

New Schools, New Leaders:
A Study of Principal Turnover and Academic Achievement at
New High Schools in New York City

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Executive Summary

This condition report focuses on how principal turnover at new high schools affects school culture and student performance and how principals manage the transition to new leadership to minimize this impact. Using both quantitative and qualitative data on high schools in New York City, we examine the organizational structures that allow a sustained focus on student learning while the leadership is undergoing a transition.

As the management literature shows “high levels of employee turnover are found to be both the cause and effect of problematic conditions, and low performance in organizations” (Ingersoll, 1999, pg 7). This is relevant for schools as well since research on school reform shows that organizational stability is an important component of a healthy school (Tesh, 1991; Hanushek & Rivkin, 2000; Purkey & Degen, 1985). Leadership transitions, particularly, in the early years of development, can be especially problematic as many organizations, including schools, begin as innovative entities that are dependent on the energy of a charismatic leader and an enthusiastic staff.

New York State has seen a surge of new school development in recent years in the form of small high schools and charter schools. As new organizations, these schools may be especially vulnerable to fluctuations in leadership, as this instability may draw attention away from the creation of infrastructures that allow a focus on student performance and can disrupt the personal relationships that form the strength of these schools, particularly in their early years. Therefore, lessons about the leadership structures that can help a school sustain achievement gains, even as it faces principal and staff turnover, can yield valuable information for all schools, whatever their size and whatever their age.

Select Findings

Our results show that there is considerable principal turnover during the first ten years of a schools existence. In our sample, the founding principal continued to lead in only 16% of our schools, while 48% percent had one change and 36% experienced two or more changes. Of those that did experience a change in leadership, 47% had their first principal changes within the first four years of opening. Our results also suggest that while the change from the founding principal to her successor may have little effect on student performance, further changes in principal leadership may be more problematic.

While the original goal of the qualitative work was to illuminate support structures that help principals lead through times of transition we found many idiosyncratic stories and not much institutionalization. We heard about incredibly complicated, and sometimes hostile, transitions to principalship that were everything but traditional. We learned about support systems that were informal, arising out of previous relationships and the acumen of the new principal. We heard about the confusion that confronts new principals, and the complications of transitioning to a role that carries multiple responsibilities

and is not always clearly defined. Nevertheless, some instructive themes emerged about what helpful support systems might look like, the task of managing the role of principal, and how principals were able to maintain a focus on teaching and learning during times of transition.

Only one principal in our study sample experienced a smooth transition to the principalship; she was serving as an assistant principal in the school, was appointed interim-acting principal for the remainder of the school-year, and then to principal and had the summer to prepare for her new role. The transition to the principalship was anything but conventional for the other three principals. All three of these principals assumed their role mid-year, which merely added to the challenges they faced as a new principal.

Regardless of the process, however, all four principals spoke of the difficulty of being thrown into a school culture that was not of their own making and all spoke how little their previous experience had prepared them for their new role. One of the most complicated parts of the transition, according to our interviewees, was navigating the multifaceted job of principal. Despite the fact that all had been assistant principals prior to becoming principal, all of our interview subjects spoke about the shock of becoming principal.

Finally, all of the principals agreed that there were few formal support structures available to help. Coupled with the not knowing what their job entailed, the lack of support only presented more challenges in managing the transition. What little formal support did exist usually came in the form of one-shot districtwide principal meetings and conferences, rather than sustained and targeted professional development. All of the principals, however, were able to forge support systems for themselves, largely through informal means, predominately based on previous relationships with other principals. Most reported that they received some support from the previous principal, though this was based on prior relationships and not institutionalized in any way and was subject to personality and availability.

Conclusion

The literature about principal turnover and its effect on student performance and teacher retention contains many recommendations for districts and schools when it comes to handling principal succession. The most common recommendation is the need for schools and districts to plan carefully and in advance for principal succession, and the importance of adequately preparing and supporting principals in their new schools, regardless of whether the principal is a novice principal new to that school, or an experienced insider. Setting the right tone before a principal transition within the school community is crucial to the reception of a new principal and the relationship that this principal will have with the faculty. One of the advantages of a model of distributive leadership is that it will minimize the impact of a principal's succession on the school if various parts of the role are shared among the faculty and staff.

Nevertheless, managing the transition period can be complicated, especially for new principals entering roles that “defy support.” But our study suggests that there are ways to ease the transition period; all

of our principals told us that an on-going, sustained connection with another principal was critical in easing their transition. They also suggest that it would have been helpful to shadow another principal for a few months before assuming the principalship themselves. Indeed, the one principal in our sample who had advance noticed of her transition remarked about how helpful it had been to be able to work with the previous principal. This enabled the new principal to begin her role on a substantive footing, where others approached their new roles in survival mode. Finally – districts should work to decrease the rate of principal turnover within schools. As our data suggests, while the transition from founding principal to the second principal may lead to a slight decrease in student outcomes, multiple changes, particularly in a short time period, may be more problematic.

I. Introduction

Using both quantitative and qualitative data, this condition report focuses on how principal turnover at new New York City high schools affects school culture and student performance and how principals manage the transition to new leadership to minimize this impact.

It is well known in the management literature that “high levels of employee turnover are found to be both the cause and effect of problematic conditions, and low performance in organizations” (Ingersoll, 1999, pg 7). This is relevant for schools as well; research on school reform shows that organizational stability is an important component of a healthy school (Tesh, 1991; Hanushek & Rivkin, 2000; Purkey & Degen, 1985). And, in previous work, Weinstein et al (2007) find that fluctuations in staffing threaten to disrupt the implementation of schools’ instructional programs.

Prior work on organizations also finds that transience may be particularly harmful for young organizations. This work suggests that in the initial stages of an organization’s development, its evolving culture aims to create a stable, predictable environment (Schein, 1985). Leadership transitions can interrupt this process. Indeed, some organizational researchers describe a very personal process of organizational development, which we find especially relevant to new schools. In Kimberly’s (1979) conceptualization, organizations begin as innovative entities, often dependent on the energy of a charismatic leader and an enthusiastic staff. They then evolve through a series of developmental stages including the formation of an organizational identity, the development of commitment and cohesiveness among staff members, and, finally, the institutionalization of policies, rules and formalized structures. Fluctuations in staffing and clientele can interrupt this process, thus impeding the overall growth and development of an organization. Thus, new organizations, which are in the process of establishing themselves, may be most vulnerable to changes in leadership.

Our previous research finds that new high schools are subject to such fluctuations in staffing and student demographics, particularly in their early years (Weinstein et al., 2007). But while the research suggests that these fluctuations can detract from the creation of infrastructure, a shared vision and school culture, and policies that provide the stability for a focus on academic learning, some new schools have been able to maintain a high standard of achievement even in spite of the transience they face. This report explores the leadership structures that allow these schools to maintain a focus on academic improvement.

Importance of this Work

Recent shifts in education policy that have led to the surge of new school development in New York State makes this work particularly relevant for schools and students. The small schools initiative has generated many new schools in New York City. Across the state, charter legislation and shifts in enrollment patterns due to population movement have also resulted in the creation of new schools. As new

organizations, these schools may be especially vulnerable to fluctuations in leadership, as this instability may draw attention away from the creation of infrastructures that allow a focus on student performance and can disrupt the personal relationships that form the strength of these schools, particularly in their early years.

