Teaching and Learning Conditions in Ohio
Implications for Supply and Demand

Final Report - Fall 2007

CENTER FOR TEACHING QUALITY

where teachers are central to improving schools

By
Barnett Berry and Ed Fuller
with Alice Williams and Ursula Lobacz

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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

Teacher working conditions are student learning conditions, and Ohio's teaching and learning conditions are critical to consider when assessing the state's ability to recruit and retain teachers. The number of Ohio teachers every year who choose to leave their schools or to leave teaching altogether has remained steady over the last several years, but losses have hovered around 10,000 teachers annually, with minority teachers and those teaching in urban schools being most likely to leave.

General Findings

Analyses of results from the 2007 Ohio Teaching and Learning Conditions Survey reveal several important aspects of educators' perceptions of teaching and learning conditions in the state that may inform efforts to curtail attrition, including:

- Ohio educators are generally positive about their teaching and learning conditions.

- Leadership is critical to retaining teachers, but only slightly more than half of educators are positive about school leadership in important areas.

- Teachers need more time to plan and collaborate.

- Teachers need more opportunities to participate in school decision-making.

Initial Findings from an Analysis of Responses of Teacher Stayers, Movers, and Leavers

Teacher responses to survey questions were disaggregated and analyzed based on each teacher's declared career intentions (stay in current school, move to another school or district, or leave teaching entirely). Results from these analyses are:

- Teachers who are most dissatisfied with working conditions are more likely to report that they will change schools or districts, not leave the profession.

- Teacher movers and leavers are most frustrated by their levels of empowerment and by their perceptions of the quality of leadership in their schools.

- Efforts to stem teacher attrition in Ohio likely will require multiple approaches that are sensitive to differences in teaching and learning conditions at different levels of schooling and in different school locales.

Domain-Specific Findings

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

- *Leadership*—One out of three teachers cite leadership as the aspect of their work environment that most affects their willingness to continue teaching at their current school, but many teachers have strong negative impressions of several leadership characteristics.

- *Empowerment*—Educators as a whole believe that teachers are encouraged to participate in empowering activities, but the types of activities in which teachers themselves believe that they have *actual opportunities* to participate are limited to the classroom level; in other school- or district-level empowerment arenas, teachers feel more detached from decision-making processes.

- *Facilities and Resources*—Ohio educators are generally very positive about their facilities and resources.

- *Time*—There is wide disagreement between teachers and principals about the time available to teachers to attend to all of their professional responsibilities.

- *Professional Development*—Both administrators and teachers agree that there is a clear disconnect between professional development *delivered* and professional development *needed*.

Analysis of the Impact of Teaching and Learning Conditions on Teacher Attrition

Regression analyses of teacher career intentions that include survey response data along with school-level data provided by the Ohio Department of Education provide support for the importance of many of the findings:

- There are strong associations—consistent across elementary, middle, and high schools—between teacher career intentions and teacher perceptions of school safety, school-level atmospheres of trust and respect, recognition of teacher accomplishments, and teachers' treatment as professionals.

- Years of experience, school location, and the proportion of teachers in a school who are teaching out of field also contribute to decisions of individual teachers in secondary schools to move from their current schools or to consider leaving teaching altogether.

Introduction

Over the last decade, growing numbers of studies have demonstrated that teachers—more so than any other in-school factor—are the most powerful influence on student achievement.[1] Numerous studies have pointed to several key teacher quality variables that explain this influence (such as verbal ability, subject matter knowledge, knowledge about teaching and learning, and experience[2]); however, even when teachers possess all of the requisite knowledge and skills, they still may not teach as effectively as possible.

Why? The two-word answer is: *working conditions.*

At a basic level, teacher working conditions include class size, the number and diversity of the students with whom a teacher works, and student discipline and school safety issues. However, teacher working conditions are also influenced by a host of other variables, such as the amount of out-of-field teaching assignments a teacher has, or a teacher's access to the sound instructional materials and supplies needed to teach students. More recently, researchers and practitioners have broadened their conception of teacher working conditions to include adequate preparation, quality professional development, time to learn from colleagues, control in making important curricular and organizational decisions, and strong administrative support—most notably from principals. As indicated by our report title, many states are beginning to realize that teacher working conditions are student learning conditions.

In fact, researchers have found strong relationships between certain school conditions and teacher retention and student achievement. For example, using a national database that tracked actual attrition patterns, researchers found that working conditions play a significant role in teachers' decisions to leave teaching. Teachers from higher-poverty schools were more than twice as likely as those in lower-poverty schools to leave teaching because of poor working conditions, including the lack of student discipline and motivation, limited decision-making authority, and inadequate administrative support.[3] Some scholars have documented how low salaries influence teacher attrition, but in schools serving more impoverished students, troubling working conditions seem to be the primary reason for high faculty turnover.[4]

Others have found that when teachers reported that they had effective administrators, necessary materials, opportunities for collegiality, and empowerment to make professional decisions, they were more likely to have higher morale and remain committed to teaching.[5]

Ohio's leading education policymakers—most notably State Superintendent Susan Tave Zelman—have recognized the importance of paying more attention to the conditions under which teachers work. In partnership with the Ohio Education Association, over the last three years the state has conducted teaching conditions surveys of Ohio educators. As Superintendent Zelman

has noted, "This survey will inform decisions about improving teaching and learning conditions across the state ... [and] provide [educators, schools, and districts] with valuable information about the status of learning conditions."

Indeed, teacher working conditions are student learning conditions, and Ohio's teaching and learning conditions are critical to consider when assessing the state's ability to recruit and retain teachers. A recent statewide supply and demand report revealed that enrollment growth in suburban districts and higher attrition in urban districts are pressing hard on district administrators.[6] Minority teachers continue to be underrepresented in the profession, and the average age of teachers is about 44 years of age. Even as more teachers are approaching retirement age, there is also a growing group of novice teachers (about 20 percent of the workforce has less than five years of experience), putting dual stress on administrators to replace those who are retiring while also mentoring the increasing number of brand new teachers who take over their classrooms. Pressures are also mounting as a result of a changing student population. Although more teachers are earning masters' degrees, there is little evidence that they are gaining the skills needed to teach growing numbers of special needs and second language learners, or to teach to 21st century standards.

Perhaps most disconcertingly, there does not appear to be any decrease in the number of Ohio teachers every year who choose to leave their schools or even to leave teaching altogether. While attrition rates in Ohio have remained relatively steady over the last several years, there has been a recent uptick, with over 10,200 teachers leaving the teaching profession in 2005, and statewide data indicate that minority teachers and those teaching in urban schools are the most likely to leave.[7]

Attrition is a problem in almost every district in the state, but it is a particular concern in urban and high-poverty districts. The authors of one study note that teachers who leave schools in very high poverty urban areas are not likely to move within their districts, choosing instead to teach in other, less urban districts. Teachers in rural areas are not likely to move to urban districts, either; instead they tend to move to other communities like the ones they left. Special education, mathematics, and English teachers in particular are more likely than other teachers to move to other districts.[8] With this context in mind we present our 2007 findings.

About the 2007 Survey

In Spring 2007, educators in 63 participating Ohio school districts across the state spoke out on working conditions in their schools by participating in a web-based survey that addressed key teaching and learning conditions related to time, empowerment, school leadership, professional development, and facilities and resources. Thanks to the efforts of the Ohio Department of Education and the Ohio Education Association (OEA), as well as the Ohio Federation of Teachers and the Ohio Association of Secondary School Administrators, nearly 8,000 educators (44 percent of eligible respondents) responded to the latest Ohio Teaching and Learning Conditions Survey.

Working with Department of Education and OEA officials, the Center for Teaching Quality assembled individual school and district response reports, which were only released publicly if at least 40 percent of a school faculty's or district's school-based licensed educators responded. These reports are now available online[9] for more than 300 schools, providing critical information for making local and state-level decisions about policies and practices that affect teaching and learning conditions in Ohio.

We raise one important caution in interpreting the findings. Not every Ohio school participated in the survey, and not every participating school met the 40 percent school-level response rate threshold; therefore, it is important to consider how well the survey respondents reflect the entire population of Ohio educators before drawing hard-and-fast conclusions. While there are some areas in which the survey respondents as a group appear to be somewhat different from the full complement of Ohio educators, in many respects the survey response group is reflective of Ohio educators as a whole.[10] For example:

- The racial representation among Ohio educators statewide is about 94 percent white and 5 percent African-American; about 90 percent of the survey group are white, and about 7 percent are African-American.

- About 90 percent of all teachers in 2003-2004 chose to stay in teaching and to remain at the same school; about 90 percent of the 2006-2007 survey respondents indicated that they would remain in their current schools.[11]

However:

- A smaller proportion of survey respondents were early-career (0 to 10 years of experience) teachers (37 percent versus 46 percent statewide).

- Survey respondents were more likely to have earned a post-graduate degree (71 percent versus 54 percent).

- Survey respondents who planned to leave their schools were more likely to indicate that they would move to another school (7 percent versus 1 percent) rather than leave teaching entirely (2 percent versus 9 percent).

Consequently, readers of this report are encouraged to exercise due caution when attributing the results presented herein to the entire population of Ohio educators.

About the Report

This is the final of three reports that focus on the responses of Ohio educators to the 2007 Teaching and Learning Conditions Survey. The first report presented an overview of initial findings based on a preliminary scan of survey responses. The second report supplemented these findings with an overview of educator responses in each of the five aforementioned teacher working conditions domains. This final report investigates responses in all of these areas in greater detail by proposing possible explanations for some of the patterns revealed herein.

Definitions Used in this Report

In order to ensure that policymakers and practitioners can use the data included in this report with precision, it is important to first establish the definitions of several terms used throughout the report.

Educator

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

Teacher

In some cases, we draw distinctions between what classroom teachers report and what principals or educators as a whole 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 plan to move to another school within their district or to another school district altogether; or

- *Leavers*, or teachers who plan to leave teaching entirely.

Domain

Questions 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 *Ohio Teaching and Learning Conditions Survey* include time, facilities and resources, empowerment, school leadership, and professional development. We define these major concepts in the following ways:

- *Time* refers to the opportunities teachers have to meet the needs of their students given school schedules, non-instructional duties, paperwork, and availability (or inaccessibility) of structured venues to collaborate with colleagues.

- *Facilities and Resources* 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.

- *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 first 2007 Ohio Teaching and Learning Conditions Survey report on preliminary data trends (released in May 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, and then address how Ohio teachers with different career intentions—those who intend either to stay in their current schools, move to other schools, or leave teaching altogether—view their teaching and learning conditions. In the last section, we present brief analyses of the domain-specific responses that inform these findings.

General Findings

1. Ohio educators are generally positive about their teaching and learning conditions.

Almost three-quarters (74 percent) of Ohio educators agree that their school is a good place to work and learn, and a full one-quarter (25 percent) of educators "strongly" agree with that statement (Figure 1). Also, 90 percent of Ohio educators plan to remain teaching at their current school, a slightly higher percentage than was recorded in the 2006 Ohio pilot teaching and learning conditions survey (89 percent).

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

Agree
49 percent

Strongly disagree
4 percent

Disagree
8 percent

Neither agree nor disagree
14 percent

Strongly agree
25 percent
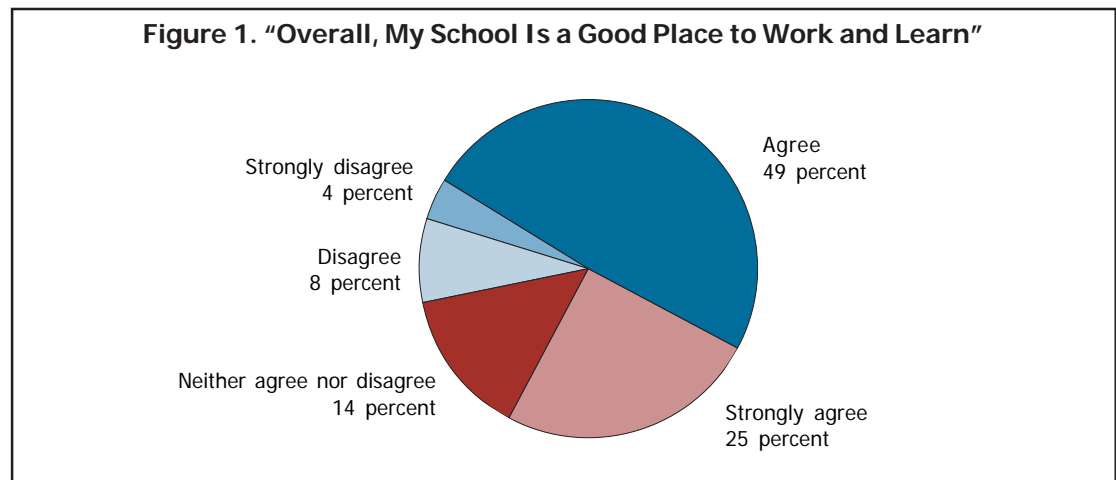
Teachers are positive about teaching and learning conditions in several specific areas:

• Ohio educators are generally positive about their facilities and resources. Between three-fifths and three-quarters of educators agree that many key facilities and resources are in place, including sufficient access to appropriate instructional materials and resources (64 percent), clean and well maintained school environments (65 percent), sufficient access to office equipment and supplies (69 percent), and access to reliable communication technology (74 percent).

• Educators are positive about faculty commitment in their school. More than four-fifths (84 percent) of educators believe the faculty is committed to helping every student learn. Three out of five educators (61 percent) believe that steps are made in their school to solve problems.

Relevant Domain Analyses: Facilities and Resources (p. 20), Leadership (p. 18), Empowerment (p. 19)

2. Leadership is critical to retaining teachers, but only slightly more than half of educators are positive about school leadership in important areas.

When asked which teaching and learning condition was the single most important factor that influenced their willingness to remain teaching at their school, one out of three Ohio teachers indicate that school leadership is the most critical factor, a larger percentage than indicate any other working condition area (Figure 2).

Figure 2. Aspects of Work Environment that Most Affect a Teacher's Willingness to Keep Teaching at Current School

Professional Development
3 percent

Leadership
33 percent

Time
18 percent

Empowerment
25 percent

Facilities and Resources
21 percent
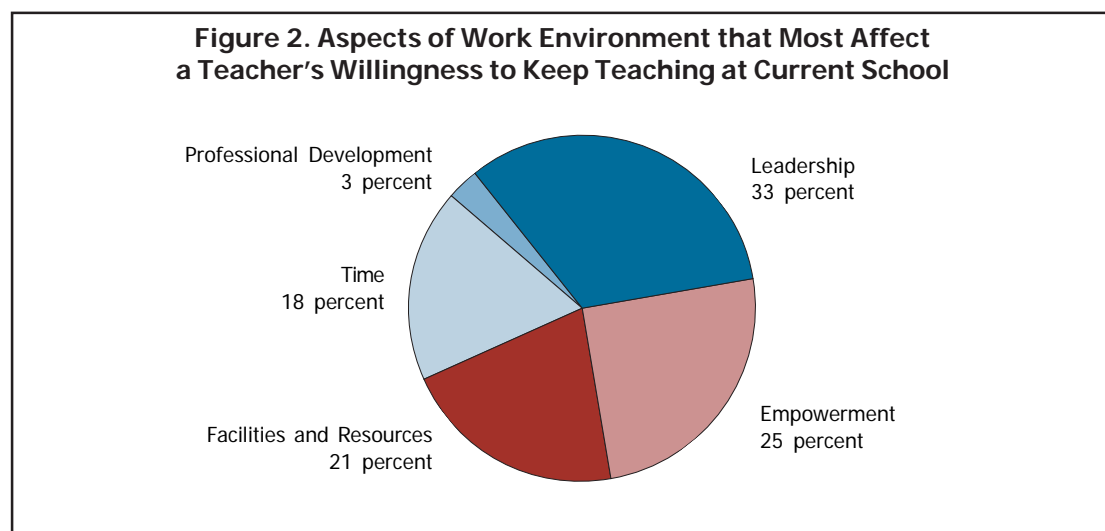
In addition, when they are allowed to indicate more than one factor, more than half of all teachers (52 percent) cite supportive school leadership as being extremely important to them in considering future career plans, a higher rate than those citing factors more commonly associated with career intentions such as salary (24 percent) or student behavior (32 percent; Table 1).

