Impact of Instructional Supervision on Student Achievement: Can We Make the Connection?

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Abstract

This paper reports on the final phase of a three-part study on the status of instructional supervision within several New York City public schools. In the first parts of the study the researchers found, through extensive use of surveys (questionnaires and interviews), that centralized educational reform had serious consequences for instructional supervision. Results indicated that in many instances principals, given many non-instructional duties, did not have the time to undertake continuous and meaningful supervision. Often, such supervision was relegated to coaches, neither trained in supervision nor given organizational authority to effectuate needed reforms to ensure quality teaching. Teachers in many cases indicated that supervision was perfunctory and evaluative. The researchers concluded that the highly centralized system of schooling that mandated prescribed curricula, added responsibilities for supervisors, and instituted narrow definitions of accountability aimed to, above all else, hold principals (and thus teachers) accountable for increases in student achievement transformed instructional supervision into a monitoring function, at its best. Several instances of effective models of supervision and professional development were discovered, however, despite bureaucratic and other non-school related constraints. These schools have had significant increases in student achievement levels as reported by State standardized tests. This last paper in the series summarizes some findings from one such successful school utilizing in depth methodologies aimed to uncover the relationship between supervisory practice and student achievement. The questions the study addressed were: What does supervision look like in an effective school and how do supervisors effectively work to influence teacher behavior that best promotes student learning? What impact does successful supervision have on student achievement? What can we learn from this case study that might inform the practice of supervision in other schools? Based on this tentative case study involving one school, findings indicate that supervision is purposeful, targeted, and central to promoting a school wide instructional program wherein student achievement is always at the forefront. Principal leadership is essential as is the establishment of a culture of teacher empowerment and collaboration. The paper concludes with some questions for continued study into the connection between supervision and student achievement.

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Can We Make the Connection?

"The purpose of educational accountability is to improve student achievement."
Douglas B. Reeves (2002)

Preface

This paper is the third and final installment in an on-going three-year study on the nature of instructional supervision in the New York City public schools, that have undergone radical organizational and curricular transformation since the mayor, Michael Bloomberg, took over control of the schools and centralized authority in the hands of a new chancellor, Joel Klein, an attorney. The first paper, entitled "High Stakes Testing, Standards, and the Demise of Instructional Supervision," reported on the status of instructional supervision within the prescriptive standards-based environment based on interviews with New York City public school teachers. The research findings demonstrated the prevalence of directive, checklist and narrative approaches to supervision. Principals and their assistants were perceived by teachers as predominantly being involved in non-instructional duties and evaluative functions. Supervision, as a means to promote instructional dialogue to improve teaching in the classroom, was carried out by a new position called an "instructional coach" who was neither a supervisor nor trained in instructional supervision. Moreover, although reform efforts called for greater professional development (PD), data indicated that most PD workshops were not viewed as particularly helpful, nor were they sustained and teacher initiated. Little connection, if any, between supervision and professional development was reported by survey respondents. Respondent decried, for the most part, the emphasis on prescribed standards and increased testing of students. The researchers concluded that the standards-based environment in New York City with its emphasis on uniform curricula provided onerous challenges to quality instructional supervision. A major conclusion from this study was that instructional supervision, as best practice, was mostly absent in the schools in which the respondents to the surveyed worked.

The second paper, "Usurpation or Abdication of Instructional Supervision in the New York City Public Schools?" continued to report on the status of instructional supervision under the influence of a centralized and bureaucratically managed system (i.e., top down initiatives) in New York City. Surveys from teachers, coaches and principals indicated that supervision, for the most part, remained a monitoring or inspectional task reminiscent of older forms of supervision. Supervision remained the responsibility primarily (although unofficially) of coaches who had little, if any, formal training in supervision. The underlying question of this study was the extent to which supervision as improvement of instruction had been abdicated by principals or usurped by coaches (not personally but as a result of bureaucratic and administrative fiat) given their charge to work with teachers in the classroom. Factors that precipitated such a situation were

explored by reports from interviews with New York City public school teachers, coaches, principals, and assistant principals. Findings indicated that supervision was not being usurped by coaches in the sense that they had purposefully intended to assume supervisory duties, traditionally relegated to trained principals and their assistants. Given the structure and nature of reform efforts in NYC, coaches played a significant role in instructional supervision. However, without vested authority and little or no training in supervision, coaches had little impact on altering teacher behavior that supports quality teaching needed to promote student achievement. Moreover, principals hadn't intentionally abdicated their instructional supervisory function as much as had been overwhelmed by the enormity of the reform measures and constant struggle to keep "head above the water," as one principal admitted. In another sense, however, principals had abdicated their responsibility by complying so readily with reform measures, many of which made little instructional sense.