Therefore, lessons about the leadership structures that can help a school sustain achievement gains, even as it faces principal and staff turnover, can yield valuable information for all schools, whatever their size and whatever their age.

The research questions that guide this work are:

- What is principal turnover like in new high schools?
- What leadership structures help these schools sustain and enhance academic gains?
- How are these structures institutionalized so as to insulate them from changes in staff and administration?

We conduct a mixed methods study to explore how changes in school leadership can affect school success and how some schools managed to ensure a continued focus on academic achievement, even through periods of transience. Quantitative methods are used to analyze school performance over time in our sample of high schools. We then use these results to identify a sample of schools for the qualitative component of our work. The qualitative field work consists of interviews with the principals at the four schools that comprise our sample.

II. Literature Review

The recent increase in principal turnover and the associated difficulties of finding qualified replacements is an urgent issue in school districts across the country (Hargreaves, 2005; Norton, 2003). In recent years, this has been complicated by demographic changes and waves of retirements of higher-level school administrators that often leave school systems unable to find qualified and experienced administrators to fill these positions (Hargreaves, 2005). Norton (2003) finds that because of the shortage of qualified principals, vacancies are often filled by “acting,” or substitute, principals who are unprepared for the job and ineffective at implementing necessary changes. The atmosphere created during the transition period, both before and after the principal leaves, has been identified as an especially sensitive time in determining the future success of the school (Norton, 2003; Fink and Brayman, 2006; Hargreaves, 2005; Macmillan et al., 2004; Jones, 2000). Understanding what happens during this transition period is especially important to minimize the disruption or negative consequences that may affect student learning.

Impact on Students and Teachers

Principals play a wide variety of roles in a school, not the least of which is the creation of academically supportive environments for both students and teachers. Leithwood, et al. (2008) find that while teachers have the most influence on student performance, principals are essential for setting the tone of the

learning community and modeling good teaching practice. The role of the principal is crucial to promoting and supporting teachers' achievements, creating a positive work environment for teachers, and improving staff morale, which also creates the right learning environment for students (Leithwood, et al., 2008; Firestone et al., 2001). Principal accountability, such as principals' ability to take responsibility for student achievement, is often an indicator of the quality of a particular school's educational practices in general (Vanderhaar, et al., 2006; Firestone et al., 2001; Quinn, 2002). Because principals are educational leaders among their teachers, an effective principal can shape the outcomes of a school's performance on test scores by supporting creative and effective teaching (Firestone, et al. 2001).

Given principals' considerable influence over a school community, it is no wonder that the literature pays much attention to implications for the school community when the principal leaves. In their in-depth study of teacher retention and mobility in Washington State, Plecki, et al. (2005) find that high principal turnover was correlated with high teacher turnover. In another study of teacher transience, Ingersoll (2001) finds administrative support to be one of four critical factors in teachers' decisions to remain in, or leave, teaching. Because principals are instrumental in creating a positive and supportive work environment for teachers, high principal turnover can lead to decreased teacher satisfaction and tenure; teachers often cite support from school administrators as an important element in their decisions to stay at a particular school (Plecki, et al., 2005; Knapp et al., 2004). Moreover, Vanderhaar, et al (2006) suggests a link between principal stability and student outcomes. They find that the length of a principal's tenure at a given school positively affects student achievement, with seven or more years at the same school indicating the length of tenure necessary to implement effective change. Thus, principals are a critical component in creating school environments that are conducive to teaching and, by extension, learning.

Planning for Leadership Transition

Even predictable change – anticipated promotions, transfers, and expected retirements – needs to be carefully planned for in advance in order to mitigate some of the potentially harmful effects of administrative transience and to create a smooth transition to new leadership. Changes in leadership, especially if unexpected, can leave the school community distrustful of a new, incoming principal, and reverse previous accomplishments if not handled thoughtfully (Macmillan, et al., 2004; Shields, 2000; Hargreaves, 2005; Leithwood, et al., 2008). In many public school districts, principalships often operate as a rotating position in which a new person is placed at a school for two or three years before being promoted to a different school in the district or to a higher position in the district's administration; this constant mobility prevents constructive improvements from taking hold within individual schools (Fink and Brayman, 2006). Advance planning for anticipated and unexpected principal turnover, as well as implementing policies to help increase principal retention, can help create the stability necessary for the institutionalization of best practices (Glasspool, 2006).

The concept of “sustainable leadership” accounts for schools’ need to retain their long-term goals and institutional strengths even after the departure of the principal. Without planning effectively for future leadership, schools run the risk of losing their hard-won improvements with each leadership transition. Effective school leaders plan for succession and take the time to groom replacements by encouraging in-house career development among teachers and distributed leadership roles among the staff. In addition, efforts to retain effective principals are crucial in order to sustain on-going improvements in a school (Hargreaves and Fink, 2003; Zellner, et al., 2002; Firestone et al., 2001).

Hargreaves’ and Goodson’s study (2006) on American and Canadian school leadership concludes that the failure to plan for changes in school leadership causes much of the insecurities schools face when there is a transition, including the failure of recent improvements to take hold, and a reversion to previous patterns of inefficiency. By rotating experienced principals through different schools in a single district, instead of keeping effective leadership in one location, districts undermine their own success and school improvement suffers.

III. Methodology

For this study we use a longitudinal database developed by researchers at the Institute for Education and Social Policy (IESP) containing data on all New York City high schools operating between 1993 and 2007. This data was obtained from the Annual School Reports (ASR), which are published yearly by New York City Department of Education’s Division of Assessment and Accountability, and the New York State Education Department’s annual School Report Cards (SRC).

Sample

This study builds on our previous work examining the effectiveness of the early wave of small high schools in educating New York City’s high school students. These include all public high schools that opened between September 1993 and June 1998. We chose this sampling strategy for a number of reasons. First, the 1993-1994 school year marked the first year of this early wave of new school creation. Second, schools that opened prior to the 1997-98 school year provide us with multiple years of demographic and outcome data; for each school in our sample we had at least two years of outcome data. Third, by including only those schools that opened after 1993, we are able to track changes in schools’ entering student populations over time. Finally, we chose this strategy because it allows us to compare small high schools to a set of larger schools that opened during the same time period, and therefore to control for some of the unobservable characteristics that, while common to newly opened schools, may influence school outcomes over time. For example, new schools often face complications—such as facilities that have recently been constructed or are undergoing renovation, lack of supplies, textbooks that have not been received before school begins, incomplete faculty and other school staffs, or limited curricula and administrative policies—that older schools do not. These

unobservable characteristics are more similar in schools that opened during the same time period. Whatever their size, we believe that schools of similar age provide a better comparison group than schools that have existed over differing periods of time.

For the present study, we expand the sample to include public high schools that opened between September 1993 and June 2002 for a total sample of 80 schools; on average we have nine years of graduation data for each school.¹ Because our original sample was limited to new schools, we were able to capitalize on following principal transitions from the founding principal to the present one, giving us a fuller picture of what transition looks like in new schools.