Table 1. Elements Affecting Teachers' Career Intentions

Element	Percent of teachers citing as very important
Adequate support from school leadership	52%
Effectiveness with the students I teach	50%
Teaching assignment (subject, students)	40%
Collegial atmosphere amongst staff	39%
Empowerment to make decisions	37%
Personal reasons (health, family, etc.)	36%
Student behavior	32%
Time during the work day	30%
Adequate facilities and/or resources	29%
Retirement options	26%
Salary	24%
The community environment where I teach	21%
Degree of testing and accountability	15%
Cost of living of the school's community	12%

Fortunately, Ohio educators as a whole are positive about many aspects of school leadership, but there is still much room for growth:

- Only about half of Ohio educators agree that school administration and teachers have a shared vision (53 percent) or that teachers are recognized for accomplishments (54 percent). Educators are only slightly more positive about the ability of leadership to communicate clear expectations to students and parents (59 percent agree this is true in their school; Table 2). While an overall positive response rate is encouraging, these results also indicate that more than 40 percent of the state's educators do not believe that school leaders communicate clear expectations—a factor long associated with effective leadership.

Table 2. Educators' Impressions of Leadership

Aspect of Leadership	Percent of educators agreeing
The faculty are committed to helping every student learn	84%
The school leadership communicates clear expectations to students and parents	59%
Staff members are recognized for accomplishments	54%
The school administration and teachers have a shared vision	53%
There is an atmosphere of trust and mutual respect within the school	53%

- Of all of their concerns about the leadership in their schools, educators appear to be most worried about the response of school leaders to teacher concerns about their leadership, with only about 41 percent of all educators indicating that they believe their leaders make sustained efforts in this area. In addition, less than half of Ohio educators agree that school leadership makes a sustained effort to address teacher concerns about empowerment (44 percent) and time (47 percent; Table 3).

Table 3. Educators' Impressions of Leadership's Attention to Concerns	
The school leadership makes a sustained effort to address teacher concerns about:	Percent of educators agreeing
Leadership issues	41%
Empowering teachers	44%
The use of time in my school	47%
Facilities and resources	54%
Professional development	56%

Relevant Domain Analysis: Leadership (p. 18)

3. Teachers need more time to plan and collaborate.

Teachers expressed concern about the amount of time they have available to teach, plan, and collaborate with colleagues. These concerns take on added significance when considered within the context of what Ohio educators report as the most important working condition in promoting student learning. About 42 percent of Ohio educators believe that time is the most important working condition for improving student learning—double the number who cite the next-closest condition, teacher empowerment (21 percent; Figure 3).

Figure 3. Most Important Working Conditions for Promoting Student Learning

Time 42 percent
Professional Development 8 percent
Leadership 12 percent
Facilities and Resources 18 percent
Empowerment 21 percent
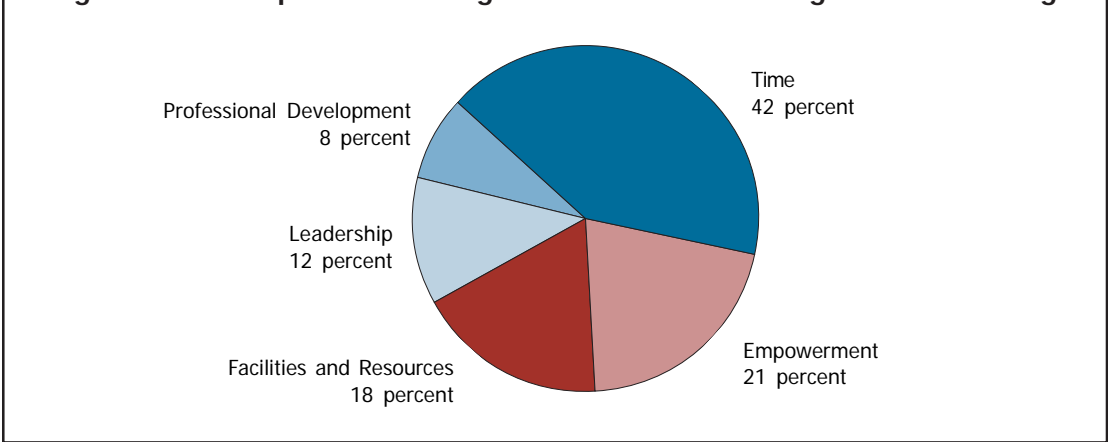
- Slightly more than one-third (34 percent) of Ohio teachers agree that the non-instructional time they receive is sufficient. Only 40 percent of teachers agree that they have time available to collaborate with colleagues and a mere 13 percent report having more than three hours per week available for structured collaborative planning (Table 4).

Table 4. Teachers' Perceptions of Adequacy of Time Available		
Aspect of Time	**Agree**	**No Opinion or Disagree**
The non-instructional time provided for me is sufficient	34%	66%
I have time available to collaborate with my colleagues	40%	60%
I have class sizes that allow me to meet educational needs of all students	46%	54%
In a typical week, I have ___ hours for structured, collaborative planning:		
None	32%	
Less than 3 hours	54%	
Between 3 and 5 hours	11%	
Between 5 and 10 hours	2%	13%
More than 10 hours	0%	

- As a result of this lack of planning time, most teachers are working outside of the regular school day on school-related activities. More than one-third (36 percent) report working, on average, more than 10 hours per week outside of the work day, and 67 percent report working more than an hour a day on school related activities outside the work day.

- Ohio educators also are devoting significant days to school and professional responsibilities beyond their current contracts. Half of all educators (50 percent) report working 10 or more days beyond the scope of their current contracts and only 10 percent report working less than three days beyond contract.

Relevant Domain Analysis: Time (p. 21)

4. Teachers need more opportunities to participate in school decision-making.

Ohio teacher "movers" and "leavers" cite teacher empowerment as one of the key elements in their decisions to move or leave. Teachers want to play a role in classroom and school decisions to ensure that they can be effective with their students, but while a majority of teachers in Ohio believe that they are impacting classroom-level decisions, many do not believe that they are playing a significant role in other decisions that ultimately impact their school.

- A majority of teachers report playing a role in decisions about classroom-level issues such as devising teaching techniques (63 percent), and a smaller majority report being involved in setting grading policies and student assessment practices (51 percent).

- However, teachers are far less likely to report that they or their colleagues play a large role in school-level decisions such as budgeting (4 percent), hiring (8 percent), determining the content of professional development (14 percent), school improvement planning (18 percent), and establishing and implementing student discipline policies (22 percent; Table 5).

Table 5. Teachers' Impressions of Their Role in Certain Tasks	
Task	**Percent of teachers who believe they play a significant role**
Devising teaching techniques	63%
Setting grading and student assessment practices	51%
Selecting instructional materials and resources	41%
Establishing and implementing policies for student discipline	22%
School improvement planning	19%
Determining the content of in-service professional development programs	14%
Hiring new teachers	8%
Deciding how the school budget will be spent	4%

- This lack of participation may explain teachers' sense of separation from decision-making. Only about one-third (36 percent) of teachers agree that they are centrally involved in decision-making about educational issues. Part of the reason could be current processes for making school-wide decisions. Less than half (43 percent) of all teachers agree that there is an effective process for making decisions and solving problems in their schools.

- These empowerment issues appear to only somewhat adversely influence the degree to which teachers believe they are respected and trusted. A majority of Ohio teachers still agree that they are respected as educational experts (53 percent), are trusted to make sound professional decisions about instruction (57 percent), and work in a school with an atmosphere of trust and mutual respect (53 percent)—but only a *slight* majority (Table 6).

Table 6. Teachers' Feelings of Respect and Trust	
Respect and Trust Indicator	**Percent of teachers agreeing**
Teachers are trusted to make sound professional decisions about instruction	57%
Teachers are respected as educational experts	53%
There is an atmosphere of trust and mutual respect within the school	53%
Teachers are supported by the community in which they teach	51%

Trust and respect consistently surface as important "empowerment" issues in this and other studies of teaching and learning conditions (see, for instance, the regression analyses toward the end of this report, pp. 23-25), but some may question the appropriateness of their inclusion in discussions of empowerment. It is important to bear in mind that empowerment is not always about power and control; sometimes it is about being entrusted to offer input into important decisions. This kind of teacher empowerment—empowerment through autonomy and collaboration—should be recognized not only for its value in establishing a supportive environment for educators, but also for its potential in accelerating school improvement.[12]

Relevant Domain Analyses: Empowerment (p. 19), Leadership (p. 18)

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

5. *Teachers who are most dissatisfied with working conditions are more likely to report that they will change schools or districts, not leave the profession.*

It is perhaps not surprising that teachers who indicate that they are either leaving their current schools (school "movers") or leaving teaching altogether (school "leavers") are generally less positive about teaching and learning conditions than are teachers who plan to stay in their current schools. What may be more revealing is the fact that movers are almost always much less positive about teaching and learning conditions than are leavers—in other words, the most dissatisfied teachers appear to want to move schools rather than to leave teaching entirely. In response to whether they believe that their school is a good place to work and learn, only 27 percent of movers agree, compared to 51 percent of leavers and 78 percent of stayers (Figure 4). Also, at least in the group surveyed, there are more than twice as many teachers who intend to move as there are teachers who intend to leave.

Figure 4. Teachers: "Overall, My School Is a Good Place to Work and Learn"
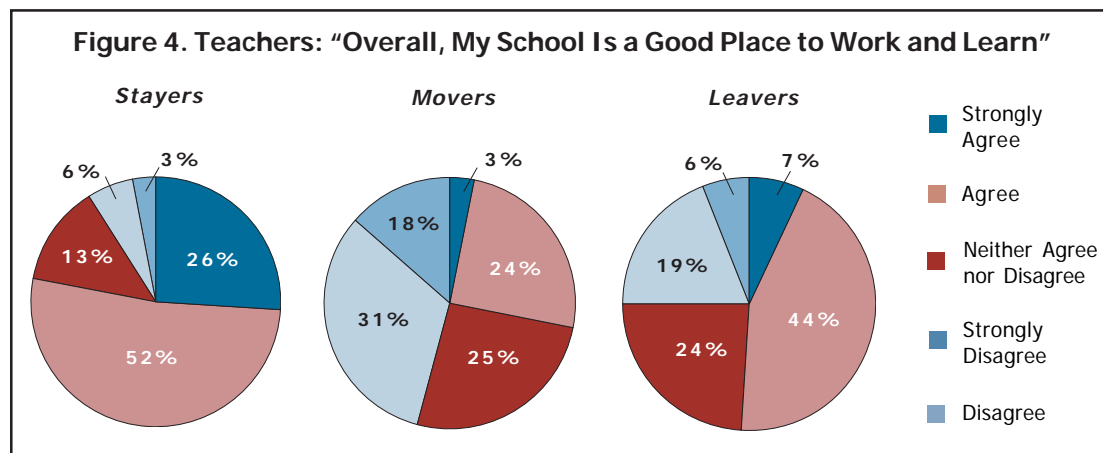
It is important to keep in mind, however, that the largest single group of teacher leavers (50 percent) is comprised of teachers with over 26 years of experience—in other words, teachers who have reached retirement age. By contrast, around half of the movers have taught ten or fewer years, whereas less than one out of five of the leavers have taught ten or fewer years. As a result, the data reported above do not necessarily reflect faithfully the opinions of one important sub-group of leavers who are most likely to be targeted by state or local teacher retention plans: early career (pre-retirement age) teachers who plan to leave the profession entirely.

Early Career Leavers

This analysis is based only on the small number of respondents (*n* = 79, well under half of all leavers) who indicate that they are leaving teaching entirely and who are not of retirement age (less than 21 years of experience[13]), and readers are reminded to exercise caution when interpreting these results.

Early career leavers generally express lower opinions than stayers and movers about teaching and learning conditions across all domains, though only marginally so with respect to the adequacy of instructional and planning time. The conditions on which their opinions depart most dramatically from their peers are in the area of empowerment—especially with regard to their perceptions about the degree to which they are respected as education experts, have the support of their community, are entrusted with making decisions about instruction, and benefit from their community's participation in school life—and in their overall feelings about their schools being good places to work and learn (only 48 percent of early career leavers think their schools are good places to work and learn, compared to 74 percent of movers and stayers).

The single largest contributor to their decision to leave teaching appears to be their assessment of their own effectiveness with the students they teach (69 percent identified this factor), and it is interesting to note that well over 80 percent of non-leavers also cite this component as an important factor in their career intentions. In other words, the degree to which a teacher believes that she or he is effective with students may be a powerful indicator of her or his eventual career decision—more so than with any other indicator, teachers who feel effective stay in teaching, and teachers who do not feel effective move or leave. In addition, perceptions of adequate support from school leadership also appear to play a large role in career decisions, with about 62 percent of all early career leavers and just under 80 percent of all non-leavers citing it as a factor in their decisions. On the other hand, factors commonly assumed to make a difference, like salary and prevalence of testing and accountability systems, appear to be less important in the career decision process (though it is interesting to note that the perceived pervasiveness of testing and accountability is the only factor cited more frequently by early career leavers [50 percent] than by non-leavers [39 percent] as contributing to their future career decisions [Table 7]).

One tentative conclusion to draw from these responses is that there is no clear single teaching and learning condition highlighted on the survey that appears to influence early career leavers; early career leavers express general dissatisfaction with almost all aspects of their working environments. On the other hand, while their responses do not suggest a clear pattern with respect to their primary *motivations* for leaving, it is important to note that more than two-thirds cite concerns about their effectiveness as teachers, perhaps suggesting that interventions in the form of increased professional development opportunities would help allay their feelings of inadequacy (early career leavers are much less likely to indicate having received professional development in every teaching area than are their non-leaver colleagues; Table 8).

There are other possible factors worth exploring, too—for instance, over half (55 percent) of the early career leavers teach in districts characterized by high poverty and low median incomes, and about half of them teach in urban districts—but they are beyond the scope of the analyses possible with the current survey responses.

Table 7. Factors Influencing Career Decisions, Early Career Leavers vs. Non-Leavers		
Factor Identified as Important or Very Important in Influencing Career Decision	Early Career Leavers	Non-Leavers
Effectiveness with the students I teach	69%	83%
Adequate support from school leadership	62%	79%
Student behavior	62%	63%
Empowerment to make decisions	59%	73%
Personal reasons (health, family, etc.)	59%	63%
Time during the work day	54%	61%
Salary	54%	56%
Collegial atmosphere amongst staff	53%	72%
Degree of testing and accountability	**50%**	**39%**
The community environment where I teach	48%	53%
Adequate facilities and/or resources	44%	56%
Teaching assignment (subject, students)	44%	71%
Retirement options	38%	52%
Cost of living of the school's community	22%	32%

Table 8. Exposure to Professional Development, Early Career Leavers vs. Non-Leavers		
Ten or More Hours of Professional Development Received in Past Two Years	Early Career Leavers	Non-Leavers
Limited English Proficiency (LEP)	1%	3%
Special Education (Acad. Gifted Students)	3%	4%
Closing the Achievement Gap	4%	20%
Special Education (Students with Disabilities)	5%	20%
Classroom Management	7%	19%
Student Assessment	10%	35%
Reading	13%	40%
Content-Area Professional Development	14%	44%
Methods of Teaching	16%	41%

6. Teacher movers and leavers are most frustrated by their levels of empowerment and by their perceptions of the quality of leadership in their schools.

Movers in particular—nearly half (48 percent) of them—cite the quality of school leadership as the most critical factor in their decision to leave their current school, but movers and leavers alike expressed concerns about a number of teaching and learning conditions. More specifically:

• The greatest sources of frustration for movers and leavers appear to be the areas of ***empowerment*** and ***leadership***. In general, movers appear to feel much less empowered than do leavers, and both groups appear to feel less empowered than stayers. Movers and leavers alike do not feel involved in decision-making about educational issues (72 percent and 60 percent, respectively, respond negatively to this item), they do not believe that they are respected as educational experts (62 percent and 57 percent), and they do not tend to feel support from their communities (51 percent and 48 percent; Table 9). Their feelings about leadership are even stronger, with movers and leavers both disagreeing more vociferously

about the presence of strong leadership on almost every leadership issue than do their stayer colleagues.

