the minimum school response rate of 35 percent (n = 152); the numbers of middle schools (n = 46), high schools (n = 32), and mixed-level schools (11) also meeting that rate were insufficient for running robust and accurate regressions. The model is specified as follows. Let the school-wide proportion of students who achieve at levels 3 or 4 on a standardized, state-administered math test (the NCRT) be represented by Y. The regression model estimates the significance of the contribution of certain independent variables to that proportion as a linear function of those variables. Thus, a generic equation for this model looks like:

$$Y_i = \alpha_0 + \alpha_1(S_i) + \alpha_2(T_i) + \alpha_3(TLC_i) + \alpha_4(Y^r_i) + \alpha_5(Y^{m06}_{i\text{-}1}) + e_i$$

where Y_i = the proportion of students schoolwide who achieve at levels 3 or 4 on the 2007 math NCRT for school i, α_0 = a constant, S_i = student population characteristics variables for school i, T_i = teacher population characteristics variables for school i, TLC_i = the proportion of teachers

who indicate that they intend to stay at school *i*, Y^{r}_{i} = proportion of students schoolwide who achieve at levels 3 or 4 on the 2007 reading NCRT, Y^{m06}_{i-1} = proportion of students schoolwide who achieved at levels 3 or 4 on the math NCRT from the previous year, and *e* is an error term. In non-mathematical terms, this equation reads as:

> *The proportion of students who achieve at levels 3 or 4 on standardized math tests are influenced by characteristics of the students at the school, characteristics of teachers at the school, the overall teaching and learning conditions at the school (as estimated by teacher career intent), current levels of student achievement in other academic areas, and math achievement from the previous year.*

Data

All data for these analyses were obtained from three sources: the 2007 Clark County Teaching and Learning Conditions Survey; a school-level data set comprised of demographic information about each school that was prepared specifically for this study by the Clark County School District; and school-level NCRT results that are publicly available at the Clark County School District website.[44] Since this analysis focused on factors that impact *school-level* gain scores, only schools with a minimum response rate of 35 percent were included in the analysis. The independent variables included in the model (all of which are continuous) are:

Student Population Characteristics (obtained from the Clark County School District):
- Percent of economically disadvantages students at the school
- Percent of African-American students at the school

Teacher Population Characteristics (obtained from survey responses and from the Clark County School District):
- Percent of teachers intending to stay
- Percent of teachers who are not designated as "highly qualified" under federal *NCLB* guidelines
- Schoolwide average teacher attendance rate

NCRT Achievement Levels (obtained from the Clark County School District):
- 2006 school composite NCRT math pass-rate (K-5/6)
- 2007 school composite NCRT reading pass-rate (K-5/6)
- *Dependent Variable*—2007 school composite NCRT math pass-rate (K-5/6)

Output

Student Achievement Regression Results, Elementary Schools

		B	Std. Error	Beta	t	Sig.	
	(Constant)	0.877	0.486		1.806	0.074	*
1	Percent teachers intending to stay	0.055	0.027	0.067	2.052	0.043	**
2	Percent economically disadvantaged students	0.080	0.024	0.194	3.340	0.001	**
	Percent African-American students	-0.108	0.056	-0.060	-1.922	0.057	*
2	Percent teachers who are not HQ (NCLB)	0.040	0.043	0.034	0.927	0.356	
	Schoolwide teacher attendance rate	-0.899	0.505	-0.057	-1.779	0.078	*
3	Percent of students at levels 3/4 in math, NCRT (2006)	0.151	0.057	0.181	2.648	0.009	**
	Percent of students at levels 3/4 in reading, NCRT (2007)	0.796	0.066	0.921	12.011	0.000	**

Dependent Variable: Percent of students schoolwide at level 3/4 in math, NCRT (2007)

* p<0.10
** p<0.05

Model Steps:	R	R-Square	Adj. R Square	Std. Error of Est.	Chg. in adj. R-squared
1 Teacher Retention	0.400	0.160	0.153	0.113	0.153
2 School & Teacher Characteristics	0.785	0.617	0.600	0.078	0.447
3 Controls for Other Achievement	0.951	0.903	0.897	0.039	0.297

Important Caveats and Limitations

The reader may be puzzled by the negative and significant relationship between teacher attendance rates and math achievement levels. There may be some temptation to conclude that these results downplay the importance of teachers in the learning process. It should be noted, however, that teacher attendance rates are high across all CCSD schools (averaging about 96 percent, and never below 90 percent in 2006-2007[45]), such that the differences in attendance rates across the schools in this analysis are too small to be meaningfully important (even though they are *statistically* significant).