For the third and final study in the series, the researchers wanted to assess the impact of instructional supervision on student achievement. As indicated by the previous two studies, although instructional supervision was not given its due attention, some schools surveyed did, in fact, display some rather creative and comprehensive approaches to supervision. Examining one such school forms the basis of this study.

Introduction

This final paper, picking up from two studies previously reported during the last two AERA conferences, reports on results of an attempt to find a link between instructional supervision and student achievement. In other words, how can researchers assess the impact of supervision and professional development on student learning? Previous research (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004) demonstrate that such a link is indirect (also, see Alig-Mielcarek, 2003). Still, what impact can supervision have on teacher classroom behavior that might in turn positively influence student achievement?

The researchers decided to undertake this important assessment on a small scale by utilizing an in depth case study of one school where such a connection is less tenuous and more demonstrable than perhaps other settings. This paper presents its findings and draws some implications, and raises still many more questions. Data were collected through in depth interviews with school building administrators, coaches (still in process as of this writing), and teachers (still in process as of this writing). Close examination of standardized test scores were undertaken. An instrument is currently being developed to assess the effectiveness of supervision within schools matched to school performance on standardized tests. Data obtained from administrators and teachers were used to confirm or reject student achievement comparisons. Non-participant observational methods were also incorporated. In sum, this instrumental case study examined the nature of instructional supervision and its impact on student achievement.

The following questions were addressed:

1. What does effective supervision "look like?"

2. What impact do supervisors have on teachers' in-class teaching behaviors and attitudes towards promoting student learning?
3. What is the connection among instructional supervisory practices, teacher classroom behavior, and levels of student achievement?
4. What can we learn about making the connection between supervision and student achievement?

Raising questions for further research into the connection between supervision and student achievement forms the conclusion section of this paper.

Background

The *Handbook of Research on School Supervision* (Firth & Pajak, 1998), the most recent attempt to report on the status of the field of supervision from a research prospective, has little or nothing to say about supervision's impact on student achievement. In over 1250 pages, the only reference, cited in the index about student achievement, occurs in reference to coaching (Goldsberry, 1998). Summarizing research in the field, Goldsberry (1998) emphatically states that "Scant evidence of learners' performance or attitude improvement resulting from coaching programs exists" (p. 447). He later states that "When student achievement measures are used, the connection between achievement and the contribution of coaching is necessarily tenuous" (p. 447). The absence of research on the impact of supervision specifically related to achievement has been lamented at many COPIS and AERA-SIG annual meetings and during informal conversations among professors of supervision. Without adequate research addressing specific ways supervision works to influence student achievement, supervision as a field and practice will continue to remain inconsequential in an era of heightened accountability that measures efficacy of instructional strategies by examining links to levels of student achievement. Notwithstanding, some methodological, technical, and even logistical difficulties in being able to make firm connections, scant attempts to address the issue have thwarted efforts of supervision to make a unique contribution under current school reform efforts. This paper is an attempt to add to the conversation by raising questions and attempting to make the connection between supervision and student achievement a bit less tenuous.

Efforts to connect school, if not only instructional, leadership to student learning have recently been underway. One of the most recent efforts to make such connections were reported in a comprehensive study by Leithwood, Seashore Louis, Anderson, and Wahlstrom (2004). They posed the following questions, among others: 1) What effects does successful leadership have on student learning?; 2) How does successful leadership exercise its influence on the learning of students? The researchers found that "successful leadership can play a highly significant . . . role in improving student learning" (p. 3). Cautioning readers about the size and effects of such conclusions, the researchers drew the following conclusions, among several others:

1. Leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school.
2. Leadership effects are usually largest here and when they are needed most.
3. Principals, . . . are being admonished to be "instructional leaders" without much clarity about what that means.