The demographic characteristics of the students attending our sample schools differ considerably from the composition of city high schools as a whole. Schools in our sample have significantly lower rates of White and Asian students, and significantly higher percentages of Hispanic and black students. The schools in our sample are also more likely to have poorer student populations than high schools citywide. However, schools in our sample are also more likely to have lower percentages of students who are in special education, are English Language Learners (ELL), or recent immigrants (Table 1). A lower percentage of entering 9th and 10th grade students have met the standards on 8th grade tests in English Language Arts (ELA) and Mathematics, but this was not consistently statistically significant over the study years.

Teachers in our sample schools have considerably less experience and education than teachers at high schools citywide. Students in our sample schools were taught by less experienced teachers who were less likely to have a master's degree; our sample schools have significantly lower percentages of teachers who have taught at the school for two years or more, or have five years or more teaching experience overall, than city high schools as a whole.

Even with a student population more likely to be minority and poor and less likely to have met citywide standards upon entering high school, especially in mathematics, the sample schools have considerably better four-year graduation outcomes than city high schools as a whole. In addition, the sample schools have statistically significant four-year dropout rates that are approximately half the citywide average across all years of the study.

Analyses

The centerpiece of our quantitative analysis is a regression model linking principal turnover (principal transience) to student outcomes. To determine whether a change in leadership actually took place, the name of a school's principal was recorded in the database for each sample year based on the information provided in the ASRs or SRCs. Principal turnover is measured as a dichotomous variable indicating whether a school

¹ Again, we exclude the schools known as transfer high schools (those that enroll students only after they have left a traditional high school) and high schools that enroll only new immigrant students from this analysis. These schools are excluded because the admissions process differs from that of the general high school population. Students are accepted into transfer high schools only after they have been discharged from other academic or articulated city high schools. Schools for immigrant students are open only to those with less than four years in the United States.

underwent a change in principal from the previous year for each sample school year. We also include whether or not the principal is the founding principal or a new principal at the school.

Our dependent variables are the percent of students graduating in four years, percent of students dropping out after four years, percent of students still enrolled after four years and percent passing the English and Mathematics Regents examinations. We also control for differences in student characteristics, including the distribution of students within the school by race/ethnicity, gender, participation in special education, English language learners (ELL), eligibility for free lunch, and recent immigrant status. For entering students, we include the percentage of entering 9th and 10th grade students who are English Language Learners, in full-time special education, or overage for grade, and percentage of students who meet the standards on 8th grade English Language Arts (ELA) and Mathematics examinations. Teacher characteristics in our analyses include the percentage of teachers at the school for two years or more and the percentage of teachers with five or more years of experience.

Our basic regression model is

$$(1) Y_{jt} = \beta_0 + \beta_1 SchoolYear_{jt} + \beta_2 New_{jt} + \varepsilon_{jt}$$

where Y_{jt} is an outcome variable at school j , $SchoolYear_{jt}$ indicates the number of years school j has been in operation in year t , New_{jt} is a dummy variable that takes the value of 1 if a school had a new principal at the beginning of year t or 0 if no change occurred, and ε is a random error term with the usual properties.

Identifying the Case Study Schools

We use the quantitative data to identify a cohort of schools for further study. To do this, each school's student outcomes over time was charted relative to any changes in school leadership. We then identified 13 schools that experienced principal turnover and have either enhanced or maintained their performance or lost performance gains over time. From this pool, we recruited four schools to participate in the study (Table 1). Our final case study sample includes three high turnover schools that have enhanced/maintained their performance, and one low-turnover school that has also enhanced/maintained its performance (Figure 1).

School A is located in the Bronx and serves close to 600 students in grades 9-12. This school, as are all our case study schools, is Title I eligible, with almost 75% of students being eligible for free lunch. The student population is approximately 60% Hispanic and 40% black. The school has a four-year graduation rate of 60%; almost 80% of students passed the Comprehensive English and Mathematics A Regents examinations. The school has been through numerous principal changes in addition to experiencing moderate teacher turnover – almost one-quarter of teachers had not been teaching in this school in the previous school year.

School B is also located in the Bronx and serves approximately 500 students in grades 9-12. Its student body is approximately two-thirds Hispanic and one-third black, with almost 80% of students eligible for free

lunch. In 2006-07, the school had a graduation rate of 69% and almost two thirds of students passed the English and Mathematics A Regents. The school has had moderate principal and teacher turnover.

School C is located in Brooklyn and serves approximately 450 students in grades 6-12. The student population is over 60% black and about 33% Hispanic; about 70% are eligible for free lunch. In 2006-07, the graduation rate was 65% with almost 90% of students passing the English and Mathematics A Regents. The school has a relatively low rate of principal and teacher turnover, with only 15% of teachers had not been teaching in this school in the previous school year.

School D is also located in Brooklyn and serves approximately 650 students in grades 6-12. Its student population is about 50 percent black and 40 percent Hispanic; approximately 60% of students are eligible for free lunch. The graduation rate was about 50 percent in 2006-07 and almost three-quarters of students who took the English and Mathematics A Regents passed. The school has a moderate to high rate of principal turnover and a high rate of teacher turnover and a young teaching staff, with almost half the teachers being new to the school and 40 percent having three years or less teaching experience.

IV. Findings

Our results show that there is considerable principal turnover during the first ten years of a schools existence. In our sample, the founding principal continued to lead in only 16% of our schools, while 48% percent had one change and 36% experienced two or more changes (Table 3). The data also shows that a founding principal is likely to remain at her school during the first four years and then leave. As shown in Table 4 there is a dramatic jump between year four and year five from 11.3% to 42.5% and then again between year six and year seven from 47.5% new principals to 71% new principals. The average tenure for principals in our sample is 3.4 and we can see that average tenure remains under 4.7 years during our study period. Figure 2 charts the distribution of the number of principals in a school over the study period. As the school graduates its first class most of them will begin to experience the transition from the founding principal to her successor. In year seven through nine, many of the schools are now experiencing yet another transition to a new principal. Among those schools that have been opened at least 10 years, a small number are on their fifth principal.

Table 6 presents the results of our OLS regressions, The estimates shown are only for percent graduating; the results are similar for percent dropout, percent still enrolled, and percent passing English and Mathematics Regents examinations although none of the principal coefficients in these models are significant. Both models that are presented for percent graduated include year fixed effects, while model 2 contains control variables (total enrollment percent black, percent Hispanic, percent Asian or other, percent female, percent LEP, percent recent immigrant, percent of entering 9th and 10th graders meeting standards on English Language Arts and Mathematics, percent full-time special education, and percent eligible for free lunch).

The coefficients on second principal and third principal in both models are negative and suggest that while the transition from founding principal to her immediate successor ($\beta = -0.98$ and not statistically significant) may lead to a small decrease in the percent of students graduating the change from the founding principal to the third principal leads to a larger decrease in graduation rates and is statistically significant ($\beta = -5.52, p < 0.10$). With the addition of the control variables the coefficients on these variables decrease, but remain the same in direction and statistical significance. These results suggest that while the change from the founding principal to her immediate successor may have little effect on student performance further changes in principal leadership may be more problematic.

We now turn to the results of our qualitative work that may shed light on the reasons why frequent change is so difficult. The original goal of the qualitative work was to illuminate support structures that help principals lead through times of transition. We were particularly interested in revealing organizational structures that allow a sustained focus on student learning while the leadership is undergoing a transition. We hoped to uncover systems that were institutionalized in the study schools, and that could be transferred to other places.