There are several other levels of imprecision with respect to our regression analysis, however, that do bear further discussion. First, individual student scores were not available, which means that all regression estimates are based on school-level averages. In some cases, these averages could hide significantly different variations in individual student scores within and across schools. Second, there is little guarantee in the cases of elementary school tests that tests for different grades measure similar skills; for instance, 4th grade math tests might focus on multiplication while 5th grade math tests might focus on fractions and decimals. The dependent variable, a composite of all of the pass rates across grade levels at an elementary school, does not allow us to take these differences into account. Third, while it is *generally* likely that students in a given grade at an elementary school are the same students who attend that school the following year, there are definite changes in student populations as students move on to middle school and arrive for kindergarten. In addition, some schools experience more student mobility than others. A fourth and final caveat to bear in mind is that, because we use achievement *pass-rates* rather than direct achievement *scores*, several degrees of precision are lost in our calculations. A much more precise measure, had it been available, would have been *per-grade scaled scores*, from which we would have been able to calculate *gains* in student achievement across the course of a year by means of generating *residual gain score estimates*.[46]

Appendix F. Perceptions of Selected Teaching and Learning Conditions: Empowerment Schools, TLC Schools, and Other Schools

Time Issues:	Empowerment Schools	TLC Schools	All Other Schools	Difference in Percentage Points: Emp-Other	Difference in Percentage Points: TLC-Other
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	65%	41%	37%	28	4
Teachers have time available to collaborate with their colleagues.	80%	54%	56%	24	-2
The non-instructional time provided for teachers in my school is sufficient.	70%	45%	49%	21	-4
Teachers are protected from duties that interfere with their essential role of educating students.	67%	52%	53%	14	-1
Efforts are made to minimize the amount of routine administrative paperwork* I am required to do.	63%	34%	41%	22	-7
Teachers are allowed to focus on educating students with minimal interruption.	76%	53%	54%	22	-1
It is necessary for me to work a second job during the regular school year.	31%	37%	43%	-12	-6
Facilities and Resources Issues:					
Teachers have sufficient training and support to fully utilize the available instructional technology.	67%	52%	57%	10	-5
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	62%	54%	70%	-8	-16
Teachers have sufficient access to a broad range of professional personnel.	84%	66%	68%	16	-2
Empowerment Issues:					
Teachers are recognized as educational experts.	82%	48%	53%	29	-5
Opportunities for advancement within the teaching profession (other than administration) are available to me.	63%	47%	48%	15	-1
Teachers are centrally involved in decision-making about educational issues.	80%	39%	41%	39	-2
Teachers are trusted to make sound professional decisions about instruction.	86%	46%	58%	28	-12
In this school we take steps to solve problems.	88%	57%	63%	25	-6
The faculty has an effective process for making group decisions and solving problems.	82%	45%	47%	35	-2
Professional development activities enhance teacher skills as instructional leaders.	90%	58%	62%	28	-4

Appendix F. Perceptions of Selected Teaching and Learning Conditions: Empowerment Schools, TLC Schools and Other Schools (continued)

Empowerment Issues (cont.):	Empower-ment Schools	TLC Schools	All Other Schools	Difference in Percentage Points: Emp-Other	Difference in Percentage Points: TLC-Other
Teachers are supported by the community in which they teach.	75%	45%	47%	28	-2
Parents and community members have opportunities to contribute to students' success.	56%	27%	36%	20	-9
Teachers play a large or primary role in:					
Determining the content of in-service professional development programs	43%	16%	20%	23	-4
Establishing and implementing policies and student discipline	63%	32%	28%	35	4
Providing input on how the school budget will be spent	44%	15%	15%	29	0
School improvement planning	64%	31%	32%	32	-1
Selecting instructional materials and resources	71%	33%	38%	33	-5
Devising teaching techniques	76%	44%	53%	23	-9
Setting grading and student assessment practices	67%	40%	51%	16	-11
Determining the requirements of lesson plans	93%	71%	74%	19	-3
Leadership Issues:					
There is an atmosphere of trust and mutual respect within the school.	76%	45%	58%	18	-13
The school leadership communicates clear expectations to students and parents.	89%	61%	67%	22	-6
The faculty are committed to helping every student learn.	96%	85%	83%	13	2
Teachers feel comfortable raising issues and concerns that are important to them.	76%	41%	54%	22	-13
The school leadership consistently enforces rules for student conduct.	88%	59%	58%	30	1
Opportunities are available for members of the community to contribute actively to this school's success.	90%	65%	66%	24	-1
The school improvement team provides effective leadership at this school.	76%	41%	48%	28	-7
The school administration and teachers have a shared vision.	85%	45%	56%	29	-11
The leadership effectively communicates policies.	86%	51%	61%	25	-10

Appendix F. Perceptions of Selected Teaching and Learning Conditions: Empowerment Schools, TLC Schools and Other Schools (continued)