Waters, Marzano, and McNulty (2003) also reported on the effects of leadership practices on student achievement. The researchers conducted a meta-analysis of many studies from the 1970s, including dissertations. After examining over 5,000 studies, the authors developed a framework that identified 21 leadership behaviors that significantly correlated with student achievement. They published their findings with prescriptions for practice (Marzano, Waters, & McNulty, 2005). Supervision was not explicitly addressed.

Alig-Mielcarek (2003) hypothesized that "instructional leadership would have a "direct effect on student achievement (p, 120). However, the author concluded "the data did not support this hypothesis" (p. 120). Although "bivariate correlations . . . indicated that instructional leadership has a significant positive relationship with student achievement," (p. 120), further studies are required such as "longitudinal" analyses. Hallinger and Heck (1996) explain that although principals might impact student achievement, such an impact might be greater among "others in the school" (p. 26). Supervision, specifically, is not addressed by either study.

Williams (2003) in a dissertation titled *The Relationship between Principal Response to Adversity and Student Achievement* emphasized the importance of the principal in influencing student achievement through developing a school culture focused on learning and working to establish a collaborative learning community. The researchers used an ex-post facto research design to examine the relationship between an Adversity Quotient, a self-reporting instrument, and scores from standardized student achievement data over a two year period. Results indicated that students attained higher test scores in schools with higher Adversity Quotient principals.

In a similar, yet more recent study, Owings, Kaplan, and Nunnery (2005) conducted a statewide study to "determine the relationship between principal quality as measured by ratings on an ISLLC standards rubric and student achievement scores over time" (p. 102). Student achievement levels were higher in schools with principals with higher ratings. The researchers concluded that principal quality was connected to student achievement. They caution, though, that "the relationship is correlational and not causal" but that "it is reasonable to believe that principals who practice and build skills in leadership for teaching and learning can positively impact their schools' learning and student performance" (pp. 115-116). Once again, supervisory practices per se were left unexamined.

Some studies that examined leadership practices of principals discussed many factors except their impact of student achievement. In an extensive survey study conducted by MetLife (2003), data gleaned from surveys of thousands of participants nationally indicate that principals are critical for motivating teachers and students, ensuring a safe

and secure school environment, communicating to parents, and other administrative responsibilities. However, no specific mention is made about how principals influence student achievement. Again, the inference is that if such an impact were indeed true, then at best, it was indirect. Our review of the extant literature confirms the conclusion drawn by Levin (2006) in reviewing the work of Firestone and Riehl (2005) that educational leadership "does not produce a direct effect on student learning, but is a mediating influence on teachers, curriculum, instruction, community, and school organization" (p. 40).

Reviewing the literature of principal leadership and student achievement, Brown (2007) first focuses on research in the 1970s and early 1980s. Highlighting *A Nation at Risk* (National Commission on Educational Excellence, 1983) and its recommendation for strong leadership as a means for school improvement as well as the effective schools research that recognized the importance of quality leadership by consistently identifying strong instructional leadership as instrumental in creating a positive school climate and as a correlate of high-achieving schools (Edmonds, 1979), Brown indicates that such efforts set the tone for future emphases on measures of student achievement. Yet she reiterates what other scholars have indicated, "that current theory and research evidence points toward principals affecting student achievement indirectly." Moreover she says:, "Although it is difficult to demonstrate a direct link between school leadership and student achievement (the most tangible and publicly accepted measure of school success), a model of what makes a good leader is emerging." She identifies the following factors or variables as most studied: instructional leadership; school culture; management; communication, collaboration, and community building; and vision development, risk taking, and change management. She cites the work of Alexander, Entwisle, and Olsen, 2001; Andrews, and Soder, 1987; Bender Sebring, and Bryk, 2000; Fullan, 2005; Hallinger, Bickman, and Davis, 1996; Marzano, 2003; National Institute on Educational Governance, Finance, Policymaking, and Management, 1999.; Puma, Karweit, Price, Ricciuiti, Thompson, and Vaden-Kiernan, 1997; Scheurich and Skrla, 2003, among others. Brown provides a table, (Waters, Marzano, & McNulty, 2003, see Table 1 below), indicated top ten principal leadership responsibilities that have been studied in regards to their effects on student achievement. Although the table mentions monitoring and evaluation, we argue that that is not supervision. Supervision is a non-evaluative process in which instructional dialogue is encouraged for the purpose of engaging teachers to consider effective strategies to promote student learning. Therefore once again, no explicit mention of supervision is proffered.