Table 9. Teachers' Feelings of Empowerment by Career Intention			
Empowerment Indicator	Percent <u>dis</u>agreeing:		
	Movers	*Leavers*	*Stayers*
Teachers are centrally involved in decision-making about educational issues	72%	60%	38%
Teachers are respected as educational experts	62%	57%	27%
Teachers are supported by the community in which they teach	51%	48%	22%

- Movers and leavers are dissatisfied with *facilities and resources* at similar levels, with a few notable exceptions. While both are more dissatisfied than their stayer colleagues, movers are more likely than leavers to cite dissatisfaction with the overall adequacy of the resources available to them (40 percent dissatisfied, compared to 32 percent of leavers). They note in particular higher levels of dissatisfaction with the availability of instructional materials (48 percent versus 36 percent) and the safety of their schools (37 percent versus 27 percent; Table 10).

Table 10. Teachers' Impressions of Facilities and Resources by Career Intention			
Facilities and Resources Indicator	Percent <u>dis</u>agreeing:		
	Movers	*Leavers*	*Stayers*
Overall, this school has adequate facilities and resources for me to do a good job	40%	32%	15%
Teachers have sufficient access to appropriate instructional materials and resources	48%	36%	21%
Teachers and staff work in a school environment that is safe	37%	27%	11%

- In their responses to questions about *time* and *professional development*, movers and leavers both are somewhat less positive than stayers, but not in systematic or patterned ways. Positive responses from movers and leavers are typically between 9 and 18 percentage points lower than those of stayers.

7. Efforts to stem teacher attrition in Ohio likely will require multiple approaches that are sensitive to differences in teaching and learning conditions at different levels of schooling and in different school locales.

The concerns of elementary school leavers are often quite different from and less definitive than the concerns of middle and high school leavers. There are only marginal differences in the proportion of teachers at the three school levels who intend to leave teaching altogether, but the *differences* in perceptions among leavers across levels are sometimes very revealing.

- For example, elementary teachers who intend to leave teaching are less concerned about safety issues in their schools than are middle or high school leavers. Similarly, elementary school leavers sense greater encouragement to participate in professional leadership activities, as well as a greater sense of the presence of a problem-solving process at the school level. Elementary leavers are also more likely to feel positive about the atmosphere of trust and respect that pervades their schools and the degree to which their leadership and faculty share a vision. On the other hand, middle and high school leavers are more likely to cite positive feelings about their role in selecting instructional materials and setting grading and assessment policies (Table 11).

Table 11. Differences in Perceptions of Leavers Across Grade Levels

Teaching and learning condition	Percent Agreeing: Leavers		
	Elem.	Middle	High
Teachers and staff work in a school environment that is safe.	66%	50%	43%
Teachers are encouraged to participate in professional leadership activities.	68%	44%	51%
In this school we take steps to solve problems, we don't just talk about them.	53%	22%	34%
The school administration and teachers have a shared vision.	48%	19%	26%
There is an atmosphere of trust and mutual respect within the school.	42%	19%	22%
Selecting instructional materials and resources	22%	38%	47%
Setting grading and student assessment practices	30%	44%	52%
The faculty are committed to helping every student learn.	88%	84%	54%
Overall, my school is a good place to work and learn.	60%	31%	46%

- Perhaps the most notable difference is in the proportion of elementary and middle school leavers who believe that their schools' faculty are committed to helping every student learn (88 percent and 84 percent) compared to the proportion of their high school leaver peers who feel the same way (only 54 percent). Finally, belief in the degree to which their schools are good places to work and learn is low among leavers at all three levels, but it drops off most precipitously among middle school leavers (60 percent of elementary school leavers, 46 percent of high school leavers, and only 31 percent of middle school leavers; Table 11).

In addition, perceptions of teaching and learning conditions vary not only by each teacher's career intentions but sometimes also by the type of district in which she or he teaches. Because of the low numbers of survey respondents in the three state-identified categories of rural districts[14] who indicate that they plan to either move from their current schools or leave teaching altogether, we created a meta-district category by merging data from the three rural district types. In this report, we substitute the following terms for the rather lengthy official district category names (see sidebar).

District Type Terminology

Major Urban—Very High Poverty	=	*Major Urban*
Urban—Low Median Income, High Poverty	=	*Urban*
Urban/Suburban—High Median Income	=	*Suburban*
Urban/Suburban—Very High Median Income, Very Low Poverty	=	*Affluent Suburban*
Rural, Agricultural and Rural, Small Town (Range of Poverty Levels)	=	*Rural*

In general, teachers—even movers and leavers—in affluent suburban districts are more likely to feel positive about many aspects of teaching and learning conditions. Movers and leavers in affluent suburban districts as well as in rural districts are more likely to agree that their school is safe and provides adequate space than are teachers in other district types. In addition, affluent suburban movers and leavers believe they are more empowered than teachers in other districts, reporting, for example, that they play a larger role in making decisions about instructional materials, developing instructional techniques, and setting grading and assessment policies than do teachers in other districts. In particular, only 8 percent of movers (and 11 percent of leavers) in major urban schools report that they play a large or primary role in selecting instructional materials and resources. Finally, movers and leavers in affluent suburbs—along with colleagues in major urban districts—are more likely to believe that leaders make a sustained effort to address their concerns about issues such as professional development and facilities and resources (Table 12).

Table 12. Differences in Perceptions of Movers and Leavers Across District Types

Teaching and learning condition	Percent Movers Agreeing					Percent Leavers Agreeing				
	Major Urban	Urban	Suburban	Affluent Suburban	Rural (Combined)	Major Urban	Urban	Suburban	Affluent Suburban	Rural (Combined)
Teachers and staff work in a school environment that is safe.	39%	41%	54%	**61%**	**69%**	42%	61%	53%	**63%**	**73%**
Teachers have adequate professional space to work productively.	47%	38%	43%	**51%**	43%	39%	38%	31%	**50%**	**40%**
Teachers play a large or primary role in:										
Selecting instructional materials and resources	8%	28%	24%	**39%**	35%	11%	41%	34%	**59%**	37%
Devising teaching techniques	32%	43%	30%	**66%**	49%	39%	51%	57%	**77%**	57%
Setting grading and student assessment practices	33%	36%	24%	**50%**	45%	34%	34%	43%	**63%**	37%
School Leaders make a sustained effort to address issues about:										
Leadership	**18%**	12%	9%	9%	16%	**26%**	14%	11%	**26%**	23%
Facilities and resources	**27%**	26%	18%	25%	23%	**42%**	29%	27%	**42%**	23%
The use of time in my school	**25%**	18%	11%	**20%**	13%	**35%**	19%	18%	**37%**	21%
Professional development	**28%**	26%	24%	**39%**	25%	**47%**	38%	36%	**52%**	20%
Empowering teachers	**20%**	12%	7%	**18%**	13%	**35%**	17%	13%	**41%**	17%

While not definitive, these data and findings do suggest that Ohio will need to take multiple and different approaches to curbing teacher attrition, fitting plans to differences in teacher perceptions of teaching and learning conditions both at various school levels and across different school district locales.

Domain-Specific Findings

The findings for this report were generated after careful consideration of educator responses to questions about the five different teaching and learning condition domains addressed in the survey. Presented here—in their order of importance to teachers with respect to their future career decisions—are more detailed assessments of the stories the data in these domains tell. In this section, we also begin the process of unpacking how different teachers—defined by where they teach (e.g., urban, suburban, rural) and by other characteristics (e.g., experience, gender, ethnicity, etc.)—view specific teaching and learning conditions.

Leadership

The clearest signal from responses to questions in the leadership domain is that administrators and teachers alike believe very strongly that all faculty are committed to student learning (84 percent overall, with similar results when responses are broken down by position). In other areas of leadership, however, there appear to be fewer areas of consensus. With one out of every three teachers citing leadership as the aspect of their work environment that most affects their willingness to continue teaching at their current school, the responses in this domain are particularly relevant for addressing teacher turnover in Ohio.

When it comes to school leadership, most teachers' perceptions tend to be positive, but, more so than in other domains, the overall positive results often mask a sizeable amount of negative opinions. In other words, teachers tend to have either strong positive or negative impressions of several leadership characteristics, with fewer neutral impressions. For example, while over half of all teachers (53 percent) believe that an atmosphere of trust and respect pervades their school, nearly one third (29 percent) express negative impressions of the same characteristic, with only 18 percent expressing no opinion. This pattern is evident in many leadership domain responses (Table 13).

Table 13. Teachers' Impressions of Leadership			
Aspect of Leadership	Agree	No Opinion	Disagree
There is an atmosphere of trust and mutual respect within the school	53%	18%	29%
The school leadership communicates clear expectations to students and parents	59%	19%	23%
Staff members are recognized for accomplishments	54%	22%	24%
The school administration and teachers have a shared vision	53%	23%	24%

Similarly, teachers express mixed impressions of their leadership's ability to address teacher concerns, with between 55 percent (professional development concerns) and only 40 percent (leadership concerns) of teachers reporting that they believe that their leaders make a sustained effort to address concerns in each of the five domain areas. African-American educators express more confidence in leadership's willingness and ability to address these issues (between 65 and 52 percent) than do their white colleagues (between 55 percent and 40 percent), as do inexperienced educators (between 69 and 55 percent for educators in their first year in a school; Table 14).

Table 14. Various Educators' Impressions of Leadership's Attention to Concerns				
The school leadership makes a sustained effort to address teacher concerns about:	Percent Who Agree			
	All Teachers	White Educators	African-American Educators	1st-Year Educators
Professional development	55%	55%	65%	69%
Facilities and resources	53%	53%	62%	61%
The use of time in my school	45%	46%	57%	55%
Empowering teachers	43%	43%	54%	61%
Leadership issues	40%	40%	52%	55%

Empowerment

Educators' sense of empowerment in Ohio is decidedly mixed, and in a relatively systematic way. While most educators (70 percent of teachers; 91 percent of principals) believe that teachers are encouraged to participate in professional leadership activities, the *types* of activities in which teachers believe that they have *opportunities* to participate are most often limited to leadership at the classroom level—designing teaching techniques (63 percent of teachers) and making instructional decisions (57 percent of teachers). In other school- or district-level empowerment arenas, teachers feel more detached—sometimes much more so—from decision-making processes, from a high of 41 percent who believe that they play a role in selecting materials to lows of 8 percent and 4 percent, respectively, in matters of hiring and budget-setting. Teachers also sense that they have little control over other areas for potential empowerment, such as the content of their professional development, school improvement planning, and school discipline policies.

More so than in any other domain, there are sometimes striking differences between African-American and white educator perceptions of their levels of empowerment. On the one hand, only 26 percent of African American educators feel that they have any influence in the selection of materials (compared to 43 percent of white educators). They also sense that they have less input in devising teaching techniques (49 percent compared to 64 percent) and that they have less support from their communities (44 percent compared to 52 percent).

On the other hand, there are many areas in which African-American educators feel more empowered. Fifty-six percent of African-American educators believe that their faculty has an effective process for making group decisions, compared to only 43 percent of white educators, and African-American educators believe they have more (non-administrative) opportunities for advancement than do their white peers (50 percent versus 39 percent). Though, as noted above, neither group feels particularly involved in school improvement planning, African-American educators are more likely than white educators to feel like they are a part of that process (32 percent versus only 19 percent; Table 15).[15]

Table 15. Various Educators' Impressions of Their Empowerment

Task:	Percent of Educators Who Believe They Play a Significant Role	
	African-American	*White*
Selecting instructional materials and resources	26%	43%
Devising teaching techniques	49%	64%
School improvement planning	**32%**	**19%**
Empowerment Indicator:	**Percent of Educators Agreeing**	
	African-American	*White*
The faculty has an effective process for making group decisions and solving problems	**56%**	**43%**
Teachers are supported by the community in which they teach	44%	52%
Opportunities for advancement within the teaching profession are available to me	**50%**	**39%**

Facilities and Resources

In terms of physical support, Ohio educators are generally very positive about their facilities and resources. Two-thirds (67 percent) express favorable overall views of their facilities and resources, with a large or very large majority of educators expressing favorable impressions of the availability of specific facilities and resources. Positive responses range from between 61 percent (availability of instructional technology) to 73 percent (access to communications technology). Impressions of school cleanliness (67 percent) and safety (74 percent) are also high, though it should be noted that African-American educators are much less enthusiastic about their schools' safety (62 percent) than are their white colleagues (77 percent).

Ohio educators are less enthusiastic in general about the availability of support personnel and professional workspace, with only about half of all educators (between 44 percent and 56 percent) rating the availability of these resources as sufficient (Table 16).

Table 16. Teachers' Impressions of Availability of Support Staff, Workspace

Facilities and Resources Issue:	Percent of teachers agreeing
Teachers have sufficient training and support to fully utilize available instructional technology	44%
Teachers have adequate professional space to work productively	53%
Teachers have sufficient access to a broad range of support personnel	56%

Time

There is wide disagreement between teachers and principals on many issues of time availability. For example, less than half of all teachers agree or strongly agree that they have reasonable class sizes and time to meet the needs of all students (46 percent), time for collaboration (40 percent), or sufficient non-instructional time (34 percent). Principals, on the other hand, are much more likely to perceive that there is adequate time available in each of these areas (77 percent, 73 percent, and 68 percent, respectively; Table 17).

Table 17. Teacher and Principal Perceptions of Time Usage		
In-School Time Usage:	**Percent Who Agree**	
	Teachers	*Principals*
Teachers have reasonable class sizes, affording time to meet the educational needs of students	46%	77%
Teachers have time available to collaborate with their colleagues	40%	73%
The non-instructional time provided for teachers in my school is sufficient	34%	68%

This difference is particularly important in light of the fact that teachers overwhelmingly indicate that time during the work day is the most important working condition for promoting student learning (42 percent of all teachers).[16] Administrators, on the other hand, are much less likely to cite time as the most important working condition for promoting student learning (only 25 percent of principals and assistant principals).

Some of these differences may be a result of differences in teachers' and principals' perception of the time teachers have available at school and the time they spend out of school on school work every day. While a sizeable proportion of teachers say that they have less than an hour of non-instructional time a day (82 percent report having less than five hours a week), a much smaller proportion of principals perceive teacher non-instructional time to be that scarce (59 percent). Similarly, while two out of every three teachers report spending more than five hours a week outside of school on school work, only 41 percent of principals think that is the case; indeed, more than one-third of all teachers report spending more than ten hours a week on school work outside of school, but only one in about 14 principals believes that to be so (Figure 5).

Figure 5. Teachers' and Principals' Perceptions of Time Spent on School Work Outside of School During an Average Week

Teachers

Principals

1%
10%
36%
23%
31%

1%
7%
26%
34%
31%

- None
- <3 hours
- >3 hours, ≤5 hours
- >10 hours
- >5 hours, ≤10 hours
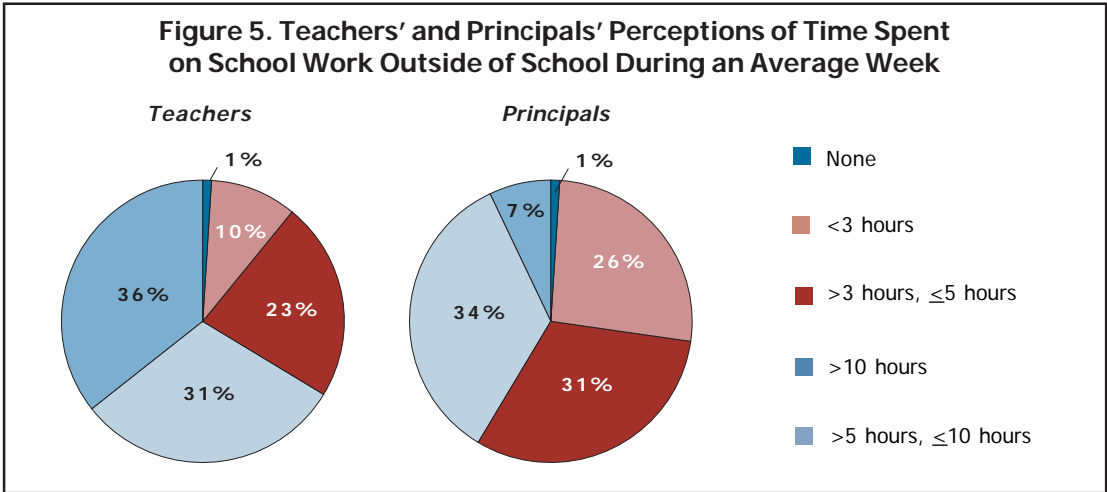
In general, inexperienced teachers are consistently more positive about their class size, collaboration time, and non-instructional time than are more experienced teachers, as are teachers who have logged fewer years in their current school.