In the course of our research, however, we found many idiosyncratic stories and not much institutionalization. We heard about incredibly complicated, and sometimes hostile, transitions to principalship that were everything but traditional. We learned about support systems that were informal, arising out of previous relationships and the acumen of the new principal. We heard about the confusion that confronts new principals, and the complications of transitioning to a role that carries multiple responsibilities and is not always clearly defined.

Nevertheless, the research yields some important lessons about supports that might ease the transition period, as well as about the process of leadership itself. Some instructive themes emerge about what helpful support systems might look like, the task of managing the role of principal, and how the four principals in our sample schools were able to maintain a focus on teaching and learning during times of transition. Interestingly, the themes are common across all the schools in our sample, regardless of whether that school had experienced “high” or “low” administrative turnover.

But first, some background and the stories of the transition; what the transition process was like for our principals, and what the school culture was like at the time of transition.

Transition to Principal

Only one principal in our study sample experienced a smooth transition to the principalship. Her story follows a normative route to becoming a principal; she was serving as an assistant principal in the school and when rumors about the principal’s plan to leave surfaced, the district informed her that she would be the natural choice for succession. Indeed, when the principal finally announced her resignation, she was appointed interim-acting principal for the remainder of the school-year. Although not appointed to the

official principalship until the fall, she had been told about the pending appointment in June, and so had the summer to prepare for her new role. Moreover, because she had been an assistant principal in the school prior to becoming the interim-acting principal, she was able to understand the school culture and think proactively about how she would manage it—and what she would change—when she became principal, including returning the school to its original mission. In her role as assistant and then interim-acting principal, she was able to monitor the school culture and devise a way to manage it when she formally assumed the principalship. “When I came in, (the previous principal) was experiencing a fight with the teachers (around the revocation of the waiver). So I sort of stepped into this role, trying to make some peace and also put down some guidelines and structures that they had never had before.” Her ability to plan—by virtue of having been in the school and knowing in advance that she would become principal—eased this part of that transition.

The transition to the principalship was anything but conventional for the other three principals in our study. All three of these principals assumed their role mid-year, which merely added to the challenges they faced as new principal. In one school, the transition was unexpected and sudden. The previous principal left abruptly, and the current principal had to step in as the interim-acting principal without much notice. She went through the formal C-30 process after having served as interim-acting for several months, and was finally granted the official principalship. The school had been through three principals in the seven years prior to current principal’s appointment.

In another school, the transition was fraught with resentment and power dynamics. The current principal was informed of her appointment two minutes before it was revealed to the entire staff; indeed, she had not even realized that the conversation she had had with the superintendent a few weeks prior had been an interview for the position. Because she had been an assistant principal at the school for a relatively short time, her appointment generated resentment among some of the teachers and other administrative staff. Moreover, the significant amount of administrative turnover in this school—eight principals in eleven years—had left the staff mistrustful and fragile.² This high rate of turnover influenced her transition in many ways, “You have to understand that when you’ve had nine principals in twelve years, there’s a lot of stuff that doesn’t get done here because the staff doesn’t take the leadership seriously because they know this too shall pass.” Many assumed that her tenure would be short as well.

Another school experienced stability in the first four years of its existence before encountering a period of turbulence. The principal who succeeded the founding principal left rather abruptly, and parents objected to the replacement. The current principal was encouraged to apply for the position, despite having no experience as an assistant principal. This principal describes her appointment to the principalship as “less of a hiring process and more of a community movement.” Interestingly, this school has the lowest administrative turnover in our sample, suggesting that the community ties and support—the community was

² Many of these principal changes occurred mid-year and are not reflected in the ASR data.

deeply engaged in the creation and founding of this school, as well as in the selection of its current principal—might have played a role in administrative longevity in this case. This principal has been in her current position for eight years.

Regardless of the transition process, however, all four principals spoke of the difficulty of being thrown into a school culture that was not of their own making. Although all had been assistant principals in their schools prior to becoming principals, all of our interviewees spoke of the shock of assuming responsibility for a culture that they had not envisioned or created. This was particularly salient for the three principals who had experienced difficult transitions. “You operate in a very different capacity when you are playing out someone else’s vision for what the school is supposed to be.” One principal described the school culture as “crazy” and chaotic. During her first year as principal, an audit exposed the low academic performance of the students, and the school was placed on the “schools in need of improvement” list—something that shocked her, even though she had been an assistant principal at the school for several years. Moreover, there had been a lot of teacher turnover, so this principal was also dealing with many new teachers. Another principal talked about the transition as “baptism by fire.” This principal assumed her position “under very hostile territory” and had to figure out how to lead within this hostility. All of the principals in our sample struggled to manage the complications that had been bequeathed them, while simultaneously learning the intricacies of their new position.

We find that the appointment of principals—and the cultures they walked into—quite varied and complicated. Nevertheless, some themes emerge that can help us understand how they were able to sustain, and in some cases, enhance student achievement.

Track to the Principalship

There was a common track to the principalship for all the school leaders in our study. All of them had, at one time, been teachers. For three principals, teaching had been their first, and only career; for one, it was a second career. Nevertheless, all had had considerable classroom experience, and three had taught in the school they currently lead. Also prior to becoming principal, all four had been working at the school, three of the four had been an assistant principal in their current school, while the fourth was a “teacher leader.”

During our conversations, all interviewees were quick to claim their teaching experience. They acknowledged that this experience has been critical to their ability to lead their schools; it provides a credibility that is essential to their leadership. Their classroom experience enables them to relate personally to the pressures that teachers face, and thus hold a teachers’ perspective when making decisions. According to one principal, “the minute I forget what it’s like to be in the classroom I start making wrong kinds of decisions because I don’t remember how hard it is to have 28-30 kids in a class.” This common experience also builds trust and cohesion among staff, according to our interviewees, because everyone is working from the same page. While this does not necessarily translate into teacher-centric decision making, principals feel

that their teaching experience affords them a credibility and latitude among teachers which is essential to their leadership. One principal commented that “when I get up in front of my staff, none of them can say, ‘well, how would you know?’” Another principal was certain that her experience as a teacher and her continuing classroom experience while an assistant principal helped to ease her transition, “One of the things that probably softened the transition was that I taught a class (and) I ran clubs.” There seemed to be consensus that this teaching experience protected them from a “you just don’t understand what we face everyday” mentality that can drive a wedge in the cohesion of a school. Indeed, in one school, administrators—the principal and all the assistant principals—retain teaching responsibilities throughout the school year.

Although this teaching experience was viewed as an asset by the principals, it also complicated their transition, particularly for those who had been teachers in the school they were now being asked to lead. Principals spoke about the tensions they felt between their old role as teacher and their new role as principal. Often, this tension manifested itself in decision-making; several principals revealed that early in their tenure, they sought too much input from staff regarding all kinds of decisions. “I gave too many people a say at first. (There was) lots of participatory decision making, lots of buy-in.” This dynamic inhibited staff from regarding the new principal as a leader. Moreover, the group-leadership quickly proved to be inefficient and complicated. After a few painful early months, one principal identified this dynamic as a barrier to her leadership; “From then on, I worked on setting clear expectations, setting clear directions and ideas for the school. I needed to learn to relate as boss-teacher instead of teacher-teacher.”