Table 1: Top Ten Principal Leadership Responsibilities: Average *r* and Associated Practices

Responsibility	Definition The extent to which the principal …	Avg r	Associated Practices	N schools	N studies
Situational awareness	… is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems.	.33	▪ Is aware of informal groups and relationships among teachers and staff ▪ Is aware of issues in the school that have not surfaced but could create discord ▪ Can predict what could go wrong from day to day	91	5
Intellectual stimulation	… ensures that faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school's culture.	.32	▪ Stays informed about current research and theory regarding effective schooling ▪ Continually exposes teachers and staff to cutting edge ideas about how to be effective ▪ Systematically engages teachers and staff in discussions about current research and theory ▪ Continually involves teachers and staff in reading articles and books about effective practices	321	5
Change agent	… is willing to and actively challenges the status quo.	.30	▪ Consciously challenges the status quo ▪ Is comfortable leading change initiatives with uncertain outcomes ▪ Systematically considers new and better ways of doing things	479	7
Input	… involves teachers in the design and implementation of	.30	▪ Provides opportunities for input from teachers and staff on all important decisions ▪ Provides opportunities for	504	13

	important decisions and policies		teachers and staff to be involved in policy development ▪ Involves the school leadership team in decision making		
Culture	… fosters shared beliefs and a sense of community and cooperation	.29	▪ Promotes cooperation among teachers and staff ▪ Promotes a sense of well-being ▪ Promotes cohesion among teachers and staff ▪ Develops an understanding of purpose ▪ Develops a shared vision of what the school could be like	709	13
Monitors/ evaluates	… monitors the effectiveness of school practices and their impact on student learning.	.28	▪ Monitors and evaluates the effectiveness of the curriculum ▪ Monitors and evaluates the effectiveness of instruction ▪ Monitors and evaluates the effectiveness of assessment	1071	30
Outreach	… is an advocate or spokesperson for the school to all stakeholders.	.28	▪ Advocates on behalf of the school in the community ▪ Interacts with parents in ways that enhance their support for the school ▪ Ensures that the central office is aware of the school's accomplishments	478	14
Order	… establishes a set of standard operating principles and procedures.	.26	▪ Provides and enforces clear structures, rules, and procedures for teachers, staff, and students ▪ Establishes routines regarding the running of the school that teachers and staff understand and follow ▪ Ensures that the school is in compliance with district and state mandates	456	17

Resources	… provides teachers with the material and professional development necessary for the successful execution of their jobs.	.26	▪ Ensures that teachers and staff have necessary materials and equipment ▪ Ensures that teachers have necessary professional development opportunities that directly enhance their teaching	570	17
Ideals/beliefs	… communicates and operates from strong ideals and beliefs about schooling	.25	▪ Holds strong professional ideals and beliefs about schooling, teaching, and learning ▪ Shares ideals and beliefs about schooling, teaching, and learning with teachers, staff, and parents ▪ Demonstrates behaviors that are consistent with ideals and beliefs	526	8

Waters, T., Marzano, R.J., & McNulty, B. (2003). *Balanced leadership: What 30 years of* research tells us about the effect of leadership on student achievement. Aurora, CO: Mid-continent Research for Education and Learning.

Recently, Pajak (2006) has begun a study focusing on student achievement through curriculum leadership as part of a larger instructional supervision effort. Results of this study, however, are forthcoming. Goldsberry (2006) at the same conference raised provocative issues about the connection between supervision and student achievement, but no definitive results of a study were reported. Not many other researchers are focusing on supervision. Consequently, the fall, 2007 COPIS conference has as its theme "Supervision and Student Achievement" as an attempt to catapult interest in this very important area for research.

Although little, if any research exists focusing on supervision and student achievement, we do know that supervision as best practiced stresses work with teachers on specific teaching and learning strategies. Marzano, Pickering, and Pollock (2001) have elucidated specific research-based instructional strategies that affect student achievement. Since presumably supervisors work with teachers to improve instruction, if supervisors would work on helping teachers apply these research-based strategies, then supervisors would indeed have an effect of student learning, albeit indirectly. Yet, no study has been conducted to test such a postulate.