Professional Development

Educators express little overall negativity in their assessments of the availability of professional development resources (26 percent responding negatively) and of the overall quality of professional development (18 percent). However, fewer than half of all educators in general (47 percent) and teachers in particular (46 percent) believe that *school-level* professional development provides them with the skills and knowledge necessary for teaching effectively.

According to administrators and teachers alike, there is also a clear disconnect between professional development *delivered* and professional development *needed*, though the two groups do not always agree as to the most important areas for additional professional development. While administrators indicate that teachers need additional professional development in special education for students with disabilities (81 percent), closing the achievement gap (67 percent), and student assessment (52 percent), teachers indicate that the bulk of their professional development has been in their specific content areas (43 percent indicate they have received professional development in this area, the highest percentage among all options), with very few teachers indicating available professional development in the areas cited by administration (20 percent, 20 percent, and 36 percent, respectively). No matter their preparation route (traditional or alternative) or preparation level (bachelor's or higher), teachers are much less likely than their administrators to believe that they need additional support in almost every area of teaching, but a sizeable proportion want more support in teaching students with special needs (51 percent) and in closing the achievement gap (43 percent; Table 18).

Table 18. Teacher and Principal Perceptions of Professional Development Availability and Needs			
Support Area:	**Percent Indicating a Need**		**Percent of Teachers Receiving**
	Teachers	*Administrators*	**10+ Clock Hours, Past Two Years**
Special Education (Students with Disabilities)	51%	81%	20%
Closing the Achievement Gap	43%	67%	20%
Special Education (Acad. Gifted Students)	26%	50%	5%
Reading	23%	40%	40%
Student Assessment	22%	52%	36%
Classroom Management	19%	41%	19%
Methods of Teaching	15%	40%	41%
Content-Area Professional Development	13%	13%	43%
Limited English Proficiency (LEP)	10%	32%	3%

Analysis of the Impact of Teaching and Learning Conditions on Teacher Attrition

The analyses for this final part of the study are 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 B: 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 19 at the end of the section.

Of particular note are the consistent and strong associations between four teaching and learning conditions and teacher career intentions. Least surprising of all is the finding that teacher perceptions of school safety are positively associated with career intent; that is, teachers who believe that their schools are safe places to work and learn are between 37 percent (elementary) and 77 percent (middle school) more likely to say that they intend to stay at their schools. Similarly, teachers who believe that they are recognized for their accomplishments and that there is an atmosphere of trust and mutual respect at their schools are much more likely to indicate that they intend to stay at their current schools. Awareness of an atmosphere of trust and respect resonated particularly with middle school teachers (there is an increase in likelihood of staying of over 160 percent for middle school teachers who sense an atmosphere of trust and mutual respect at their schools), and this finding corresponds to a growing theoretical and empirical research base that shows that trust and respect are critical factors in improving schools.[17]

Finally, at every school level, teachers who sense a greater degree of acknowledgment that they are and should be treated as professionals are much more likely to indicate that they will return to their schools the following year. The increase in likelihood is sizeable across school levels— 75 percent more likely for a high school teacher to indicate that she or he will stay, 98 percent more likely for a middle school teacher, and 119 percent more likely for an elementary teacher. For this study, acknowledgment of teacher professionalism is defined by a combination of indicators, including respect for teachers as educational experts, central involvement for teachers in decision making about educational issues, trust in teachers to make sound professional decisions about instruction, and the opportunity for teachers to play large roles in selecting instructional materials and resources and devising teaching techniques. Such findings support a strong body of qualitative research that consistently has found that teachers want to be treated as professionals, especially in terms of being entrusted to make important educational decisions about their schools and classrooms.[18]

Impact of Other Teacher and School Characteristics

The main focus of this 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. Results in this section are also summarized in Table 19. First, and perhaps least 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 with previous research. These findings are only statistically significant at the middle school level (where novice teachers are about 41 percent as likely as experienced teachers to stay) and high school level (where novice teachers are about 59 percent as likely to stay), but the apparent impact of inexperience is consistent across levels.

Second, school locale appears to play an important role in many teachers' career intention decisions, especially at the elementary level. Compared to teachers who work in schools that are located in suburban communities, the likelihood that elementary teachers in a variety of settings will remain in their current schools is significantly much smaller (only about 48 percent as likely to stay in a school in a major urban setting, and only about 57 percent as likely to stay in a school in a rural setting). The same is true for elementary teachers in smaller urban settings, but not to a significant degree. Patterns are similar across other school levels, though rarely significantly so (the exception being for rural high school teachers).

Finally, two high school-level results stand out. First, the greater the proportion of teachers there are in a high school who are assigned to in-field teaching duties (*i.e.*, teaching classes for which they are certified), the greater is the likelihood that a teacher indicates an intention to stay at her or his school.[19] The second notable high school result is that female high school teachers appear to be much 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 (who are still predominantly present at the high school level only) are more likely to pursue and be awarded non-teaching administrative promotions,[20] or even to leave the profession altogether to seek greater remuneration in other fields.

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*. 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, 80 percent of the time), the change in the corresponding *probability* that she will vote will not be as dramatic (because the new, larger probability is limited to a range between her original probability of 80 percent up to 100 percent). Based on responses to the Ohio Teaching and Learning Conditions Survey, the overall probability that an Ohio teacher chosen at random is a "stayer" is already about 90 percent (9 out of 10 report that they will stay); therefore, a positive change in the likelihood of staying only impacts the probability range between 90 and 100 percent (see Appendix B for more explanation of the difference). All changes in likelihood discussed above are converted into changes in probability in Table 19.

Table 19. 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				**91%**	**90%**	**90%**
Factor or Characteristic: *Teacher Characteristics*						
Female (vs. male)	1.131	1.199	**1.422** *	92%	92%	**92%**
Novice (vs. mid-career)	0.731	**0.410** *	**0.593** *	88%	**79%**	**84%**
School Characteristics						
% Core Teachers Teaching in-Field	1.006	**0.895** *	**1.048** *	91%	**89%**	**90%**
Urbanicity (vs. Suburban)						
Major Urban	**0.483** *	0.760	0.791	**83%**	87%	87%
Urban	0.887	1.319	0.791	90%	92%	87%
Rural	**0.568** *	0.782	**0.486** *	**85%**	88%	**81%**
Teaching/Learning Conditions (Positive vs. Negative Impression)						
Facilities and Resources	**1.415** *	**1.696** *	1.199	**93%**	**94%**	**91%**
Safe School	**1.370** *	**1.771** *	**1.609** *	**93%**	**94%**	**93%**
Time for Collaboration	1.281	1.161	0.949	**93%**	**91%**	**89%**
Prof. Development Resources	**1.305** *	1.185	**1.536** *	**93%**	**92%**	**93%**
Recognition	**1.637** *	**1.859** *	**1.879** *	**94%**	**94%**	**94%**
Trust and Respect	**1.518** *	**2.604** *	**1.802** *	**94%**	**96%**	**94%**
Decision Process	**1.554** *	1.004	1.504	**94%**	**90%**	**93%**
Teachers = Professionals	**2.195** *	**1.980** *	**1.747** *	**96%**	**95%**	**94%**

* = result is statistically significant

Conclusions

Overall, Ohio's educators are positive about many aspects of their teaching and learning conditions. Most of them agree that their school is a good place to work and learn, and 90 percent plan to continue teaching at their current school, a higher percentage than has been recorded in previous statewide teaching and learning condition surveys. As was the case in those previous surveys, it is clear that leadership is critical to retaining educators; however, only slightly more than half of the educators who responded to the 2007 Teaching and Learning Conditions survey have positive perceptions of school leadership in important areas. As one researcher has concluded, "There are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader. Many other factors may contribute to such turnarounds, but leadership is the catalyst."[21]

In addition, results from the survey indicate that teachers seek more empowerment when it comes to improving student learning—especially in terms of being centrally involved in decision-making about out-of-classroom issues. Issues of empowerment seem to be of greatest concern to the state's minority teachers and to those who intend to move from their school or to leave the profession entirely. Only a slight majority of Ohio teachers agree that they are respected as educational experts, are trusted to make sound professional decisions about instruction, and work in a school with an atmosphere of trust and mutual respect. In general, teachers who are considering a move to another school or district appear to feel much less empowered than do leavers, and both groups appear to feel less empowered than stayers. Most teachers who are most dissatisfied with working conditions indicate that they are likely to respond by changing schools or districts, not by leaving the profession.

As Ohio struggles to find new ways to recruit and retain teachers for "major urban" schools, it is worth remembering that only 8 percent of movers in these high need schools report that they are able to select instructional materials and resources. As our logistic regression analyses suggest, teacher empowerment issues play a large role in whether or not teachers intend to stay in teaching. That said, the single largest contributor to the early leaver's decision to exit teaching appears to be their *assessment of their own effectiveness* with the students they teach. The implication is clear: teacher retention is tied to more authority and responsibility, but it is also tied to more opportunities to learn how to teach in the face of challenging circumstances.

One key question for Ohio's policymakers to ask is how to develop the kinds of school administrators teachers need, administrators who will share leadership responsibilities with teachers and who will facilitate teachers' desires to learn how to be more effective teachers. Teacher leaders can help other teachers learn, and they can lead without usurping administrative prerogative, but these data suggest that few administrators and teachers know how to create that kind of symbiotic school environment. In addition, principals and teachers appear to have very

different perceptions of the quality of teaching and learning conditions in their schools, with profound differences in their understanding of the time needed to learn and of the quality of professional development in general.

Indeed, the data suggest strongly that teachers need more time to plan and collaborate—a mere 13 percent of Ohio teachers report having more than three hours per week available for structured collaborative planning. Key questions to ask include how time is being used, as well as to what end. Researchers have documented that in most European and Asian countries, classroom teachers spend about 17 to 20 hours of their 40- to 45-hour work week in their classrooms with students. The remaining time is spent on class preparation and joint planning; collegial work on curriculum and assessment development; one-on-one meetings with students, parents, and other colleagues; and learning through involvement in study groups, observation of other teachers, research, and demonstration lessons.[22] At the same time, other researchers have pointed out that this kind of teacher time may best explain why students in other nations outscore their American counterparts in international assessments.[23]

When considering all of these figures and the conclusions drawn above, readers are encouraged to bear in mind several caveats. To begin with, the Teaching and Learning Conditions Survey cannot tease out clearly whether teachers choose to move or leave *because of* teaching and learning conditions, or whether their responses to teaching and learning conditions are a *result* of their decisions to move or leave. In addition, while data for teacher stayers are based on over 6,500 responses, data for teacher movers and leavers are based on responses from only about 500 and 200 teachers, respectively. Also, we want to alert readers to the fact that data from this survey on career *intentions* appears to be somewhat different from data on actual career *decisions* included in previous state reports on teacher retention. Future reports and analyses should draw on actual school-level turnover data from the survey year itself to develop a more accurate picture of how teachers' career intentions play out. Finally, it would be worthwhile for the state and survey designers to work collaboratively to obtain data about the specific subject areas taught by survey respondents. We suspect that such distinctions might help to uncover important differences in the perceptions of working conditions of teachers in different subject areas—particularly of those teaching in high-needs subject areas—just as patterns of differences have surfaced at different school levels.

In closing, teaching and learning conditions clearly matter for educators in many different ways. Many of the responses from almost 8,000 Ohio educators suggest a need for both considerable action and reflection. In many cases, relatively small percentages of teachers believe they work under the conditions that allow them to be effective. By analyzing the data in this report, Ohio stakeholders can begin to ask important questions about how the findings can drive reform. What percentages should be considered "good enough?" How can schools with *better* conditions help those with *worse* conditions to improve? To what extent do teaching and learning conditions serve as markers for student opportunities to learn? If they do serve as markers, which indicators would be the most palatable as well as the most valid and reliable for assessing progress? Policymakers and practitioners need to identify benchmarks for 21st century teaching and learning conditions that will not only give students a chance to learn 21st century skills but also help education leaders manage more carefully—with seemingly constant upswings in retirements and novice teacher turnover—an increasingly volatile teacher labor market. Ohio has a core of dedicated teachers who can contribute to these efforts, and with the aid of focused attention and data-driven policies, the dedication and efficacy of its teaching population has the potential to thrive.

Appendix A. Implied Per-School Attrition Rates

On the following pages is a complete list of all Ohio schools in which at least 40 percent of all teachers responded to the 2007 Ohio Teaching and Learning Conditions Survey and in which there were at least five respondents. The 40 percent response rate threshold helps ensure that results are representative of the population of educators in each school, and the minimum of five responses helps to protect the anonymity of respondents.

This table includes implied attrition rates—that is, the proportion of respondents at the school who indicated that they either intended to move to another school before the start of the next school year or that they did not plan to return to teaching at all—for each school, as well as some basic demographic characteristics of teachers in each school.

As in other areas of this report, readers are urged to interpret these data with all due caution: survey respondent statements about their future career *intentions* are not necessarily reliable reflections of their future career *decisions*.