Support Systems

All principals agreed that there were few formal support structures available to help with their transition to the principalship. And what little formal support that did exist, usually came in the form of districtwide principal meetings, leadership academies, and conferences. These convenings were, generally, isolated events that did not offer continued, sustained support over time. “The day that I officially became principal, (the superintendent) called me and said, ‘you have a two-day training. We are meeting at a hotel.’ She was very brusque. And I’m sitting there with all these other principals at the meeting, trying to be professional and listen, but there really was no one-on-one.” As such, some principals felt that these conferences were limited in their usefulness.

Some of our interviewees viewed the district itself as support, while others did not. One principal, as the leader of a 6-12 school, reported to two separate superintendencies. She found this to be extremely challenging because, “I had two powers that be.” Another principal was denied the support she sought from her district superintendent; “One time I called my superintendent and she says, ‘well, it’s lonely at the top.’” Yet another principal felt supported by her district; “when the school was under the alternative superintendent, someone at the superintendency was always on call for emergencies.” At the end of her first year, one principal recalled that the Alternative Education Division created a support group for new

principals. At this forum, she got advice from teachers and deputy superintendent on “some of the things that nobody ever tells you about.” This resource was “very helpful.”

Interestingly, our interviews suggest that the principals’ transition experience determined, to some extent, the degree to which they were able to take advantage of the formal supports that were offered. For example, the one principal who had time to plan and transition into her position was able to take advantage of these conferences. She was sent to the Leadership Academy, where she met other principals and engaged in exercises designed to help her think strategically about her school. Another principal’s experience of a leadership conference was quite different; because her transition to the principalship had been so abrupt, this principal felt overwhelmed and confused by the conference, and was unprepared to take advantage of its offerings.

Nevertheless, all the principals in our study were able to forge support systems for themselves, largely through informal means. These support systems were based predominately on personal relationships and involved networking and sharing experiences. For example, most principals reported that they received some support from the previous principal, though this was based on prior relationships and not institutionalized in any way. This is the only school-based support we heard about, and again, it was subject to personality and availability. One principal reported that she felt free to call upon previous principals with questions. This same principal formed a bond with principals of other schools created as part of the alternative schools movement (as had hers); they developed their own support network and began to mentor one another. Still another principal had dinner with a former principal of the school once a month for a year. Personal relationships seemed integral to getting the necessary support, and principals needed to be industrious in finding it themselves; “you have to really know somebody in order to call them and (say) I need help.”

These relationships seemed to serve multiple purposes, offering both moral and technical support. In some instances, principals just wanted “someone to call.” But they also wanted a resource to help answer questions about “everything from the mundane, like how to get the clock fixed, to the more substantive, like how to think about instruction, professional development.” Sustained relationships with other principals or district personnel were critical in helping our interviewees through difficult transition periods. And accessibility was important too; just knowing that someone would pick up the phone at the other end of the line provided comfort.

Thus, overall, mentoring, networking, and support groups surfaced as the most important sources of support for these principals during their transition. When asked to think about the kinds of supports they would prescribe for incoming principals, all the principals in our study suggested some kind of formal mentoring program.

“Principals need a mentor they can trust. (They need) meetings and data from district to fully understand status before making instruction plans; need opportunities to develop relationships with PTA, parents, security

and leadership team for support. Support for principals is always important, at every stage, there is always something to learn from other folks.”

Another principal said:

“I would have liked to have a mentor. Someone to call. Networking with other principals also would have been helpful, to exchange ideas. (It would have been helpful to have a) formal mentor relationship with an older principal, for at least six months, or someone from the Leadership Academy to visit once a week.”

Interestingly, two principals in our study declared that the transition period defies support; one said “You just need to live through it. You have to “just learn by fire,” while the other said “Some things you can’t learn, you just have to be in it.” But at the same time, these two principals spoke of the significance of networks and mentors in their own transitions. This speaks to the importance of relationships; the principals in our study seemed to derive the greatest support from sustained, accessible connections with other principals and district leaders. The support they received from these connections was contextual and specific to their everyday experience. So while it may be difficult to prescribe a class or program that can aid in a principal’s transition, having someone to “walk through the fire” with seemed to offer critical support. Indeed, according to our interviews, study principals’ ability to forge support networks for themselves contributed to their ultimately successful transitions.

Finally, it is important to acknowledge that, in the time since our study principals’ transitions, districts have started to provide formalized venues for networking and mentorship. Study principals cited networking opportunities, through programs such as the Integrated Curriculum and Support Group and Children First, as important support systems that have recently been created and that would have helped with their transition, had the support been available at the time.

Managing the Job

One of the most complicated parts of the transition, according to our interviewees, was navigating the multifaceted job of principal. Despite the fact that all had been assistant principals prior to becoming principal, all of our interview subjects spoke about the shock of taking on this new role; “Not for any reason should you ever think that because you are an assistant principal you could ever know what it is like to be a principal, because you really have no idea.”

One principal spoke about discovering the “layers of responsibility.” This principal spent time separating her operational responsibilities from her instructional ones. Another principal remembered her first days as “figuring out the job description of a principal. (There is) so much you are held accountable for, and I was learning a lot of things that are tangentially related to teaching and learning: to what extent is there

staff governance, decision making? How do you build a professional culture? How do you build a pedagogy that actually relates to kids in the classroom?” Learning when—and what—to delegate was a critical piece of this process. A large part of the transition, according to our interviewees, was identifying tasks, and figuring out how to delegate them in the most effective and efficient way. Knowledge of the system, how to deal with the union, for example, was also critically important. “I knew the system. I was a teacher for 16 years and I understood how the UFT worked. I understood that you make friends with your payroll secretary and your custodian and all the other things that they don’t teach you.” This principal believed that this prior knowledge was critical in helping her to succeed in her role as principal; even before becoming principal, she already knew “how to navigate” some important elements of the job.

Beyond understanding what their new responsibilities entailed, the principals also spoke about the difficulty of learning to lead. This involved finding a line between being supportive and being directive, when to make decisions themselves, and when to involve others in the process. “When I first came in as principal, I guess I tried to please everybody, and you can’t please everybody. I learned the hard way.” This principal reoriented her leadership perspective from “let me make the teachers happy” to “let me make the kids happy.” Once she defined this for herself and then articulated it to the staff, she found the course of leadership much clearer. When speaking of how she learned to balance the needs of multiple “constituents”—teachers, students, even parents—one principal said, “I learned to be a lot more tempered; that there are always three sides to a story.” Nevertheless, while this principal feels that it is important to acknowledge these “three sides,” she also claims that keeping a consistent focus on “living the school’s vision” helps her to reorient herself when multiple constituents tug in different directions.

Leading also meant setting—and then standing by—firm expectations for quality of instruction. “I am not going to take the fall for people who don’t do their job. If I have to do your job and mine, I don’t need you.” This stance was not always well-received; several principals reported high turnover early in their tenure. Nevertheless, the principals we spoke with felt that this kind of accountability was important in setting the tone and culture of the school.

Finally, it is important to acknowledge the stress that these principals endured, particularly early in their tenure. Two of the principals we spoke with have health problems that they link to the stress of their job. “When I started this job, I was on no medication whatsoever. Now I am on four.” Learning to lead was not an easy process for any of the principals in our study.