Despite the lack of mention of instructional supervision as a variable under study, we might be able to draw some conclusions about what possible effects supervision would have on student achievement from results reported by the aforementioned studies. Successful leadership, in general, appears to have an indirect influence on the school organization and thus on student learning. Moreover, research affirms that educational leaders who pay close attention to instructional matters at the classroom level effect successful teaching, and thus learning; but again, it's an indirect influence. We still do not know enough about what educational leaders do to influence learning, nor the impact of what these leaders do versus a plethora of other variables including, among others, teacher preparation and certification status (Darling-Hammond, 1999; McColskey & Stronge, 2006), school or district culture (Hargreaves, 1995), class size (Hoxby, 2000), etc. As we will underscore later in the paper, supervision as an intervening variable needs close attention and study. Superficially and initially, though, we may conjecture that if it does have an impact then that influence may be indirect, and when compared to other influencing variables that effect may be stronger or weaker depending on still other variables such as school size, experience levels of the supervisor, experience levels of building teachers, and demographic factors of the school and students themselves.

Some Limitations

Although the researchers in this study attempted to clarify the connection between supervision and achievement, several significant limitations persist. Obviously, one case study, albeit incomplete as of this writing, is insufficient to make a strong connection. Still, the researchers chose to examine one particular school to more deeply understand how one school, considered successful (i.e., lauded by district administrators as evidenced by high achievement test scores), incorporated instructional supervision as the mainstay of its approach to foster student learning. The limitation is obvious; results cannot be generalized beyond this one particular school. Moreover, idiosyncratic practices vary by school. Still, the researchers were able to discern "best practices" in supervision as reflected in the literature and testimonies of school practitioners.

Another limitation, centers on the reliability of data derived solely from standardized tests. Drawing student achievement conclusions about any school practice (e.g., teaching strategies, principal leadership behaviors, or supervisory practices (e.g., clinical supervision) must be viewed in a comprehensive manner. Limitations of tests themselves, renorming practices, and efforts by educators to train students in test sophistication strategies need consideration. Addressing some of these concerns, Meier and Ravitch (2006) lament excessive emphasis on standardized tests under current NCLB legislation because they negatively impact curriculum and teaching in schools. They further argue that testing gains, where reported, are suspect. They explain:

> Yet both of us are appalled by the relentless "test prep" activities that have displaced good instruction in far too many urban classrooms, and that narrow the curriculum to nothing but math and reading. We are furthermore distressed by unwarranted claims from many cities and states about "historic gains" that are

based on dumb-downed tests, even occasionally on downright dishonest scoring by purposeful exclusion of low-scoring students.

This study raises cautionary notes about making definitive connections between supervision and achievement. However considering the scant attention of past scholarship in the field of supervision related to assessing impacts on student achievement, this paper presents one, of hopefully future attempts to better understand the work of supervision in schools and its impact on teacher behavior and, ultimately, on student learning.

Methods and Data Sources

The Case: PS X is located in a rapidly changing southern Brooklyn neighborhood. The early 20th century traditional brick building houses 755 Pre-K to 5 students. A previously predominantly Italian-American neighborhood, the surrounding Asian and Hispanic populations have increased significantly over the past 5-10 years. The present school population is 62% Asian, 21% Hispanic, 14% Caucasian, and 3% black. The percent of students eligible for free lunch increased in the years between 2003 and 2005 from 73% to 93.7%. These statistics are significant in the analysis of student achievement scores.

Ms. X was appointed to PS X in Fall 2004. She had previously been an assistant principal for four years at an intermediate school in the same school district. She received her leadership training through a district/university partnership where instructional and transformational leadership and a year-long full-time internship were the principal focuses. The former Assistant Principal received similar training, although not through the collaboration. She had been a coach and a staff developer and was hired as an assistant principal before completing the leadership program because of her experience, reputation, and skills as a teacher leader.

The Study: We sought to examine the development and evolution of instructional supervision in this particular school and its impact on student academic achievement. We utilized Glanz and Behar-Horenstein's (2005) conception of instructional supervision, broadly defined as a "process which utilizes a wide array of strategies, methodologies and approaches aimed at improving instruction and promoting educational leadership as well as change (p.85). We conceptualized this project as an instrumental case study (Denzin & Lincoln, 1988), where the primary goal is to promote understanding of an issue or theory through the examination of a particular case. Yin and Campbell (2002) distinguish the case study from other research strategies as optimal when one investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident; and one in which multiple sources of evidence are used.