Appendix A. Implied Per-School Attrition Rates

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Alliance City	Alliance Middle School	91.7%	5.6%	2.8%	8.3%	11.1%	30.6%	58.3%	83.3%	16.7%	67.3%
	Northside Elementary School	90.5%	0.0%	9.5%	9.5%	4.8%	23.8%	71.4%	90.5%	9.5%	100.0%
	Parkway Elementary School	78.6%	14.3%	7.1%	21.4%	0.0%	0.0%	100.0%	71.4%	28.6%	88.9%
	South Lincoln Elementary School	100.0%	0.0%	0.0%	0.0%	25.0%	25.0%	50.0%	87.5%	12.5%	44.4%
Arcanum-Butler Local	Arcanum Elementary School	95.2%	0.0%	4.8%	4.8%	9.1%	27.3%	63.6%	81.8%	18.2%	76.7%
	Arcanum High School	92.3%	7.7%	0.0%	7.7%	21.4%	14.3%	64.3%	78.6%	21.4%	60.0%
Arlington Local	Arlington Local Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	8.3%	91.7%	91.7%	8.3%	60.0%
	Arlington Local High School	100.0%	0.0%	0.0%	0.0%	0.0%	26.7%	73.3%	73.3%	26.7%	80.0%
Ashland City	Ashland Middle School	100.0%	0.0%	0.0%	0.0%	2.9%	17.6%	79.4%	91.2%	8.8%	42.5%
	Lincoln Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	60.0%	40.0%	80.0%	20.0%	50.0%
	Montgomery Elementary School	92.3%	0.0%	7.7%	7.7%	23.1%	7.7%	69.2%	69.2%	30.8%	72.2%
Aurora City	Leighton Elementary School	100.0%	0.0%	0.0%	0.0%	16.0%	56.0%	28.0%	72.0%	28.0%	60.0%
Belpre City	Belpre Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	60.0%	40.0%	60.0%	40.0%	45.5%
	Belpre High School	88.9%	11.1%	0.0%	11.1%	11.1%	44.4%	44.4%	77.8%	22.2%	40.0%
	William R Stone Elementary School	66.7%	0.0%	33.3%	33.3%	0.0%	33.3%	66.7%	77.8%	22.2%	52.9%
Bexley City	Bexley High School	100.0%	0.0%	0.0%	0.0%	7.7%	7.7%	84.6%	69.2%	30.8%	45.3%
	Bexley Middle School	100.0%	0.0%	0.0%	0.0%	15.4%	15.4%	69.2%	61.5%	38.5%	42.4%
	Cassingham Elementary School	91.7%	8.3%	0.0%	8.3%	0.0%	16.7%	83.3%	66.7%	33.3%	48.3%
	Maryland Avenue Elem. School	100.0%	0.0%	0.0%	0.0%	11.1%	11.1%	77.8%	58.8%	41.2%	75.0%
	Montrose Elementary School	86.7%	13.3%	0.0%	13.3%	0.0%	20.0%	80.0%	66.7%	33.3%	48.6%
Brunswick City	Applewood Elementary School	100.0%	0.0%	0.0%	0.0%	14.3%	28.6%	57.1%	53.8%	46.2%	56.0%
	Brunswick High School	87.5%	6.9%	5.6%	12.5%	12.2%	32.4%	55.4%	68.9%	31.1%	74.1%
	Brunswick Memorial Elem. School	88.2%	5.9%	5.9%	11.8%	0.0%	22.2%	77.8%	77.8%	22.2%	71.4%
	C R Towslee Elementary School	90.9%	0.0%	9.1%	9.1%	21.7%	26.1%	52.2%	78.3%	21.7%	100.0%
	Huntington Elementary School	96.4%	0.0%	3.6%	3.6%	0.0%	44.8%	55.2%	89.7%	10.3%	100.0%
	Visintainer Middle School	92.9%	0.0%	7.1%	7.1%	7.1%	57.1%	35.7%	71.4%	28.6%	48.4%
	Walter Kidder Elementary School	91.7%	4.2%	4.2%	8.3%	20.8%	33.3%	45.8%	66.7%	33.3%	96.0%
	Willetts Middle School	94.1%	5.9%	0.0%	5.9%	16.7%	55.6%	27.8%	83.3%	16.7%	46.5%
Bucyrus City	Kilbourne Elementary School	75.0%	12.5%	12.5%	25.0%	11.1%	22.2%	66.7%	88.9%	11.1%	76.9%
	Lincoln Elementary School	57.1%	14.3%	28.6%	42.9%	14.3%	14.3%	71.4%	71.4%	28.6%	43.8%
Canton City	Barbara F Schreiber Elem. School	83.3%	16.7%	0.0%	16.7%	8.3%	50.0%	41.7%	91.7%	8.3%	46.2%
	Belle Stone Elementary School	90.9%	9.1%	0.0%	9.1%	16.7%	25.0%	58.3%	91.7%	8.3%	42.9%
	Clarendon Elementary School	90.9%	9.1%	0.0%	9.1%	9.1%	18.2%	72.7%	63.6%	36.4%	46.2%
	Dueber Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	6.7%	93.3%	66.7%	33.3%	75.0%
	Worley Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	28.6%	71.4%	85.7%	14.3%	56.0%
Cedar Cliff Local	Cedarville Elementary School	100.0%	0.0%	0.0%	0.0%	15.4%	30.8%	53.8%	69.2%	30.8%	86.7%
	Cedarville High School	87.5%	0.0%	12.5%	12.5%	0.0%	25.0%	75.0%	75.0%	25.0%	59.3%
Chillicothe City	Allen Elementary School	91.7%	8.3%	0.0%	8.3%	0.0%	33.3%	66.7%	83.3%	16.7%	54.2%
	Mt Logan Elementary School	93.8%	0.0%	6.3%	6.3%	6.3%	18.8%	75.0%	62.5%	37.5%	43.2%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Clinton-Massie Local	Clinton-Massie Elementary School	92.3%	3.8%	3.8%	7.7%	11.5%	30.8%	57.7%	61.5%	38.5%	56.4%
	Clinton-Massie High School	95.7%	4.3%	0.0%	4.3%	17.4%	34.8%	47.8%	56.5%	43.5%	83.3%
	Clinton-Massie Middle School	100.0%	0.0%	0.0%	0.0%	0.0%	33.3%	66.7%	66.7%	33.3%	46.7%
Columbus City	Alexander G. Bell Elem. School	88.9%	11.1%	0.0%	11.1%	0.0%	11.1%	88.9%	44.4%	55.6%	56.0%
	Avondale Elementary School	75.0%	25.0%	0.0%	25.0%	0.0%	37.5%	62.5%	75.0%	25.0%	40.0%
	Beatty Park at Eastgate Elem. Sch.	66.7%	33.3%	0.0%	33.3%	33.3%	33.3%	33.3%	50.0%	50.0%	40.0%
	Berwick Alt. Elem. School	76.9%	15.4%	7.7%	23.1%	7.7%	61.5%	30.8%	53.8%	46.2%	68.4%
	Broadleigh Elementary School	75.0%	25.0%	0.0%	25.0%	6.3%	56.3%	37.5%	56.3%	43.8%	58.6%
	Buckeye Middle School	80.0%	20.0%	0.0%	20.0%	5.0%	40.0%	55.0%	80.0%	20.0%	52.6%
	Centennial High School	77.8%	14.8%	7.4%	22.2%	7.1%	39.3%	53.6%	60.7%	39.3%	69.6%
	Columbus Alternative High School	100.0%	0.0%	0.0%	0.0%	5.9%	41.2%	52.9%	52.9%	47.1%	43.2%
	Como Elementary School	95.5%	4.5%	0.0%	4.5%	4.5%	45.5%	50.0%	50.0%	50.0%	100.0%
	Dominion Middle School	94.1%	5.9%	0.0%	5.9%	11.1%	16.7%	72.2%	77.8%	22.2%	52.9%
	Eakin Elementary School	92.9%	7.1%	0.0%	7.1%	6.3%	25.0%	68.8%	50.0%	50.0%	77.3%
	East Columbus Elementary School	76.9%	23.1%	0.0%	23.1%	7.7%	38.5%	53.8%	92.3%	7.7%	72.2%
	East Linden Elementary School	81.8%	18.2%	0.0%	18.2%	0.0%	54.5%	45.5%	54.5%	45.5%	57.9%
	Easthaven Elementary School	65.0%	35.0%	0.0%	35.0%	5.0%	40.0%	55.0%	65.0%	35.0%	87.5%
	Fairwood Alt. Elem. School	94.7%	0.0%	5.3%	5.3%	15.8%	47.4%	36.8%	68.4%	31.6%	62.5%
	Franklin Alternative Middle School	38.9%	61.1%	0.0%	61.1%	27.8%	44.4%	27.8%	55.6%	44.4%	51.4%
	Gables Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	10.0%	90.0%	80.0%	20.0%	58.8%
	Georgian Heights Alt. Elem. School	90.0%	10.0%	0.0%	10.0%	0.0%	40.0%	60.0%	90.0%	10.0%	44.0%
	Huy Elem. School at Gladstone	92.3%	0.0%	7.7%	7.7%	7.7%	23.1%	69.2%	84.6%	15.4%	72.2%
	I-Pass	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	80.0%	60.0%	40.0%	100.0%
	Independence High School	90.0%	6.7%	3.3%	10.0%	6.3%	34.4%	59.4%	65.6%	34.4%	58.6%
	Indianola Math, Sci. & Tech. MS	68.8%	31.3%	0.0%	31.3%	0.0%	50.0%	50.0%	81.3%	18.8%	47.2%
	Leawood Elem. School at Koebel	69.2%	15.4%	15.4%	30.8%	0.0%	30.8%	69.2%	84.6%	15.4%	71.4%
	Liberty Elementary School	91.7%	8.3%	0.0%	8.3%	0.0%	58.3%	41.7%	58.3%	41.7%	50.0%
	Lincoln Park Elementary School	89.5%	5.3%	5.3%	10.5%	5.3%	36.8%	57.9%	75.0%	25.0%	80.0%
	Linden-McKinley High School	81.3%	18.8%	0.0%	18.8%	0.0%	31.3%	68.8%	62.5%	37.5%	40.9%
	Linden Elementary School	94.7%	5.3%	0.0%	5.3%	10.5%	26.3%	63.2%	84.2%	15.8%	58.8%
	Maize Road Elementary School	87.5%	0.0%	12.5%	12.5%	0.0%	25.0%	75.0%	62.5%	37.5%	40.9%
	Medary Elementary School	62.5%	37.5%	0.0%	37.5%	0.0%	35.3%	64.7%	52.9%	47.1%	100.0%
	Mifflin High School	100.0%	0.0%	0.0%	0.0%	0.0%	40.0%	60.0%	55.0%	45.0%	51.1%
	North Linden Elementary School	76.9%	23.1%	0.0%	23.1%	0.0%	46.2%	53.8%	61.5%	38.5%	60.0%
	Northtowne Elementary School	88.9%	11.1%	0.0%	11.1%	11.1%	0.0%	88.9%	77.8%	22.2%	60.0%
	Northwest Career Center	81.8%	18.2%	0.0%	18.2%	0.0%	9.1%	90.9%	27.3%	72.7%	85.7%
	Ridgeview Middle School	92.9%	7.1%	0.0%	7.1%	0.0%	28.6%	71.4%	85.7%	14.3%	43.8%
	Siebert Elementary School	92.3%	0.0%	7.7%	7.7%	0.0%	69.2%	30.8%	61.5%	38.5%	61.9%
	South High School	70.8%	25.0%	4.2%	29.2%	11.5%	30.8%	57.7%	50.0%	50.0%	52.9%
	Southeast Career Center	88.9%	11.1%	0.0%	11.1%	0.0%	22.2%	77.8%	44.4%	55.6%	45.8%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	Movers	Leavers		Novice	Midcareer	Experienced	Traditional	Alt. Cert./ Other	
Columbus City (continued)	Starling Middle School	68.4%	31.6%	0.0%	31.6%	0.0%	57.9%	42.1%	73.7%	26.3%	70.4%
	Stewart Alt. Elem. School	100.0%	0.0%	0.0%	0.0%	0.0%	41.7%	58.3%	100.0%	0.0%	85.7%
	Trevitt Elementary School	57.1%	42.9%	0.0%	42.9%	14.3%	57.1%	28.6%	28.6%	71.4%	41.2%
	Weinland Park at Second Elem. Sch.	92.3%	7.7%	0.0%	7.7%	0.0%	30.8%	69.2%	69.2%	30.8%	53.9%
Cory-Rawson Local	Woodcrest Elementary School	100.0%	0.0%	0.0%	0.0%	4.0%	48.0%	48.0%	76.0%	24.0%	93.1%
	Cory-Rawson High School	100.0%	0.0%	0.0%	0.0%	11.8%	17.6%	70.6%	82.4%	17.6%	85.7%
	Cory-Rawson Middle School	100.0%	0.0%	0.0%	0.0%	0.0%	25.0%	75.0%	83.3%	16.7%	92.3%
Crestline Exempted Village	Crestline High School	80.0%	13.3%	6.7%	20.0%	0.0%	26.7%	73.3%	93.3%	6.7%	69.6%
	Crestline North Elementary School	100.0%	0.0%	0.0%	0.0%	14.3%	28.6%	57.1%	64.3%	35.7%	63.6%
	Crestline Southeast Elem. School	81.8%	9.1%	9.1%	18.2%	0.0%	9.1%	90.9%	90.9%	9.1%	61.1%
Crestwood Local	Crestwood Middle School	46.2%	38.5%	15.4%	53.8%	11.1%	22.2%	66.7%	77.8%	22.2%	54.0%
	Crestwood Primary School	90.9%	9.1%	0.0%	9.1%	36.4%	9.1%	54.5%	90.9%	9.1%	43.3%
Dayton City	Allen Elementary School	83.3%	16.7%	0.0%	16.7%	12.0%	32.0%	56.0%	60.0%	40.0%	100.0%
	Belle Haven Elementary School	88.5%	7.7%	3.8%	11.5%	42.3%	23.1%	34.6%	59.3%	40.7%	100.0%
	Belmont High School	73.1%	19.2%	7.7%	26.9%	7.7%	26.9%	65.4%	57.7%	42.3%	77.1%
	Charles L Loos Elementary School	81.3%	18.8%	0.0%	18.8%	0.0%	50.0%	50.0%	46.7%	53.3%	72.0%
	Cleveland Elementary School	78.1%	21.9%	0.0%	21.9%	8.1%	40.5%	51.4%	62.2%	37.8%	100.0%
	Colonel White Perf. Arts High School	93.8%	6.3%	0.0%	6.3%	5.9%	41.2%	52.9%	52.9%	47.1%	54.3%
	Cornell Heights Elementary School	78.6%	21.4%	0.0%	21.4%	7.1%	0.0%	92.9%	50.0%	50.0%	60.0%
	Dunbar High School	91.2%	8.8%	0.0%	8.8%	19.4%	27.8%	52.8%	44.4%	55.6%	100.0%
	Eastmont Park Elementary School	68.8%	18.8%	12.5%	31.3%	0.0%	31.3%	68.8%	56.3%	43.8%	64.0%
	Edison Elementary School	90.0%	10.0%	0.0%	10.0%	0.0%	25.0%	75.0%	70.0%	30.0%	84.0%
	F G Carlson Elementary School	82.4%	17.6%	0.0%	17.6%	17.6%	11.8%	70.6%	47.1%	52.9%	68.0%
	Fairview Middle School	85.7%	14.3%	0.0%	14.3%	4.3%	30.4%	65.2%	56.5%	43.5%	100.0%
	Franklin Montessori Elem. School	95.2%	0.0%	4.8%	4.8%	9.5%	33.3%	57.1%	71.4%	28.6%	100.0%
	Gardendale Academy	81.3%	18.8%	0.0%	18.8%	29.4%	47.1%	23.5%	55.6%	44.4%	76.0%
	Gorman	88.9%	11.1%	0.0%	11.1%	0.0%	22.2%	77.8%	88.9%	11.1%	56.0%
	Jefferson Montessori I Elem. School	66.7%	33.3%	0.0%	33.3%	25.0%	10.0%	65.0%	40.0%	60.0%	88.0%
	John H Patterson Career Ctr. HS	71.4%	14.3%	14.3%	28.6%	6.3%	25.0%	68.8%	56.3%	43.8%	45.7%
	Kemp @ Grant Elementary School	87.5%	6.3%	6.3%	12.5%	12.5%	12.5%	75.0%	87.5%	12.5%	64.0%
	Kiser Elementary School	82.6%	13.0%	4.3%	17.4%	8.3%	16.7%	75.0%	70.8%	29.2%	100.0%
	Longfellow Center	100.0%	0.0%	0.0%	0.0%	28.6%	28.6%	42.9%	28.6%	71.4%	70.0%
	Meadowdale Elementary School	92.3%	3.8%	3.8%	7.7%	14.3%	10.7%	75.0%	53.6%	46.4%	100.0%
	Meadowdale High School	63.6%	22.7%	13.6%	36.4%	18.2%	27.3%	54.5%	59.1%	40.9%	71.4%
	Orville Wright Elementary School	84.6%	15.4%	0.0%	15.4%	26.9%	42.3%	30.8%	84.6%	15.4%	100.0%
	Patterson/Kennedy Elem. School	83.7%	12.2%	4.1%	16.3%	10.2%	18.4%	71.4%	63.3%	36.7%	100.0%
	Stivers School For The Arts HS	92.9%	7.1%	0.0%	7.1%	6.7%	26.7%	66.7%	60.0%	40.0%	42.9%
	Valerie Elementary School	86.4%	9.1%	4.5%	13.6%	9.1%	18.2%	72.7%	59.1%	40.9%	92.0%
	Van Cleve at McGuffey Elem.	82.4%	17.6%	0.0%	17.6%	0.0%	35.3%	64.7%	88.2%	11.8%	68.0%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Dayton City (continued)	Wilbur Wright Middle School	88.5%	11.5%	0.0%	11.5%	11.5%	15.4%	73.1%	69.2%	30.8%	100.0%
	Wogaman Elementary School	96.2%	3.8%	0.0%	3.8%	11.1%	37.0%	51.9%	59.3%	40.7%	100.0%
East Cleveland City	Chambers Elementary School	66.7%	25.0%	8.3%	33.3%	0.0%	35.1%	64.9%	62.2%	37.8%	80.0%
	Heritage Middle School	100.0%	0.0%	0.0%	0.0%	0.0%	26.3%	73.7%	57.9%	42.1%	90.0%
	Rozelle Elementary School	92.3%	7.7%	0.0%	7.7%	0.0%	14.3%	85.7%	78.6%	21.4%	48.4%
	Superior Elementary School	84.0%	16.0%	0.0%	16.0%	3.8%	30.8%	65.4%	69.2%	30.8%	90.3%
Edgerton Local	Edgerton High School	90.9%	0.0%	9.1%	9.1%	9.1%	45.5%	45.5%	90.9%	9.1%	100.0%
Elida Local	Elida Elementary Kindergarten	87.5%	12.5%	0.0%	12.5%	37.5%	25.0%	37.5%	75.0%	25.0%	100.0%
	Elida Elementary School	88.9%	3.7%	7.4%	11.1%	7.4%	14.8%	77.8%	81.5%	18.5%	53.9%
	Elida High School	90.5%	4.8%	4.8%	9.5%	22.7%	9.1%	68.2%	81.8%	18.2%	55.6%
	Elida Middle School	100.0%	0.0%	0.0%	0.0%	0.0%	21.1%	78.9%	73.7%	26.3%	52.6%
Elyria City	Cascade Elementary School	36.4%	54.5%	9.1%	63.6%	9.1%	40.9%	50.0%	76.2%	23.8%	88.5%
	Eastgate Elementary School	86.7%	13.3%	0.0%	13.3%	0.0%	33.3%	66.7%	73.3%	26.7%	62.5%
	Erie Elementary School	80.0%	0.0%	20.0%	20.0%	0.0%	10.0%	90.0%	70.0%	30.0%	41.7%
	Franklin Elementary School	96.3%	3.7%	0.0%	3.7%	14.3%	28.6%	57.1%	75.0%	25.0%	100.0%
	Kindergarten Village Elem. School	100.0%	0.0%	0.0%	0.0%	0.0%	35.7%	64.3%	100.0%	0.0%	80.0%
	Mckinley Elementary School	92.3%	0.0%	7.7%	7.7%	0.0%	0.0%	100.0%	76.9%	23.1%	65.2%
	Northwood Junior High School	93.8%	6.3%	0.0%	6.3%	6.3%	25.0%	68.8%	81.3%	18.8%	44.1%
	Oakwood Elementary School	92.9%	0.0%	7.1%	7.1%	20.0%	6.7%	73.3%	80.0%	20.0%	58.3%