Leadership Issues (cont.):	Empower-ment Schools	TLC Schools	All Other Schools	Difference in Percentage Points: Emp-Other	Difference in Percentage Points: TLC-Other
Teacher performance evaluations are fair in my school.	88%	60%	70%	18	-10
Teachers receive feedback that can help them improve teaching.	90%	56%	66%	24	-10
Staff members are recognized for accomplishments.	87%	68%	68%	19	0
School leadership makes a sustained effort to address teacher concerns about:					
Leadership issues	73%	39%	45%	28	-6
Facilities and resources	81%	54%	62%	19	-8
The use of time in my school	85%	46%	53%	32	-7
Professional development	86%	57%	62%	24	-5
Empowering teachers	83%	42%	51%	32	-8
New teacher support	77%	56%	60%	17	-4
Overall, the school leadership in my school is effective.	82%	49%	59%	23	-9
Professional Development Issues:					
Sufficient resources are available to allow teachers to take advantage of professional development activities.	83%	68%	69%	14	-1
School-based PD provides teachers with knowledge and skills most needed to teach effectively.	84%	57%	60%	24	-2
District-wide PD provides teachers with the knowledge and skills most needed to teach effectively.	67%	59%	56%	11	2
Professional development has provided you with strategies that you have incorporated into your instructional delivery methods.	88%	73%	70%	18	3
Professional development has proved useful to you in your efforts to improve student achievement.	82%	64%	63%	19	1

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. English teachers: 33 percent; math teachers: 31 percent; social studies teachers: 27 percent; science teachers: 30 percent; and foreign language teachers: 30 percent.

6. The federal No Child Left Behind Act requires teachers to have a bachelor's degree, full state certification, and proven competency in the subject area(s) they teach before they can be considered "highly qualified."

7. The National Academy of Education. (2005). "A good teacher in every classroom: Preparing highly qualified teachers." San Francisco, Calif.: Author.

8. Reading pass rates rose from 73 percent to 77 percent, writing from 87 percent to 89 percent, and math from 40 percent to 45 percent.

9. Hirsch, E. & Emerick, S. (2006). *Teaching and learning conditions are critical to the success of students and the retention of teachers: Final report on the 2006 teaching and learning conditions survey to the Clark County School District and Clark County Education Association.* Chapel Hill, N.C.: Center for Teaching Quality.

10. www.nvtlc.org

11. The plan would allocate an additional $400 per student for empowerment funding. http://gov.state.nv.us/PressReleases/2007/2007-06-18EmpowermentSchools.htm

12. There were 20 responses from educators who did not identify their positions; their responses are included in all analyses for which the unit of analysis is "all educators," but they are not included in any analyses disaggregated by position.

13. www.nvtlc.org/reports

14. Hirsch, E. & Emerick, S. (2006). *Teaching and learning conditions are critical to the success of students and the retention of teachers: Final report on the 2006 teaching and learning conditions survey to the Clark County School District and Clark County Education Association.* Chapel Hill, N.C.: Center for Teaching Quality.

2007 Survey Results

15. Respondents were asked to designate their years of experience by choosing a range of years that included their specific amount of experience. These ranges included the following options: beginning teacher, 2-3 years, 4-6 years, 7-10 years, 11-20 years, and more than 20 years.

16. National Center for Education Statistics. (2007). *Teacher attrition and mobility: Results from the 2004-05 teacher follow-up survey.* Washington, D.C.: Author. http://nces.ed.gov/pubs2007/2007307.pdf

17. This number is most likely understated; only 84 of the 147 novice teachers who indicated that they also served as mentors responded to the question about the number of teachers they mentored.

18. 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.

19. See, for example: Davis, D., Ellett, C., and Rugutt, J. (1999). *School level differences in teachers' perceptions of multiple dimensions of school culture.* Presented at the Annual Meeting of the Mid-South Educational Research Association; and Midgley, C., Anderman, E., and Hicks, L. (1995). "Differences between elementary and middle school teachers and students: A goal theory approach." *The Journal of Early Adolescence*, 15(1), 90-113.

20. Because of their low numbers relative to the three major school levels, response rates from mixed-level schools are not considered in the comparisons in the text, but their response rates are included in the tables. Response breakdowns by position for educators across school level are as follows:

	Elementary	Middle	High	Mixed-Level
Classroom Teachers	4,592	1,731	1519	258
Principals	98	30	16	9
Assistant Principals	89	45	38	9
Other Education Professionals	268	108	98	31
Total	5,047	1,914	1,671	307

21. During the last five years, the district has built 56 new schools, 34 of which have been elementary schools.

22. Priority Goal 2, Clark County School District Improvement Plan. http://ccsd.net/schools/pdf/DSIP2006-summary.pdf.

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

24. Twenty respondents did not identify their job positions.

25. 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.