Maintaining a Focus on Teaching and Learning

Despite the turbulence of their transitions, the four principals were determined to create systems and infrastructure that would support teaching and learning in their school. The first step in this process was ensuring high quality instruction and support for students. Two principals spoke of realigning the school schedule with instruction. This meant reorganizing the schedule to accommodate extra time for tutoring,

small group work, even some evening classes. Other principals brought in new literacy and math programs, differentiated instruction, or programs to address the needs of low performing students. In one school, the principal was deliberate about focusing on testing, although not in a traditional way. This principal set the exam schedule so that students could take the tests earlier; those who failed had extra time to prepare for the next test, and those who passed “got them out of the way.” Many seniors in this school were now eligible to graduate in January, so the principal concentrated on creating programs to keep these students engaged. Taking the Regents early “is a way for kids to feel proud of themselves and then they can take electives at the end of the year. It is a way for them to stay motivated.”

In addition to concentrating on academics, schools also focused on students’ social development. In one school, the principal introduced an advisory period that met once a week. Another created community projects and classes on cultural diversity. The principal of another school created venues for meaningful student participation in school affairs; the student government and a student council contribute to decision making within the school.

Principals also worked to create a cohesive staff that is aligned with the vision and mission of the school. Toward this end, they dismissed teachers who were not aligned with the school’s vision, and hired ones who shared this educational philosophy. “I told people my vision, and if they didn’t want to go there, they should find another school.” In addition to looking for a shared commitment to an educational philosophy, most principals reported looking for staff with differing, yet complementary, skills. As one principal put it, “I went out of my way to pick people who had the same educational philosophy as me, but were very different personality-wise. I picked people (who) I felt would blend and get along. But I also picked people who are very different from me.” The principals feel that such deliberate staffing has created a foundation for more effective and creative work.

Support for staff was also critically important. The principals in our study schools spend considerable time in classrooms, and are actively involved in observing instruction. This was something new for the teachers in one school, and it helped set a higher standard for teaching. “They (teachers) weren’t used to principals going in and observing, believe it or not. So the fact that I was going in and some people were getting excellent observations and some people were getting U (unsatisfactory). They realized that its either “get it together or be gone.”” Another principal deliberately focuses on empowering teachers, asking them to participate in hiring decisions and other schoolwide functions. “We have huge distributive leadership in this building. I have an instructional cabinet that I meet with every week, made up of grade teachers, and department chairs.”

V. Conclusion

The literature about principal turnover and its effect on student performance and teacher retention contains many recommendations for districts and schools when it comes to handling principal succession. The

most common recommendation is the need for schools and districts to plan carefully and in advance for principal succession, and the importance of adequately preparing and supporting principals in their new schools, regardless of whether the principal is a novice principal new to that school, or an experienced insider. Setting the right tone before a principal transition within the school community is crucial to the reception of a new principal and the relationship that this principal will have with the faculty. One of the advantages of a model of distributive leadership is that it will minimize the impact of a principal's succession on the school if various parts of the role are shared among the faculty and staff.

Nevertheless, managing the transition period can be complicated, especially for new principals entering roles that “defy support.” But our study suggests that there are ways to ease the transition period; all of our principals told us that an on-going, sustained connection with another principal was critical in easing their transition. They also suggest that it would have been helpful to shadow another principal for a few months before assuming the principalship themselves. Indeed, the one principal in our sample who had advance noticed of her transition remarked about how helpful it had been to be able to work with the previous principal. This enabled the new principal to begin her role on substantive footing, where others approached their new roles in survival mode. Finally – districts should work to decrease the rate of principal turnover within schools. As our data suggests, while the transition from founding principal to the second principal may lead to a slight decrease in student outcomes, multiple changes, particularly in a short time period and while the school is in its early development, may be more problematic.

References

- Akiba, M. & Reichardt, R. (2004, April 24). What Predicts the Mobility of Elementary School Leaders? An Analysis of Longitudinal Data in Colorado. *Education Policy Analysis Archives*. 12(18). <http://epaa.asu.edu/epaa/v12n18/>.
- Barth, R. (1990). *Improving Schools From Within: Teachers, Parents, and Principals Can Make the Difference*. San Francisco: Jossey-Bass.
- Davidson, B. M. & Taylor, D. L. (1999). Examining Principal Succession and Teacher Leadership in School Restructuring. Paper presented at the annual meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 19-23, 1999).
- Elfers, A. M. & Plecki, M. L. (2006). Examining Teacher Retention and Mobility in Small and Rural Districts in Washington State. University of Washington, College of Education. *Educational Leadership and Policy Studies*. November 2006.
- Elmore, R. F. (2000). Building a New Structure For School Leadership. Winter 2000, The Albert Shanker Institute.
- Fink, D. & Brayman, C. (2006, February). School Leadership Succession and the Challenges of Change. *Educational Administration Quarterly*. 42 (1): 62-89.
- Firestone, W.A., Monfils, L., Martinez, M. C., Polovsky, T., Camilli, G. & Hayes, M. (2001). Principal Leadership in the Context of a State Testing Program: An Exploratory Study. Paper presented at the annual meeting of the University Council for Educational Administration in Cincinnati, OH, November 2, 2001.
- Gates, S.M., Ringel, J. S., Santibanez, L., Guarino, C., Ghosh-Dastidar, B. & Brown, A. (2006). Mobility and turnover among school principals. *Economics of Education Review*. 25: 289–302.
- Glasspool, T. S. (2006). Socialization of Pennsylvania High School Principal Succession. (Dissertation). University of Pittsburgh, 2006.
- Hargreaves, A. (2005, Winter). Leadership Succession. *The Educational Forum*. 69: 163-173.
- Hargreaves, A. & Fink, D. (2003, December). The Seven Principles of Sustainable Leadership. *Educational Leadership*. December 2003.
- Hargreaves, A. & Goodson, I. (2006, February). Educational Change Over Time? The Sustainability and Nonsustainability of Three Decades of Secondary School Change and Continuity. *Educational Administration Quarterly*. 42(1): 3-41.
- Ingersoll, R. M. (1999, September). *Teacher Turnover, Teacher Shortages, and the Organization of Schools*. Washington: University of Washington, Center for the Study of Teaching and Policy.
- Ingersoll, R. M. (2001). *Teacher Turnover and Teacher Shortages: An Organizational Analysis*. *American Educational Research Journal*, 38(3), pp. 499-534.
- Jones, J. C. (2000). Principal Succession: A Case Study (dissertation). Calgary, Alberta. November 2000.
- Kimberly, J. R. (1979). Issues in the Creation of Organizations: Initiation, Innovation, and Institutionalization. *Academy of Management Journal*. 22: 437-457.