	Prospect Elementary School	83.3%	11.1%	5.6%	16.7%	10.5%	15.8%	73.7%	94.7%	5.3%	100.0%
	Roosevelt Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	71.4%	28.6%	44.1%
	Westwood Junior High School	78.9%	15.8%	5.3%	21.1%	5.3%	42.1%	52.6%	83.3%	16.7%	61.3%
	Windsor Elementary School	93.8%	0.0%	6.3%	6.3%	0.0%	25.0%	75.0%	62.5%	37.5%	64.0%
Fairfield City	Fairfield Central Elementary School	76.5%	5.9%	17.6%	23.5%	5.9%	47.1%	47.1%	88.2%	11.8%	42.5%
	Fairfield East Elementary School	100.0%	0.0%	0.0%	0.0%	4.0%	36.0%	60.0%	87.5%	12.5%	58.7%
	Fairfield High School	88.7%	7.5%	3.8%	11.3%	13.2%	35.8%	50.9%	73.6%	26.4%	46.4%
	Fairfield Middle School	86.1%	13.9%	0.0%	13.9%	17.5%	27.5%	55.0%	67.5%	32.5%	42.9%
	Fairfield North Elementary School	94.4%	0.0%	5.6%	5.6%	0.0%	50.0%	50.0%	83.3%	16.7%	50.0%
	Fairfield South Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	21.7%	78.3%	69.6%	30.4%	68.6%
	Fairfield West Elementary School	90.0%	10.0%	0.0%	10.0%	10.0%	20.0%	70.0%	75.0%	25.0%	50.0%
Findlay City	Bigelow Hill Elementary School	93.3%	0.0%	6.7%	6.7%	6.3%	31.3%	62.5%	81.3%	18.8%	100.0%
	Central Middle School	100.0%	0.0%	0.0%	0.0%	10.0%	45.0%	45.0%	75.0%	25.0%	100.0%
	Chamberlin Hill Elementary School	100.0%	0.0%	0.0%	0.0%	7.7%	23.1%	69.2%	92.3%	7.7%	100.0%
	Donnell Middle School	100.0%	0.0%	0.0%	0.0%	9.1%	27.3%	63.6%	90.9%	9.1%	55.0%
	Findlay High School	91.1%	8.9%	0.0%	8.9%	19.6%	21.7%	58.7%	84.8%	15.2%	44.0%
	Glenwood Middle School	85.7%	14.3%	0.0%	14.3%	8.3%	41.7%	50.0%	87.5%	12.5%	100.0%
	Jacobs Elementary School	94.7%	0.0%	5.3%	5.3%	21.1%	42.1%	36.8%	68.4%	31.6%	100.0%
	Jefferson Elementary School	90.0%	10.0%	0.0%	10.0%	20.0%	20.0%	60.0%	60.0%	40.0%	100.0%
	Lincoln Elementary School	100.0%	0.0%	0.0%	0.0%	8.7%	26.1%	65.2%	82.6%	17.4%	100.0%
	Millstream East C	73.3%	13.3%	13.3%	26.7%	5.6%	38.9%	55.6%	27.8%	72.2%	100.0%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Findlay City (continued)	Northview Elementary School	66.7%	8.3%	25.0%	33.3%	0.0%	41.7%	58.3%	100.0%	0.0%	100.0%
	Washington Elementary School	94.1%	5.9%	0.0%	5.9%	5.6%	50.0%	44.4%	61.1%	38.9%	100.0%
	Wilson Vance Elementary School	100.0%	0.0%	0.0%	0.0%	4.3%	39.1%	56.5%	82.6%	17.4%	92.3%
Franklin Local	Duncan Falls Elementary School	100.0%	0.0%	0.0%	0.0%	9.7%	25.8%	64.5%	83.9%	16.1%	62.0%
	Philo High School	97.1%	0.0%	2.9%	2.9%	11.1%	27.8%	61.1%	77.8%	22.2%	95.0%
	Philo Junior High School	92.9%	0.0%	7.1%	7.1%	0.0%	35.7%	64.3%	85.7%	14.3%	56.0%
	Roseville Middle School	100.0%	0.0%	0.0%	0.0%	21.4%	21.4%	57.1%	78.6%	21.4%	70.0%
Gahanna-Jefferson City	Blacklick Elementary School	100.0%	0.0%	0.0%	0.0%	21.1%	21.1%	57.9%	68.4%	31.6%	48.7%
	Chapelfield Elementary School	100.0%	0.0%	0.0%	0.0%	9.5%	33.3%	57.1%	85.7%	14.3%	64.7%
	Gahanna East Middle School	93.1%	3.4%	3.4%	6.9%	3.1%	18.8%	78.1%	75.0%	25.0%	61.1%
	Gahanna South Middle School	96.0%	4.0%	0.0%	4.0%	16.0%	36.0%	48.0%	76.0%	24.0%	44.1%
	Goshen Lane Elementary School	100.0%	0.0%	0.0%	0.0%	6.3%	6.3%	87.5%	68.8%	31.3%	47.2%
	High Point Elementary School	96.6%	0.0%	3.4%	3.4%	17.2%	17.2%	65.5%	78.6%	21.4%	78.6%
	Lincoln Elementary School	100.0%	0.0%	0.0%	0.0%	13.3%	26.7%	60.0%	73.3%	26.7%	47.1%
	Royal Manor Elementary School	100.0%	0.0%	0.0%	0.0%	21.4%	14.3%	64.3%	78.6%	21.4%	45.5%
Girard City	Girard Intermediate Middle School	100.0%	0.0%	0.0%	0.0%	21.4%	28.6%	50.0%	71.4%	28.6%	100.0%
	Girard Sr High School	94.4%	0.0%	5.6%	5.6%	10.5%	26.3%	63.2%	84.2%	15.8%	100.0%
	Prospect Elementary School	100.0%	0.0%	0.0%	0.0%	11.1%	11.1%	77.8%	100.0%	0.0%	73.3%
Green Local	Green Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	50.0%	50.0%	40.0%
	Green Primary Elementary School	85.7%	0.0%	14.3%	14.3%	14.3%	14.3%	71.4%	85.7%	14.3%	77.8%
Greeneview Local	Greeneview High School	92.9%	7.1%	0.0%	7.1%	14.3%	42.9%	42.9%	71.4%	28.6%	53.3%
	Greeneview Intermediate School	87.5%	12.5%	0.0%	12.5%	0.0%	37.5%	62.5%	75.0%	25.0%	56.7%
	Greeneview Primary School	100.0%	0.0%	0.0%	0.0%	10.5%	26.3%	63.2%	89.5%	10.5%	95.0%
Holgate Local	Holgate Elementary School	100.0%	0.0%	0.0%	0.0%	7.7%	38.5%	53.8%	84.6%	15.4%	89.5%
Howland Local	Howland High School	100.0%	0.0%	0.0%	0.0%	15.4%	30.8%	53.8%	84.6%	15.4%	100.0%
	Mines Elementary School	95.0%	5.0%	0.0%	5.0%	0.0%	30.0%	70.0%	95.0%	5.0%	100.0%
	North Rd Elementary School	95.7%	4.3%	0.0%	4.3%	12.5%	20.8%	66.7%	87.5%	12.5%	100.0%
Huber Heights City	Lamendola Elementary School	90.9%	0.0%	9.1%	9.1%	4.5%	9.1%	86.4%	72.7%	27.3%	65.7%
	Studebaker Middle School	75.9%	10.3%	13.8%	24.1%	0.0%	30.0%	70.0%	46.7%	53.3%	53.9%
Hudson City	East Woods Elementary School	100.0%	0.0%	0.0%	0.0%	4.0%	26.0%	70.0%	72.0%	28.0%	83.3%
	Evamere Elementary School	90.5%	2.4%	7.1%	9.5%	6.8%	22.7%	70.5%	68.2%	31.8%	86.9%
	Hudson Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	23.1%	76.9%	50.0%	50.0%	50.0%
	Hudson High School	97.5%	1.3%	1.3%	2.5%	4.8%	27.4%	67.9%	55.0%	45.0%	67.1%
	Hudson Middle School	91.3%	6.3%	2.5%	8.8%	7.3%	24.4%	68.3%	59.8%	40.2%	81.8%
	McDowell Elementary School	100.0%	0.0%	0.0%	0.0%	7.7%	34.6%	57.7%	69.2%	30.8%	56.9%
Jefferson Local	Jefferson Memorial Middle School	100.0%	0.0%	0.0%	0.0%	12.5%	18.8%	68.8%	56.3%	43.8%	73.9%
	Norwood Elementary School	100.0%	0.0%	0.0%	0.0%	8.7%	47.8%	43.5%	82.6%	17.4%	85.2%
Jefferson Township Local	Jefferson High School	83.3%	8.3%	8.3%	16.7%	35.7%	14.3%	50.0%	35.7%	64.3%	56.0%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Keystone Local	Keystone Elementary School	96.7%	3.3%	0.0%	3.3%	3.3%	30.0%	66.7%	80.0%	20.0%	100.0%
	Keystone High School	100.0%	0.0%	0.0%	0.0%	7.1%	21.4%	71.4%	78.6%	21.4%	53.6%
	Keystone Middle School	100.0%	0.0%	0.0%	0.0%	0.0%	40.0%	60.0%	93.3%	6.7%	51.5%
Lakeview Local	Cortland Elementary School	94.7%	5.3%	0.0%	5.3%	14.3%	28.6%	57.1%	76.2%	23.8%	65.6%
	Lakeview High School	96.6%	0.0%	3.4%	3.4%	6.5%	19.4%	74.2%	83.9%	16.1%	72.9%
	Lakeview Middle School	100.0%	0.0%	0.0%	0.0%	15.0%	0.0%	85.0%	70.0%	30.0%	56.8%
Maple Heights City	Dunham Elementary School	81.8%	18.2%	0.0%	18.2%	9.1%	45.5%	45.5%	81.8%	18.2%	54.6%
	Maple Heights High School	70.0%	28.3%	1.7%	30.0%	21.0%	38.7%	40.3%	62.9%	37.1%	81.5%
	Raymond Elementary School	83.3%	16.7%	0.0%	16.7%	47.4%	26.3%	26.3%	78.9%	21.1%	75.0%
Medina City	Claggett Middle School	89.3%	3.6%	7.1%	10.7%	0.0%	32.1%	67.9%	82.1%	17.9%	51.7%
	Ella Canavan Elementary School	95.2%	4.8%	0.0%	4.8%	14.3%	23.8%	61.9%	85.7%	14.3%	45.7%
	Garfield Elementary School	100.0%	0.0%	0.0%	0.0%	5.3%	10.5%	84.2%	89.5%	10.5%	46.7%
	H G Blake Elementary School	95.0%	0.0%	5.0%	5.0%	5.0%	35.0%	60.0%	60.0%	40.0%	43.5%
	Heritage Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	42.9%	57.1%	92.9%	7.1%	48.5%
Milton-Union Exempted Village	Milton-Union High School	85.7%	7.1%	7.1%	14.3%	0.0%	50.0%	50.0%	71.4%	28.6%	46.7%
	Milton-Union Middle School	93.8%	6.3%	0.0%	6.3%	23.5%	23.5%	52.9%	58.8%	41.2%	53.1%
Newton Local	Newton Elementary School	92.3%	0.0%	7.7%	7.7%	21.4%	14.3%	64.3%	71.4%	28.6%	50.0%
	Newton High School	77.8%	22.2%	0.0%	22.2%	5.6%	38.9%	55.6%	88.9%	11.1%	66.7%
Noble Local	Shenandoah Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	24.0%	76.0%	80.0%	20.0%	60.0%
	Shenandoah High School	100.0%	0.0%	0.0%	0.0%	5.6%	22.2%	72.2%	83.3%	16.7%	76.0%
Northmont City	Englewood Elementary School	93.8%	0.0%	6.3%	6.3%	5.9%	41.2%	52.9%	76.5%	23.5%	63.0%
	Englewood Hills Elementary School	100.0%	0.0%	0.0%	0.0%	9.1%	63.6%	27.3%	100.0%	0.0%	42.3%
	Phillipsburg Elementary School	100.0%	0.0%	0.0%	0.0%	25.0%	37.5%	37.5%	75.0%	25.0%	44.4%
Northwood Local	Lark Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	11.1%	88.9%	77.8%	22.2%	76.9%
	Northwood High School	90.9%	9.1%	0.0%	9.1%	0.0%	27.3%	72.7%	72.7%	27.3%	52.4%
	Northwood Middle School	91.7%	8.3%	0.0%	8.3%	8.3%	33.3%	58.3%	75.0%	25.0%	77.8%
	Olney Elementary School	83.3%	0.0%	16.7%	16.7%	0.0%	16.7%	83.3%	66.7%	33.3%	40.0%
Orange City	Ballard Brady Middle School	100.0%	0.0%	0.0%	0.0%	5.7%	25.7%	68.6%	57.1%	42.9%	70.4%
	Gund School-Beech Brook	100.0%	0.0%	0.0%	0.0%	0.0%	14.3%	85.7%	71.4%	28.6%	60.0%
	Orange High School	93.9%	3.0%	3.0%	6.1%	2.9%	22.9%	74.3%	48.6%	51.4%	47.4%
Polaris Career Ctr.	Polaris Career Center	91.7%	4.2%	4.2%	8.3%	4.2%	29.2%	66.7%	45.8%	54.2%	45.2%
Rolling Hills Local	Brook Elementary School	86.2%	3.4%	10.3%	13.8%	3.4%	41.4%	55.2%	71.4%	28.6%	96.7%
	Byesville Elementary School	100.0%	0.0%	0.0%	0.0%	14.3%	28.6%	57.1%	71.4%	28.6%	46.7%
	Secrest Elementary School	83.3%	8.3%	8.3%	16.7%	0.0%	25.0%	75.0%	100.0%	0.0%	100.0%
Ross Local	Elda Elementary School	85.3%	11.8%	2.9%	14.7%	8.8%	41.2%	50.0%	73.5%	26.5%	100.0%
	Morgan Elementary School	95.5%	4.5%	0.0%	4.5%	13.6%	22.7%	63.6%	82.6%	17.4%	78.1%
	Ross High School	100.0%	0.0%	0.0%	0.0%	12.8%	35.9%	51.3%	66.7%	33.3%	65.6%
	Ross Middle School	100.0%	0.0%	0.0%	0.0%	10.0%	27.5%	62.5%	87.5%	12.5%	80.8%
Sheffield-Sheffield Lake City	Forestlawn Elementary School	66.7%	33.3%	0.0%	33.3%	16.7%	33.3%	50.0%	100.0%	0.0%	77.8%
	Sheffield Middle School	76.5%	17.6%	5.9%	23.5%	0.0%	33.3%	66.7%	77.8%	22.2%	50.0%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Streetsboro City	Henry Defer Intermed. Elem. School	95.8%	0.0%	4.2%	4.2%	8.0%	32.0%	60.0%	87.5%	12.5%	65.8%
	Streetsboro Middle School	100.0%	0.0%	0.0%	0.0%	5.9%	41.2%	52.9%	88.2%	11.8%	58.6%
Switzerland of Ohio Local	Beallsville Elementary School	90.0%	0.0%	10.0%	10.0%	0.0%	10.0%	90.0%	70.0%	30.0%	50.0%
	Powhatan Elementary School	70.0%	30.0%	0.0%	30.0%	0.0%	36.4%	63.6%	70.0%	30.0%	42.3%
Triad Local	Triad Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	78.6%	21.4%	50.0%
	Triad High School	66.7%	33.3%	0.0%	33.3%	33.3%	33.3%	33.3%	66.7%	33.3%	45.8%
Urbana City	East Elementary School	81.0%	19.0%	0.0%	19.0%	14.3%	38.1%	47.6%	71.4%	28.6%	100.0%
	Local Intermediate Elem. School	94.4%	5.6%	0.0%	5.6%	11.1%	22.2%	66.7%	72.2%	27.8%	82.6%
	North Elementary School	71.4%	28.6%	0.0%	28.6%	10.0%	30.0%	60.0%	60.0%	40.0%	45.5%
	South Elementary School	66.7%	33.3%	0.0%	33.3%	16.7%	0.0%	83.3%	83.3%	16.7%	44.4%
	Urbana High School	92.9%	0.0%	7.1%	7.1%	0.0%	20.0%	80.0%	100.0%	0.0%	44.2%
	Urbana Junior High School	84.2%	10.5%	5.3%	15.8%	28.6%	4.8%	66.7%	100.0%	0.0%	75.0%
Washington Court House City	Eastside Elementary School	100.0%	0.0%	0.0%	0.0%	15.8%	15.8%	68.4%	78.9%	21.1%	76.9%
	Rose Avenue Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	42.9%	57.1%	71.4%	28.6%	66.7%
	Sunnyside Kindergarten Elem. Sch.	100.0%	0.0%	0.0%	0.0%	14.3%	57.1%	28.6%	71.4%	28.6%	100.0%
	Washington High School	94.7%	5.3%	0.0%	5.3%	4.8%	28.6%	66.7%	75.0%	25.0%	51.1%
	Washington Middle School	95.5%	0.0%	4.5%	4.5%	4.3%	34.8%	60.9%	73.9%	26.1%	64.1%
Waterloo Local	Waterloo Elementary School	93.3%	6.7%	0.0%	6.7%	13.3%	26.7%	60.0%	86.7%	13.3%	42.9%
	Waterloo Middle School	88.2%	5.9%	5.9%	11.8%	11.8%	11.8%	76.5%	88.2%	11.8%	56.7%
Westerville City	Alcott Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	21.1%	78.9%	84.2%	15.8%	61.8%
	Annehurst Elementary School	100.0%	0.0%	0.0%	0.0%	11.1%	66.7%	22.2%	77.8%	22.2%	47.6%
	Blendon Middle School	97.3%	2.7%	0.0%	2.7%	16.2%	21.6%	62.2%	70.3%	29.7%	100.0%
	Cherrington Elementary School	86.7%	6.7%	6.7%	13.3%	13.3%	13.3%	73.3%	80.0%	20.0%	84.2%
	Emerson Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	50.0%	50.0%	80.0%
	Fouse Elementary School	100.0%	0.0%	0.0%	0.0%	4.8%	9.5%	85.7%	76.2%	23.8%	70.6%
	Hanby Building Elementary School	91.7%	8.3%	0.0%	8.3%	0.0%	33.3%	66.7%	58.3%	41.7%	60.0%
	Hawthorne Elementary School	96.3%	0.0%	3.7%	3.7%	18.5%	29.6%	51.9%	70.4%	29.6%	63.6%
	Heritage Middle School	97.3%	2.7%	0.0%	2.7%	10.8%	18.9%	70.3%	79.4%	20.6%	66.7%
	Huber Ridge Elementary School	100.0%	0.0%	0.0%	0.0%	5.6%	38.9%	55.6%	77.8%	22.2%	55.6%
	Longfellow Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	60.0%	40.0%	100.0%
	Mark Twain Elementary School	100.0%	0.0%	0.0%	0.0%	4.5%	13.6%	81.8%	63.6%	36.4%	95.8%
	Mcvay Elementary School	91.7%	8.3%	0.0%	8.3%	15.4%	23.1%	61.5%	69.2%	30.8%	53.6%
	Pointview Elementary School	90.0%	0.0%	10.0%	10.0%	10.0%	20.0%	70.0%	50.0%	50.0%	52.2%
	Robert Frost Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	30.8%	69.2%	76.9%	23.1%	58.3%
	Westerville-North High School	100.0%	0.0%	0.0%	0.0%	5.4%	32.4%	62.2%	75.7%	24.3%	41.1%
	Westerville-South High School	93.5%	2.2%	4.3%	6.5%	10.9%	17.4%	71.7%	65.2%	34.8%	61.9%
	Westerville Central High School	88.6%	5.7%	5.7%	11.4%	22.9%	22.9%	54.3%	54.3%	45.7%	45.4%
	Whittier Elementary School	100.0%	0.0%	0.0%	0.0%	20.0%	33.3%	46.7%	60.0%	40.0%	66.7%
	Wilder Elementary School	93.3%	6.7%	0.0%	6.7%	13.3%	33.3%	53.3%	86.7%	13.3%	51.6%