We used mixed methods as the mode of inquiry (Onwuegbuzie, 2003, 2005) with the intent both to capture the individual's point of view through detailed interviewing and

observation, and to examine a profile of student achievement over several years. We took a case-based position that examined the characteristics of the particular context, and we sought to secure rich description. Kvale's (1996) conception of life world interviews fit with our view that conversations with key school personnel would provide an understanding of the supervisory practices that were espoused and in use. We used semi-structured interviews (Kvale, 1996) in conversations with all participants, including the principal, assistant principal and teachers. To maintain anonymity, we identified participants only by whether they were administration or teachers. The authors' professional relationship with this particular school permitted additional interviews, numerous site visits, and the collection of written information about the different programs.

The qualitative methodology employed was characteristic of research as described by Merriam (1997) and others: we were observers, we used a small sample of interviewees, our interview data were not described numerically, and we used multiple examples and quotations in reporting our findings. As our study proceeded, we interwove data collection and analysis using constant comparative analysis (Strauss & Corbin, 1998) that allowed us to clarify where the data fit with and departed from current theoretical constructs about supervisory practices.

Typically, we carried out individual, one-on-one interviews with participants, transcribed the interviews verbatim, and checked them for accuracy. The texts were read and reread a minimum of three times by two of the researchers, with the goal of identifying categories and recurring themes. Unstructured questions, which arose during the interviews and from the constant comparative analysis of other interviews, clarified the basis for the patterns that emerged.

Interview questions for school personnel included:

1. What do you believe are the most significant factors leading to improved achievement in this school?

2. What does the supervisory process look like in your school?

3. What types of classroom supports have been provided in the implementation of the DOE initiatives?

4. How has student information, such as standardized test scores, been used to support classroom instruction?

5. What does professional development look like in your school?

We employed triangulation procedures to reduce the likelihood of misinterpretation of data and to clarify the meaning of our interviews and observations. While multiple data sources (including interviews, focus groups, questionnaires, observations, and data

documents) were used for triangulation (Merriam, 2001; Strauss & Corbin, 1994), findings reported were primarily from interviews and observations. Formal and informal observations (including informal conversations with selected teachers at the school) were conducted by two of the researchers. Documents provided supplemental information, and included district strategic plans, policies, descriptions of district and site initiatives, and curriculum information. Student achievement data, obtained over the last three years, was obtained from the New York City Department of Education website. The depth and variety of the data collection procedures that we adopted supported the validity of the findings and conclusions.

At the time of this writing we have not yet completed the quantitative assessment that included the administration of a two-part survey to all school personnel. Part one of the survey will assess background information about participants, including teaching and educational experience. The second part of the survey will consist of twenty Likert-style items concerning participants' views about effective supervision, instructional leadership, and the relationship between supervision, classroom instruction and student learning. In addition, participants will be asked to respond to a checklist of different supervisory practices, indicating which practices had been experienced and/or utilized by them in their school. Focus groups have also not yet been conducted. Logistics at the school as well as city-wide mathematics testing precluded survey distribution and focus group interviews. If the researchers are able to conduct these assessments prior to the AERA SIG session, then findings will be reported at that time.

Student achievement data, obtained over the last three years, were obtained from the New York City Department of Education website. Descriptive statistics were used to describe this data and to compare it to data obtained from comparable schools in the neighborhood.

Findings

Based on interviews with the building principal and assistant principal, responses to several of the questions that we asked are subsumed under this first overarching question about school achievement.

Question 1: *What do you believe are the most significant factors leading to improved achievement in this school?*

The principal, who had been the school administrator for the past three years, referred to a systematic plan that had been in place. This particular school had become an "America's Choice" school seven years before. The America's Choice (AC) School Design is a K-12 comprehensive school reform model designed. by the National Center on Education and the Economy (NCEE), a research consortium composed of researchers from Harvard, U Penn, Stanford, and U of Wisconsin. The design is based on methods of preventing student failure by early detection, intervention, and acceleration and conforms to national standards.