- Knapp, M. S., Elfers, A. M., & Plecki, M. L. (2004). *Preparing for reform, supporting teacher's work: Surveys of Washington state teachers, 2003-04 school year*. Seattle, WA: University of Washington.
- Kushman, J. W. & Yap, K. (1999). What Makes the Difference in School Improvement? An Impact Study of Onward to Excellence in Mississippi Schools. *Journal of Education for Students Placed at Risk (JESPAR)*. 4:3, 277- 298.
- Ladd, H. F. (1999). The Dallas school accountability and incentive program: an evaluation of its impacts on student outcomes. *Economics of Education Review*. 18: 1–16.
- Leithwood, K., Harris, A. & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership & Management*. 28 (1):27 - 42.
- Macmillan, R. B., Meyer, M. J., & Northfield, S. (2004). Trust and Its Role in Principal Succession: A Preliminary Examination of a Continuum of Trust. *Leadership and Policy in Schools*. 3(4): 275–294.
- Norton, M. S. (2003). Let's Keep Our Quality School Principals on the Job. *The High School Journal*. Dec 2002/Jan 2003. 50 – 56.
- Plecki, M. L., Elfers, A. M., Loeb, H., Zahir, A., & Knapp, M.S. (2005, March). *Teacher Retention and Mobility: A Look Inside and Across Districts and Schools in Washington State*. Seattle, WA: University of Washington.
- Purkey, S.C. & Degen, S. (1985, Spring). Beyond Effective Schools to Good Schools: Some First Steps. *R & D Perspectives*. 1-9.
- Quinn, D. M. (2002). The impact of principal leadership behaviors on instructional practice and student engagement. *Journal of Educational Administration*. 40 (5): 447-467.
- Rowan, B., & Denk, C. E. (1984). Management succession, school socioeconomic contest, and basic skills attainment. *American Educational Research Journal*, 21: 517-537.
- Schein, E. E. (1985). *Organizational Culture and Leadership: A Dynamic View*. San Francisco: Jossey-Bass, Inc.
- Shields, B.A. (2000). Administrator Turnover: Causes and Implications (dissertation), State University of New York at Buffalo.
- Tesh, A. S. (1991). *A Research-Based Attribute Structure for School Accountability*. Greensboro, NC: The Center for Educational Research and Evaluation of the University of North Carolina.
- Vanderhaar, J.E., Muñoz, M.A. & Rodosky, R. J. (2006). Leadership as Accountability for Learning: The Effects of School Poverty, Teacher Experience, Previous Achievement, and Principal Preparation Programs on Student Achievement. *Journal of Personnel Evaluation in Education*. 19:17–33.
- Weinstein, M.G., Jacobowitz, R., Maguire, C., Saunders, T.B. & Fruchter, N. (2007). *Stability in Student and Teacher Characteristics in the First Ten Years: A Study of Small High Schools in New York City*. New York: New York University Institute for Education and Social Policy.
- Zellner, L., Ward, S. M., McNamara, P., Gideon, B., Camacho, S. & Edgewood, S. D. (2002). The Loneliest Job in Town: Sculpting the Recruitment and Retention of the Principal. 2002-02-15. Paper presented at the annual meeting of the Southwest Educational Research Association, Austin, TX, February 14 – 16, 2002.