Appendix A. Implied Per-School Attrition Rates (continued)

District	School	Career Intentions			Implied Teacher Turnover	Percent Teacher Experience Levels			Preparation Route		Survey Response Rate
		Stayers	*Movers*	*Leavers*		*Novice*	*Midcareer*	*Experienced*	*Traditional*	*Alt. Cert./ Other*	
Wilmington City	East End Elementary School	92.3%	7.7%	0.0%	7.7%	7.7%	38.5%	53.8%	92.3%	7.7%	56.0%
	Roy E Holmes Elementary School	87.5%	8.3%	4.2%	12.5%	13.0%	21.7%	65.2%	78.3%	21.7%	65.0%
	Wilmington High School	91.7%	4.2%	4.2%	8.3%	21.4%	25.0%	53.6%	71.4%	28.6%	51.7%
Worthington City	Bluffsview Elementary School	89.5%	5.3%	5.3%	10.5%	15.8%	5.3%	78.9%	68.4%	31.6%	69.0%
	Brookside Elementary School	88.9%	11.1%	0.0%	11.1%	5.6%	38.9%	55.6%	83.3%	16.7%	66.7%
	Colonial Hills Elementary School	100.0%	0.0%	0.0%	0.0%	11.8%	23.5%	64.7%	58.8%	41.2%	76.0%
	Evening Street Elementary School	100.0%	0.0%	0.0%	0.0%	0.0%	12.5%	87.5%	68.8%	31.3%	57.1%
	Kilbourne Middle School	95.0%	0.0%	5.0%	5.0%	9.5%	14.3%	76.2%	76.2%	23.8%	62.9%
	Liberty Elementary School	92.3%	0.0%	7.7%	7.7%	0.0%	7.7%	92.3%	53.8%	46.2%	45.2%
	Linworth Alternative School	100.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	80.0%	20.0%	50.0%
	McCord Middle School	92.9%	7.1%	0.0%	7.1%	7.1%	28.6%	64.3%	50.0%	50.0%	40.0%
	Slate Hill Elementary School	100.0%	0.0%	0.0%	0.0%	5.3%	15.8%	78.9%	68.4%	31.6%	62.5%
	Sutter Park Elementary School	100.0%	0.0%	0.0%	0.0%	33.3%	33.3%	33.3%	66.7%	33.3%	45.0%
	Thomas Worthington High School	82.8%	12.5%	4.7%	17.2%	7.7%	20.0%	72.3%	69.8%	30.2%	80.4%
	Wilson Hill Elementary School	100.0%	0.0%	0.0%	0.0%	11.8%	11.8%	76.5%	70.6%	29.4%	52.9%
	Worthington Estates Elem. School	93.8%	0.0%	6.3%	6.3%	0.0%	25.0%	75.0%	66.7%	33.3%	48.5%
	Worthington Hills Elem. School	100.0%	0.0%	0.0%	0.0%	0.0%	29.4%	70.6%	58.8%	41.2%	63.0%
	Worthington Kilbourne High School	97.7%	2.3%	0.0%	2.3%	4.7%	27.9%	67.4%	56.1%	43.9%	51.7%
	Worthington Park Elem. School	92.3%	3.8%	3.8%	7.7%	15.4%	30.8%	53.8%	61.5%	38.5%	84.4%
	Worthingway Middle School	83.3%	11.1%	5.6%	16.7%	5.3%	26.3%	68.4%	52.6%	47.4%	61.1%

Appendix B. Methodology

The logistic regression model for this study was applied to three different groups of teacher respondents—elementary school teachers (n = 3,271), middle school teachers (n = 1,331), and high school teachers (n = 1,699)—and is specified as follows. Let the conditional probability of a teacher's intention to stay at her or his current school be represented by P. The logistic regression model predicts the logarithm of the ratio of this probability and its reciprocal (the odds ratio)—which for this study is defined as $\ln(P/(1-P))$—as a function of independent variables. Thus, a generic equation for this model looks like:

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

where P = the probability of staying, α = a constant, T = several teacher characteristics variables, S = several school characteristics variables, UR = urbanicity (or rurality) of the school, and 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, school locale, 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 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 Ohio Department of Education. 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.[24] 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 (traditional route = 1; all other = 0)
- Ethnicity (African-American = 1; all other = 0)

School Characteristics (obtained from the Ohio Department of Education):
- Percent of economically disadvantages students at the school
- Percent of white students at the school
- Percent of African-American students at the school
- Percent of core subject area teachers at the school who are teaching in their field of licensure
- School size (in hundreds)
- School attendance rate
- Ohio Performance Index (PI) score

Urbanicity (from the Ohio Department of Education)
- Major urban setting (1/0)
- Urban setting (1/0)
- Rural setting (1/0) – *a composite variable [described below]*
- [Contrast urbanicity variable is *suburban—a composite variable (described below)*]

Perceptions of Teaching and Learning Conditions (obtained from survey responses):
- "Overall, this school has adequate facilities and resources for me to do a good job teaching students" (1 = strongly agree/agree; 0 = no opinion/disagree/strongly disagree)
- "Teachers and staff work in a school environment that is safe"
- "Teachers have time available to collaborate with their colleagues"
- "Sufficient resources are available to allow teachers to take advantage of professional development activities"
- "Staff members are recognized for accomplishments"
- "There is an atmosphere of trust and mutual respect within the school"
- "The faculty has an effective process for making group decisions and solving problems"
- Teachers are treated as professionals – *a composite variable [described below]*
- There is community support for teaching – *a composite variable [described below]*

Variables—including survey prompts—were included in the model that have been found to be related to teacher attrition in previous Center for Teaching Quality analyses of teaching and learning conditions across the country.

Notes on Composite Variables

Because there were relatively few teacher respondents in any of the state-identified categories of rural districts, the three rural district types were collapsed into one variable (rural). In addition, the two suburban district types were collapsed into one variable, but the two urban district types (major urban and urban) were kept as distinct designations. Suburban district designation serves as the excluded variable in this analysis (*i.e.*, the impact of being in an urban or rural district is contrasted with the impact of being in a suburban district).

The *teacher professionalism* Teaching and Learning Conditions composite variable is a combination of responses from five survey prompts:

- "Teachers are respected as educational experts."
- "Teachers are centrally involved in decision making about educational issues."

- "Teachers are trusted to make sound professional decisions about instruction."
- "Teachers play a large or primary role in selecting instructional materials and resources."
- "Teachers play a large or primary role devising teaching techniques."

If a teacher either agreed or strongly agreed with any of these statements, her or his composite *teacher professionalism* scale variable was increased by 1 point, meaning that an individual teacher's perceptions of teacher professionalism could range from 0 to 5. This new variable was then re-coded as follows:

- Teachers with a composite score of 4 or 5 were coded as perceiving that they work in an environment in which they are treated as professionals (= 1; approximately 70 percent of all teachers surveyed).
- Teachers with a composite score of between 1 and 3 were coded as not perceiving that they work in an environment in which they are treated as professionals (= 0; approximately 30 percent of all teachers surveyed).

The *community support* Teaching and Learning Conditions variable is the sum of responses from two survey prompts:

- "Teachers agree that parents and community members contribute to student success."
- "Teachers agree that teachers are supported by the community in which they teach."

Teachers who agreed with both statements were coded as perceiving full community support (= 1) and those who agreed with neither statement or with only one of the two statements were coded as perceiving less than optimal or no community support (= 0).

A Note on Multicollinearity

Because the two Teaching and Learning Conditions composite variables were created by sum-marizing and reducing multiple survey prompts, it is perhaps not surprising that at two of the three school levels (middle and the high school), these two variables exhibited signs of multicollinearity. Multicollinearity occurs when there are high levels of intercorrelation among independent variables, which makes it difficult to separate the influence of one variable on the dependent from the influence of the other variable. As a result, assessments of the relative strength of the explanatory variables and their joint effect are unreliable.

There are many methods for addressing multicollinearity, but for our analyses we opted to approach the problem by estimating the model for each school level in two different ways: once with only the composite professionalism variable included and once with only the community support composite variable included. Parameter estimates for variables are reported for both models below, but in the main text, because impressions of school-level professionalism are more likely to be representative of internal school working conditions than are impressions of community support, and because the differences in parameter estimates for variables in both models are minor (there are a few changes in significance levels, but directionality of the param-eter estimates remains relatively consistent), only the parameter estimates generated in the models that include the composite professionalism variable are reported. Readers are cautioned to bear these issues in mind when reading the analyses presented in the main text above.

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 1.422 for the variable "Female" indicates that the odds of a female choosing to stay are 1.422 times greater than they are for a male with otherwise similar characteristics. For categorical variables (such as urbanicity), the value *Exp(B)* indicates the increase or decrease in the odds of staying for a teacher characterized by that categorical variable *as compared to the excluded variable*. For example, in this study, a significant value of *Exp(B)* of 0.483 for the variable "Major Urban" indicates that the odds that a teacher who teaches in a school located in a major urban area will stay in her or his school are only 0.483 times the odds of a teacher in a comparison district type (in this case, a suburban district). 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 1.048 for the variable "Percent of Core Teachers Teaching In-Field" means that for every unit (percent) increase in the proportion of in-field teachers in a school, the *odds* of staying for an individual teacher increase by 4.8 percent. It does *not*, however, mean that the *probability* of staying increases by 4.8 percent. The baseline probability that a teacher will stay at a school is the same as the proportion of teachers who indicated in their survey responses that they intended to stay: 91 percent of elementary teachers and 90 percent of middle and high school teachers. The regression equations provide a way for adjusting those probabilities, given certain individual teacher conditions or opinions. See Table 19, above, for conversion of some of the changes in odds reported in the tables on the following pages to changes in probability.