The presence of a plan, however, did not ensure success. There had been a large teacher turnover in recent years and newcomers were not necessarily buying in to the America's Choice model. Rather, several key strategies utilized to implement the plan were viewed as major factors in contributing to improved achievement. These included:

1. *Building a collaborative and collegial culture.* Involving school faculty in all aspects of capacity building was seen as the major contributor to the school's success. Teachers were empowered to work with the different facets of the AC plan and to give input about program successes and failures. Teachers became motivated to go beyond what was required. In the words of the principal:

> The biggest diff is the culture and school climate which makes it collaborative and encourages teachers to buy in. WE also got rid of things we didn't' like with America's Choice and that came from teachers. The culture building was huge….They [teachers] want to do more because no one says you have to.

The principal described "getting rid of" facets of the America's Choice program that teachers didn't like. When asked to elaborate she described a change in school climate:

> There was a sense that the administration said what should be. We changed that to 'we need your input, we respect what you know and you.' There was the attitude that the coaches were in charge and would go into classrooms. That's changed because they are not supervisors.

2. *Building teacher supports* (through creative budget planning). Multiple supports for teachers were created. These included the utilization of instructional coaches (AUSSIEs), in-house mentoring for new teachers, and designing teacher schedules to include additional prep time each week for professional development.

a. Instructional supports within the classroom. According to the principal, eighty five percent of students in this school are Asian, and fifty percent are mandated for ESL. When asked specifically about the kinds of classroom supports provided for the implementation of DOE initiatives, the administrators discussed the programs available and how funding for maintaining these programs was obtained.

> We have AUSSIEs, coaches. We have Title 1 money for the AUSSIEs. I [principal] buy the continuation package and an ESL package from America's choice…. We have a Chinese bilingual kindergarten class.

b. Professional development - Professional development (PD) for NYC teachers was taken away with the Feb 2005 contract changes. The extra weekly prep built into teachers' schedules was used for grade-wide meetings, often to discuss DOE initiatives. Building in extra supports like this requires the ability to be creative and innovative with

school budgets. This particular principal was able to find funding to hire an extra cluster teacher which freed up teacher scheduling to allow for this additional weekly prep time.

The assistant principal discussed the advantages of building PD into the school day:

> When teachers stay after school you have to pay them and you don't always get to deliver message to all parties that need it. So building it into school day is more cost effective and you can reach a full audience.

The principal noted how teachers resented additional prep time until it was built into the school day. She spoke about all kinds of professional development opportunities that are made available for teachers:

> We have a lot of professional development – Carl Anderson – guru of assessing students through conferencing and writing. He goes into classrooms. We avail ourselves of every professional development opportunity. We have people come in, send teachers out, have coaches, the assistant principal, myself in classroom every day.

The principal, when questioned about structure of professional development in the school, described a multi-layered system of monthly administrative meetings, monthly grade conferences to assess student work and weekly curriculum meetings by grade. Teachers are offered half-days to attend enrichment workshops such as appearances by leading authors and literacy authors.

Providing resources – The administrators discussed the availability for students and teachers of all the resources that are requested. Funds are often obtained through grant writing, and often teachers write grants for the funding that they need. The principal explained:

> We're big on resources. We get everyone whatever they want. Title 1, Title 3, we do a lot of grant writing – teachers write grants, so we use money wisely and make sure kids get what they need and teachers too.

The previous assistant principal's response to acquiring needed funds:

> You look at the budget and cut back on something else- like supplies. Funding for teachers is essential. If the teachers aren't on board your program won't succeed without teacher buy-in.

The school's commitment to and funding of arts projects is accomplished through the ability of the administration to provide needed resources, described as follows:

> We are committed to the arts. We have a visual and vocal and dance and theater art cluster. So you fund that through what? Through tax levy and through Title 1

> because it's really professional development money for that one. We have a band teacher funded thru project Arts, several arts related after school clubs, instrumental – violin – that's a person who comes in and works with Kindergarten children. (interview with principal)

The assistant principal described how arts enrichment is built into the teachers' contractual day, providing enrichment for students who don't need tutoring:

> I know that M [principal] had built a lot of arts enrichment into her 371/2 minutes. students who aren't mandated to attend for tutorial can come in for club time. She has a staff that is very open to this over there. For example, she has her chorus coming in the afternoon. They are limited to 10 kids per teacher – so she'll have one music teacher and 3 others with an interest in music. It's the same thing with art – there is art teacher and another teacher who is interested in art. She also has sign language, a percussion group… a dance club and a theater club. Those are built into her 371/2 minutes. So she's providing a lot for those students but building it intothose minutes which are part of the teacher contract.