26. 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.

27. Only classroom teachers were surveyed regarding their career intentions.

28. 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 90 percent in Ohio to about 80 percent in Arizona; 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.

29. 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 their spouse is moving, because of a pregnancy, or even because they have reached retirement age. 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.

30. Most recently, Audrey Amrein-Beardsley reported on the importance of salary and benefits to Arizona teachers; Amrein-Beardsley, A. (2007, Sept.). "Recruiting expert teachers into hard-to-staff schools: what are the obstacles to pairing the best teachers with the lowest-achieving students? And what would it take to overcome them?" *Phi Delta Kappan*, 89(1): 64(4). See also: Stinebrickner, T. R. (1998). "An empirical investigation of teacher attrition." *Economics of Education Review*, 17(2), 127-136; Johnson, S. M., Berg, J. H., and Donaldson, M. L. (2005). *Who stays in teaching and why: A review of the literature on teacher retention.* Report prepared for The Project on the Next Generation of Teachers. Cambridge, Mass.: Harvard Graduate School of Education. It should be noted, however, that not all studies of salary impact on teacher attrition find a direct link between salary and retention; see, for instance, Hanushek, E. A., Kain, J. F., and Rivkin, S. G. (1999). *Do higher salaries buy better teachers?* NBER Working Paper No. 7082; Clotfelter, C. T., Ladd, H. F., Vigdor, J. L., and Wheeler, J. (2006). "High poverty schools and the distribution of teachers and principals." *Sanford Working Paper Series*, No. SAN06-08.

31. The one important exception was administrator impressions of the use of data from the 2006 TWC survey (47 percent of principals and only 35 percent of assistant principals believe the data are being used). Even so, an even slimmer proportion of teachers (21 percent) and other education professionals (27 percent) think the data are used. See Appendix C.

32. Readers are cautioned to interpret results that include the Education Services/Student Support Services data with care; while every other region boasts at least 1,000 educator respondents, all data for the smaller Education Services/Student Support Services region is based on only 307 responses. It is also important to bear in mind that region designations are for the 2007-2008 school year; the Superintendent's Schools region was formed in 2007 and includes schools that were formerly in one of the other regions at the time of the survey.

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33. See, for example, Fuller, E. J. (1994). *Trust as the basis of urban school reform*. Presented at the annual meeting of the American Educational Research Association. New Orleans, La.; Fuller, E. J., & Young, M. D. (1995, April). *Building trust between school and community: The principal's role in increasing Hispanic academic achievement*. Presented at the annual meeting of the American Educational Research Association. San Francisco, Calif.; Fuller, E. J. (1996, April). *Conflict or congruence? The intersection of faculty, parent, and student trust in the principal*. Presented at the annual meeting of the American Educational Research Association. New York, N.Y.; Tschannen-Moran, M. & Hoy, W. K. (2000). "A multidisciplinary analysis of the nature, meaning, and measurement of trust." *Review of Educational Research*, 70, 547-593.

34. 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.

35. It should be noted that this approach was taken for the analyses conducted in 2006 of the relationships between working conditions and student achievement.

36. NCRT achievement levels:

1. Emergent/Developing—Student occasionally/does not apply skills/strategies and requires extensive remediation.

2. Approaches Standard—Student inconsistently/incompletely applies skills/strategies and requires targeted remediation.

3. Meets Standard—Student consistently applies skills/strategies without need for remediation.

4. Exceeds Standard—Student comprehensively/consistently applies and generalizes skills/strategies in a variety of situations.

37. There are other limitations to this analysis of student achievement scores—such as the use of cross-grade achievement averages rather than single-grade scores (as was also the case in the 2006 analyses)—that are the result of limitations of the amount and type of testing data available at the time of our analysis. These and other limitations are examined in more detail in Appendix E.

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

39. With only four and 16 schools participating (and for TLC schools, there were only 12 with survey responses in 2007), numbers are too low for inclusion in either of our statistical models. In the future, as either or both of these initiatives expands, inclusion of these special school designations in statistical analyses will be more appropriate and, indeed, important.

Comparison of 2006 and 2007 Survey Results

40. It is important to note that to date, the Teaching and Learning Conditions Team has been able to work directly with only about 16 of the district's more than 300 schools on in-depth uses of these data.

Appendix E. Methodology

41. 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—258 teachers in all.

42. 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 school-level analyses.

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

44. http://ccsd.net/schools/accReports.phtml

45. Clark County School District Accountability Reports, 2006-2007 School Year. http://ccsd.net/schools/acc_pdfs_2007/districtAcc2007.pdf

46. Residual gains estimates are generated by a linear regression in which scaled scores for the year of interest (the "post-test") are the dependent variable and scaled scores for the previous year (the "pre-test") are the predictor variable. 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" (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].)