Figure 1: School Performance: Case Study Schools, 1997-2007

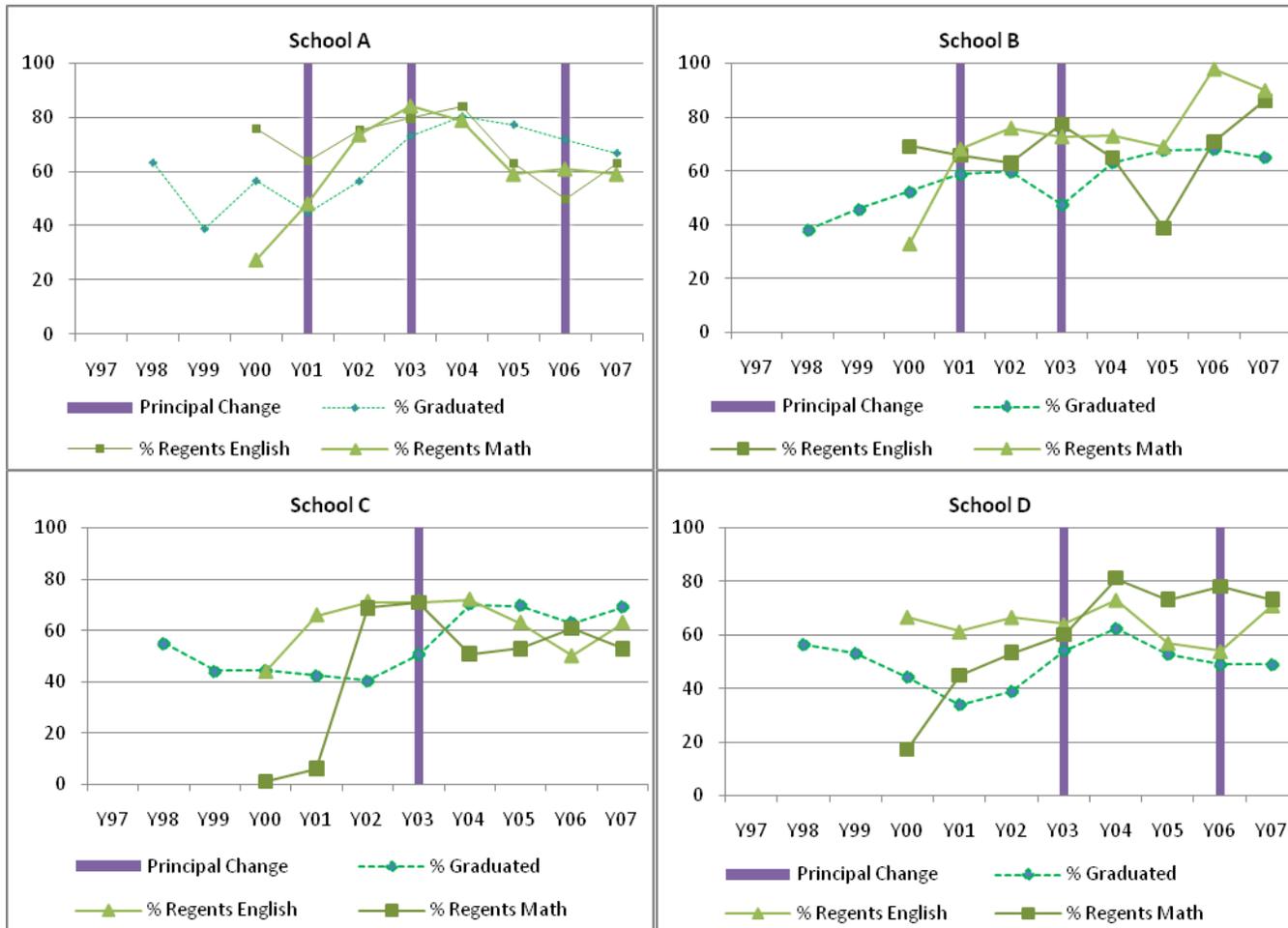


Figure 2: Number of Principals in Each School by School Year

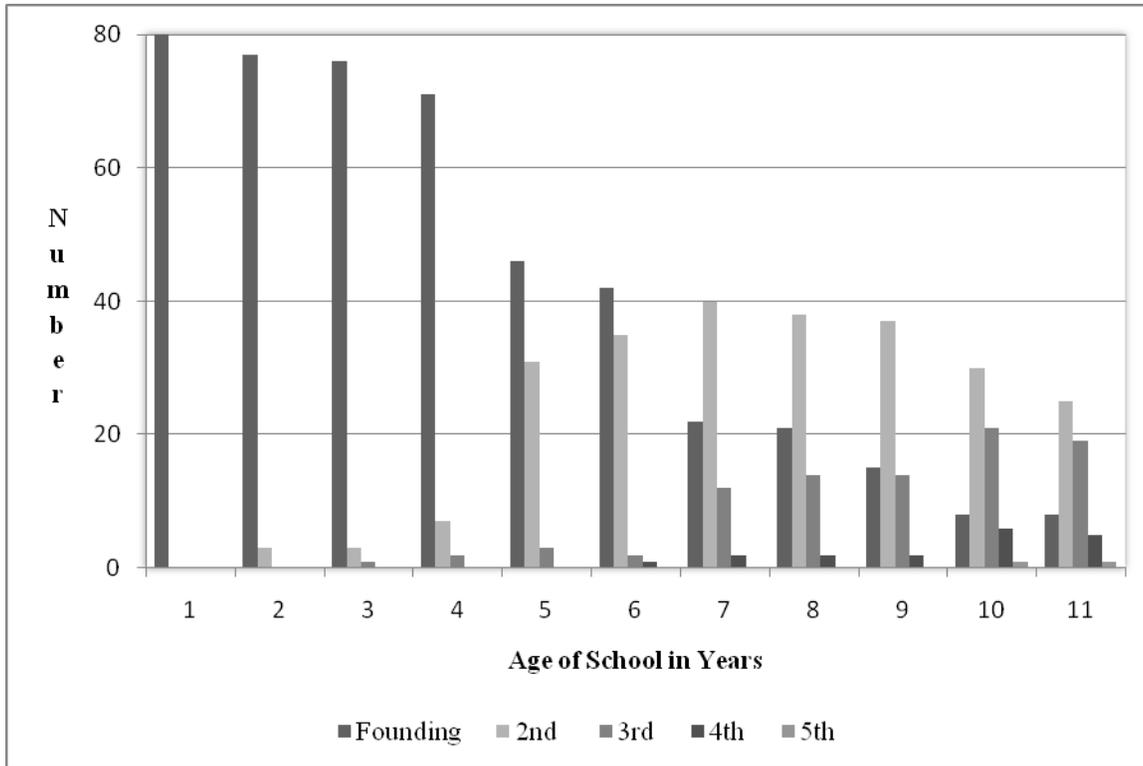


Table 1: Characteristics of Student and Teachers, Selected Years

	2006-07		2004-05		2000-01		1997-98	
	Sample	Citywide Average	Sample	Citywide Average	Sample	Citywide Average	Sample	Citywide Average
% White	9.4	n/a	8.3	14.2	8.0	16.2	7.2	15.4
	(16.0)		(13.5)		(14.0)		(12.6)	
% Black	39.0	n/a	38.5	34.7	41.8	35.9	44.2	36.8
	(24.1)		(25.0)		(26.2)		(25.5)	
% Hispanic	44.7	n/a	47.0	36.7	45.1	34.5	42.5	35.1
	(23.9)		(25.3)		(25.3)		(24.5)	
% Asian or other	6.5	n/a	6.2	14.3	5.1	13.5	6.1	12.7
	(9.7)		(1.4)		(8.4)		(6.2)	
% Female	n/a	n/a	54.5	49.3	54.6	49.5	56.4	49.6
			(8.5)		(8.4)		(10.5)	
% Special education	4.5	n/a	3.9	n/a	4.0	5.9	2.0	6.4
	(3.5)		(3.8)		(3.5)		(2.5)	
% English language learners	6.3	n/a	8.6	n/a	10.9	16.3	9.6	16.0
	(7.0)		(8.1)		(10.4)		(11.3)	
% Eligible for free lunch	54.6	n/a	60.2	51.2	66.2	48.4	61.5	52.6
	(26.5)		(22.2)		(21.0)		(23.8)	
% Recent immigrants	n/a	n/a	4.3	9.9	3.4	9.3	4.3	10.0
			(2.8)		(2.5)		(5.2)	
% Meeting Standard Entering 9th/10th Graders								
English Language Arts**	n/a	n/a	33.4	35.5	28.3	33.9	37.9	43.4
			(21.7)		(19.6)		(20.2)	
Mathematics	n/a	n/a	40.9	42.0	16.7	23.2	46.6	51.2
			(20.9)		(16.2)		(18.8)	
Student Outcomes								
% Graduated	63.9	n/a	68.6	58.2	62.3	51.0	53.7	49.7
	(16.3)		(19.8)		(17.7)		(18.8)	
% Dropped out	n/a	n/a	6.5	14.8	9.3	20.4	10.9	15.6

	2006-07		2004-05		2000-01		1997-98	
	Sample	Citywide Average						
			(5.9)		(7.3)		(9.0)	
% Still enrolled	n/a	n/a	24.8	27.0	28.4	28.6	35.5	34.7
			(17.1)		(13.1)		(14.1)	
% GE 65 English Regents	66.5	n/a	62.7	61.4	52.5	54.3	58.4	n/a
	(18.3)		(19.5)		(24.3)		(25.3)	
Teacher Characteristics								
% MA or higher	n/a	n/a	73.5	80.5	70.8	79.8	70.3	80.7
			(15.1)		(12.8)		(12.9)	
% at school > 2 years	n/a	n/a	50.7	60.1	49.3	70.8	40.6	65.9
			(15.2)		(17.8)		(15.3)	
% > 5 years experience	n/a	n/a	43.7	56.8	37.9	61.5	35.8	63.3
			(14.0)		(15.3)		(14.0)	

Table 2: Principal Turnover and School Achievement: Case Study Schools

	Minimal Turnover	Moderate to High Turnover
Improved/Sustained Performance	6 (1)	4 (3)
Decrease in Performance	0	3

() indicates case study schools

Table 3: Number of Principal Changes

N of Principal Changes	N Schools	% Schools
0	13	16%
1	38	48%
2	24	30%
3	5	6%

Table 4: Number of Founding Principals, New Principals and Means Years Tenure by School Year

School Year	N Observations	N Founding Principals		N New Principals		Mean Years Tenure
		N	%	N	%	
1	80	80	100.0	0	0.0	1.0
2	80	77	96.2	3	3.8	2.0
3	80	76	95.0	4	5.0	2.9
4	80	71	88.4	9	11.3	3.7
5	80	46	57.5	34	42.5	3.4
6	80	42	52.5	38	47.5	4.1
7	76	22	28.9	54	71.0	3.3
8	75	21	28.0	54	72.0	4.2
9	68	15	22.1	53	77.9	4.7
10	66	8	12.1	58	87.8	3.6
11	58	8	13.8	50	86.2	4.7

Table 6: OLS Regression, Percent Graduated

	Model 1	Model 2
Age of School	-0.03	-0.06*
	(0.80)	(0.63)
Principal Change 2nd Principal	-0.98	-0.29
	(1.82)	(1.42)
Principal Change 3rd Principal	-5.20*	-3.06*
	(2.55)	(1.87)
Constant	53.70****	47.29
	(3.13)	(6.06)
Year FE	Yes	Yes
Controls	No	Yes
School FE	No	No
R²	0.09	0.50
N	685	685

(1) *p<0.01, **p<0.05, *** p<0.01, **** p<0.001

(2) Year fixed effects are included for 1997-2007

(3) Controls are total enrollment percent black, percent Hispanic, percent Asian or Other, percent female, percent LEP, percent recent immigrant, percent of entering 9th and 10th graders meeting standards on English Language Arts and Mathematics, percent full-time special education, percent eligible for free lunch