Elementary School - Including Professionalism Variable

	B	S.E.	Wald	Sig.	Exp(B)
Constant	2.330	6.35	0.1	0.714	10.281
Teacher Characteristics					
Female	0.123	0.21	0.3	0.560	1.131
Novice	-0.314	0.25	1.5	0.216	0.731
Experienced	0.016	0.14	0.0	0.907	1.017
Traditional Prep.	-0.005	0.14	0.0	0.973	0.995
African-American	-0.155	0.23	0.4	0.507	0.857
School Characteristics					
% Econ. Disadv.	-0.005	0.00	0.9	0.343	0.995
% White	0.000	0.00	0.0	0.947	1.000
% Black	-0.026	0.01	6.3	0.012	0.974 **
% Tchrs. in Field	0.006	0.02	0.1	0.719	1.006
School Size (100s)	0.097	0.04	4.7	0.030	1.101 **
Attendance Rate	-0.017	0.07	0.1	0.805	0.983
Ohio Perf. Index	0.000	0.01	0.0	0.998	1.000
Urbanicity					
Major Urban	-0.727	0.30	5.8	0.016	0.483 **
Urban	-0.120	0.26	0.2	0.645	0.887
Rural	-0.565	0.25	5.1	0.023	0.568 **
Teaching and Learning Conditions					
Facilities & Rscs.	0.347	0.15	5.5	0.019	1.415 **
Safe School	0.315	0.14	4.7	0.029	1.370 **
Time for Collab.	0.248	0.15	2.6	0.105	1.281
Prof. Devel. Rscs.	0.266	0.14	3.8	0.051	1.305 *
Recognition	0.493	0.16	10.1	0.001	1.637 **
Trust & Respect	0.418	0.16	6.9	0.009	1.518 **
Decision Process	0.441	0.17	7.0	0.008	1.554 **
Tchrs.=Professionals	0.786	0.24	11.2	0.001	2.195 **

* $p<0.10$
** $p<0.05$

Elementary School - Including Community Variable

	B	S.E.	Wald	Sig.	Exp(B)
Constant	4.383	6.17	0.5	0.477	80.107
Teacher Characteristics					
Female	0.081	0.21	0.1	0.701	1.085
Novice	-0.433	0.24	3.1	0.077	0.648 *
Experienced	-0.022	0.14	0.0	0.875	0.978
Traditional Prep.	-0.017	0.14	0.0	0.904	0.983
African-American	-0.265	0.23	1.4	0.243	0.767
School Characteristics					
% Econ. Disadv.	-0.003	0.00	0.5	0.484	0.997
% White	-0.001	0.00	0.2	0.676	0.999
% Black	-0.027	0.01	6.7	0.009	0.974 **
% Tchrs. in Field	0.006	0.02	0.1	0.720	1.006
School Size (100s)	0.089	0.04	4.2	0.041	1.094 **
Attendance Rate	-0.037	0.07	0.3	0.585	0.964
Ohio Perf. Index	-0.001	0.01	0.0	0.916	0.999
Urbanicity					
Major Urban	-0.948	0.30	9.9	0.002	0.387 **
Urban	-0.164	0.26	0.4	0.527	0.849
Rural	-0.588	0.25	5.6	0.018	0.555 **
Teaching and Learning Conditions					
Facilities & Rscs.	0.329	0.15	5.1	0.024	1.390 **
Safe School	0.333	0.14	5.4	0.020	1.395 **
Time for Collab.	0.261	0.15	3.0	0.083	1.299 *
Prof. Devel. Rscs.	0.290	0.14	4.6	0.032	1.337 **
Recognition	0.471	0.15	9.6	0.002	1.602 **
Trust & Respect	0.520	0.16	11.0	0.001	1.681 **
Decision Process	0.426	0.16	6.8	0.009	1.531 **
Cmnty. Support	0.594	0.18	11.3	0.001	1.812 **

* $p<0.10$
** $p<0.05$

Middle School - Including Professionalism Variable

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-2.342	7.37	0.1	0.751	0.096	
Teacher Characteristics						
Female	0.181	0.23	0.6	0.429	1.199	
Novice	-0.892	0.34	6.7	0.009	0.410	**
Experienced	0.274	0.23	1.4	0.234	1.315	
Traditional Prep.	0.237	0.22	1.2	0.282	1.267	
African-American	0.467	0.48	1.0	0.328	1.595	
School Characteristics						
% Econ. Disadv.	0.000	0.01	0.0	0.989	1.000	
% White	-0.010	0.03	0.1	0.763	0.990	
% Black	-0.026	0.03	0.7	0.400	0.974	
% Tchrs. in Field	-0.111	0.05	5.3	0.021	0.895	**
School Size (100s)	-0.013	0.04	0.1	0.750	0.987	
Attendance Rate	0.176	0.10	3.4	0.066	1.192	*
Ohio Perf. Index	-0.018	0.02	0.5	0.477	0.982	
Urbanicity						
Major Urban	-0.274	0.74	0.1	0.711	0.760	
Urban	0.277	0.44	0.4	0.534	1.319	
Rural	-0.246	0.43	0.3	0.565	0.782	
Teaching and Learning Conditions						
Facilities & Rscs.	0.528	0.24	4.9	0.027	1.696	**
Safe School	0.571	0.25	5.3	0.021	1.771	**
Time for Collab.	0.149	0.22	0.5	0.500	1.161	
Prof. Devel. Rscs.	0.170	0.22	0.6	0.442	1.185	
Recognition	0.620	0.26	5.8	0.016	1.859	**
Trust & Respect	0.957	0.30	10.5	0.001	2.604	**
Decision Process	0.004	0.28	0.0	0.989	1.004	
Tchrs.=Professionals	0.683	0.34	4.0	0.047	1.980	**

$* \ p<0.10$
$** \ p<0.05$

Middle School - Including Community Variable

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-3.996	7.08	0.3	0.573	0.018	
Teacher Characteristics						
Female	0.118	0.23	0.3	0.605	1.125	
Novice	-0.836	0.34	5.9	0.015	0.433	**
Experienced	0.264	0.23	1.3	0.247	1.302	
Traditional Prep.	0.190	0.22	0.8	0.384	1.209	
African-American	0.417	0.47	0.8	0.370	1.518	
School Characteristics						
% Econ. Disadv.	0.001	0.01	0.0	0.930	1.001	
% White	0.001	0.03	0.0	0.987	1.001	
% Black	-0.016	0.03	0.3	0.598	0.984	
% Tchrs. in Field	-0.103	0.05	4.8	0.029	0.902	**
School Size (100s)	-0.005	0.04	0.0	0.910	0.995	
Attendance Rate	0.180	0.09	3.7	0.053	1.197	*
Ohio Perf. Index	-0.024	0.02	1.0	0.317	0.976	
Urbanicity						
Major Urban	-0.366	0.75	0.2	0.626	0.694	
Urban	-0.202	0.43	0.2	0.636	0.817	
Rural	0.287	0.44	0.4	0.516	1.333	
Teaching and Learning Conditions						
Facilities & Rscs.	0.527	0.24	4.8	0.028	1.694	**
Safe School	0.528	0.25	4.6	0.032	1.696	**
Time for Collab.	0.201	0.22	0.8	0.363	1.223	
Prof. Devel. Rscs.	0.218	0.22	1.0	0.321	1.244	
Recognition	0.659	0.25	6.8	0.009	1.933	**
Trust & Respect	0.949	0.29	10.8	0.001	2.584	**
Decision Process	0.003	0.28	0.0	0.992	1.003	
Cmnty. Support	0.679	0.27	6.5	0.011	1.972	**

$* \ p<0.10$
$** \ p<0.05$

High School - Including Professionalism Variable

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-14.25	7.0	4.2	0.041	0.000	
Teacher Characteristics						
Female	0.35	0.2	4.2	0.041	1.422	**
Novice	-0.52	0.3	3.0	0.082	0.593	*
Experienced	0.01	0.2	0.0	0.960	1.010	
Traditional Prep.	-0.25	0.2	1.7	0.187	0.778	
African-American	-0.04	0.3	0.0	0.916	0.965	
School Characteristics						
% Econ. Disadv.	0.01	0.0	1.5	0.218	1.012	
% White	0.07	0.0	3.8	0.053	1.068	*
% Black	0.05	0.0	2.3	0.133	1.051	
% Tchrs. in Field	0.05	0.0	5.1	0.024	1.048	**
School Size (100s)	0.01	0.0	0.3	0.617	1.010	
Attendance Rate	0.06	0.1	1.0	0.310	1.065	
Ohio Perf. Index	-0.01	0.0	1.3	0.252	0.986	
Urbanicity						
Major Urban	-0.23	0.5	0.2	0.663	0.791	
Urban	-0.23	0.3	0.6	0.449	0.791	
Rural	-0.72	0.4	3.2	0.075	0.486	*
Teaching and Learning Conditions						
Facilities & Rscs.	0.18	0.2	0.8	0.365	1.199	
Safe School	0.48	0.2	5.6	0.018	1.609	**
Time for Collab.	-0.05	0.2	0.1	0.796	0.949	
Prof. Devel. Rscs.	0.43	0.2	5.2	0.023	1.536	**
Recognition	0.63	0.2	9.6	0.002	1.879	**
Trust & Respect	0.59	0.2	6.3	0.012	1.802	**
Decision Process	0.41	0.3	2.6	0.106	1.504	
Tchrs.=Professionals	0.56	0.3	4.3	0.038	1.747	**

* $p<0.10$
** $p<0.05$

High School - Including Community Variable

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-13.266	6.91	3.7	0.055	0.000	
Teacher Characteristics						
Female	0.343	0.17	4.1	0.043	1.410	**
Novice	-0.654	0.29	5.0	0.025	0.520	**
Experienced	-0.062	0.19	0.1	0.746	0.939	
Traditional Prep.	-0.234	0.19	1.6	0.211	0.791	
African-American	-0.146	0.32	0.2	0.647	0.864	
School Characteristics						
% Econ. Disadv.	0.012	0.01	1.8	0.184	1.013	
% White	0.067	0.03	3.8	0.050	1.069	**
% Black	0.051	0.03	2.4	0.120	1.052	
% Tchrs. in Field	0.038	0.02	3.5	0.062	1.039	*
School Size (100s)	0.007	0.02	0.1	0.748	1.007	
Attendance Rate	0.059	0.06	0.9	0.334	1.061	
Ohio Perf. Index	-0.011	0.01	0.9	0.352	0.989	
Urbanicity						
Major Urban	-0.350	0.53	0.4	0.509	0.704	
Urban	-0.728	0.40	3.3	0.068	0.483	*
Rural	-0.167	0.31	0.3	0.588	0.846	
Teaching and Learning Conditions						
Facilities & Rscs.	0.101	0.20	0.3	0.612	1.106	
Safe School	0.568	0.20	8.1	0.005	1.766	**
Time for Collab.	-0.033	0.20	0.0	0.866	0.967	
Prof. Devel. Rscs.	0.409	0.19	4.8	0.029	1.505	**
Recognition	0.605	0.20	9.2	0.002	1.831	**
Trust & Respect	0.658	0.23	8.4	0.004	1.931	**
Decision Process	0.426	0.25	3.0	0.082	1.531	*
Cmnty. Support	0.266	0.20	1.7	0.190	1.305	

* $p<0.10$
** $p<0.05$

Important Caveats

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

What ***best describes*** your future intentions for your professional career? (Select one.)

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

As such, it is a measure of teacher *intentions* and not of actual teacher decisions (*i.e.*, a teacher could report on the survey that she or he intended to leave her or his school and teach somewhere else, while in actuality she or he ended up leaving teaching entirely or remaining at her or his current school), and that is potentially an important difference. As noted earlier in this report, while most 2007 survey respondents who indicated that they would not stay at their current school also indicated that they would move to another school rather than leave teaching entirely (at a ratio of 7 to 2), after the 2003-2004 school year, a much larger proportion of non-stayers left teaching altogether rather than moving to another school (at a ratio of 9 to 1). It is very plausible that 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), but without additional data from each survey respondent with respect to her or his actual career decision at the end of the 2007 school year, we cannot be certain that this explanation is correct. Readers of these analyses are encouraged to exercise all due 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.

Notes

Introduction

1. Sanders, W.L. & Rivers, J.C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville: University of Tennessee Value-Added Research and Assessment Center; Greenwald, R., Hedges, L.V., & Laine, R.D. (1996). "The effect of school resources on student achievement." *Review of Educational Research*, 66: 361-396.

2. Darling-Hammond, L. (2000). "Teacher quality and student achievement: A review of state policy evidence." *Educational Policy Analysis Archives*, 8(1).; Wilson, S., Floden, R., & Ferrini-Mundy. (2001). *Teacher preparation research: Current knowledge, gaps, and recommendations.* University of Washington: Center for the Study of Teaching and Policy.

3. Loeb, S., Darling-Hammond, L., & Luczak, J. (2005). "Teacher turnover: The role of working conditions and salaries in recruiting and retaining teachers." *Peabody Journal of Education*, 80(3), 44–70. *American Education Research Journal*, 38, 499–534.

4. Ingersoll, R. (2001). *Teacher turnover and teacher shortages: An organizational analysis.*

5. Weiss, E. M. (1999). "Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis." *Teaching and Teacher Education*, 15, 861–879.

6. Ohio Department of Education. (2006). *Conditions of Teacher Supply and Demand in Ohio–2005: A Data Summary for the Ohio State Board of Education*. Columbus, Ohio: Author.

7. Note: The reports' authors define attrition as when a teacher leaves a district or leaves the profession entirely.

8. Ohio Department of Education, Ibid.

9. http://www.ohiotlc.org/

10. Unless noted otherwise, all data for the entire population of Ohio teachers are from 2005.

11. One important discrepancy with regard to stayers, movers, and leavers is noted in the section below that analyzes responses based on these categories (pp. 8-11).

Survey Results

12. Wurtzel, J. (2006). *Transforming high school teaching and learning: A district-wide design*. Washington, D. C.: The Aspen Institute.

13. It is reasonable to question the validity of analyzing responses from teacher leavers with such a wide range of years of experience, but the responses of career leavers with 10 or fewer years of experience did not differ from the responses of the larger pool of early career leavers with up to 20 years of experience in most areas. Very early career leavers do tend to express more concern about the perceived lack of instructional technology and of school leadership responses to need for professional development opportunities, but only marginally so.

14. The three classifications of rural districts in Ohio are: Rural, Agricultural—high poverty, low median income; Rural, Agricultural—small student population, low poverty, low to moderate median income; and Rural, Small Town—moderate to high median income.

15. These figures may be confounded to some degree by the unbalanced presence of African-American teachers across school districts. Eighty-eight percent of the African-American educators in the survey sample work in three urban districts: Columbus (36 percent of the respondents in Columbus are African-American), Dayton (34 percent) and East Cleveland (16 percent). No other district that participated in the survey had more than 3 percent African-American respondents. Statewide in 2005, about 75 percent of black teachers and 59 percent of all other minority teachers were teaching in major urban-very high poverty school districts.

16. The next most important working condition, according to teachers, is empowerment, but it is cited by only 21 percent of all teachers. See Chart 3, p. 5.

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17. 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.

18. Johnson, S.M. & Donaldson, M.L. (2007). "Overcoming the obstacles to leadership." *Educational Leadership*, 65(1), 8-13; Berry, B. (2007). *Recruiting and retaining quality teachers for high-needs schools: Insights from NBCT summits and other policy initiatives*. Hillsborough, N.C.: Center for Teaching Quality.

19. There is little surprise that out-of-field assignment at the elementary level does not appear to bear on teacher career intentions (primarily because almost every elementary teacher can be said to teach "in-field"), but it is somewhat puzzling that, controlling for all other variables, the proportion of middle school teachers who are teaching in-field is positively re-

lated to a greater likelihood that an individual will consider leaving teaching. This result may have something to do with the way in which the state designates a teacher as being in-field, since in middle school it is not uncommon for a teacher to teach more than one subject.

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

Conclusions

21. Leithwood, K., Seashore Louis, K., Anderson, S., and Wahlstrom, K. (2004). *How leadership influences student learning*. New York: The Wallace Foundation, p. 5.

22. Darling-Hammond, L. (1999). "Target time toward teachers." *Journal of Staff Development*, 20(2), 31-36.

23. Stigler, J. W., and Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: The Free Press.

Appendix B. Methodology

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