3. *Building capacity*. Teachers are responsible for the professional development and mentoring of their colleagues. The principal describes this as follows:

> We are building capacity – letting teachers do professional development and training. Our new teachers have an in-house mentor in addition to the coaches. So they can watch each other teach, they don't have to report to me – it presents a risk-free environment for growth. They know their colleagues aren't coming back to report to me – unlike the coach.

4. Administrators as instructional leaders. School administrators are involved in all aspects of instruction. The principal and AP spend 2-3 hours a day in classrooms. "I'm in the classroom all the time," is the principal's description of her day. When asked about teachers' reactions to this kind of informal observation, the principal responded:

> they don't even notice it – I'm sitting with kids. I'll go in and find the kid with the math problem. So they don't think of it as evaluation, it's natural for me to be in the classrooms. Sometimes we'll talk about something I noticed, a concern. They know I never walk through the building on Friday afternoon.

5. The use of student information to support classroom instruction. Responding to a question concerning how student information was used to support classroom instruction, the administrators provided a detailed description of the "monitoring for results" system that is in place in the school. Teachers assess students four times a year and coaches compile the results. Staff then meets in "people personnel teams" (PPT) that include the principal, assistant principal, teacher, ESL teachers, providers such as speech and resource room. These teams plan a course of action for each child. While the monitoring for results system had already been in place, academic intervention has been greatly expanded.

Expert use of resources was again noted in the principal's description of the expanded academic intervention services, including the hiring of extra personnel:

> I put in a third Reading Recovery teacher and the Leveled Literacy Intervention (LLI) teachers. We have a floating teacher – who comes in and does intervention with kids. She does it all day long, 5 days a week. I was given her but I didn't put her in the class. She's not someone I would want in the class all day long but she does nicely one on one with kids so that's what we use her for.

When asked about support for parents, the administrators listed a variety of parent programs including ESL, workshops on assorted topics, visiting social workers and psychologists, ballroom dancing, parents as arts partners, and parent movie nights. While there is a talented parent coordinator who works on these programs, getting all parents involved is viewed as a challenge. The principal described a lack of involvement with some of the parents who work long hours and may not deem it essential that they participate in their children's school life.

Observations made by the researchers confirm the reports above. A detailed description of these observational data is forthcoming.

Question 2: What does the supervisory process look like in your school?

The supervisory process was described as informal and collaborative. The administrators spend a good part of their day in classrooms and in informal meetings with teachers:

> The AP and myself are in building all day long. A lot of teacher collaboration. I meet with them to discuss their conference notes that they take on kids, and their assessments. It gives an insight into how much they know about what they are getting from kids. So I spend a lot of time doing that.

Asked about formal observations, the principal responded:

> There is no such thing as a formal observation, no one is wearing a tuxedo and if you want to go in and observe every day you go in. (Attributed to Vincent Grippo, former school administrator in the district).

Teachers who need support get extra time to work with coaches and/or their fellow teachers. When asked if she gives teachers unsatisfactory ratings the principal responded as follows:

> I haven't had any [unsatisfactory ratings] here. I did have them at [school X]. I've had teachers with not great formal observations, and could have been a U, but met with them and supported them and come back to do another formal observation. I'll support. There is no teacher that I've hired personally that would rate a U.

The principal concluded the interview reiterating the importance of school tone:

> Kathy, my AP, said this morning that people here have it good. I think you can supervise and I think it's the culture. They know I'm not out to get them but if you're not doing your job I'm going to call you on it. If it's not good for kids it's not happening here.

Observations made by the researchers confirm the reports above. A detailed description of these observational data is forthcoming.

Findings based on achievement data follows:

Table 1. *New York City Test Results in English Language Arts (ELA)*

Percent of students meeting the standards in all tested grades (performance levels 3 & 4).

Year	**School X**	**Similar Schools***	**All City Schools**
2003	69.6	37.1	49.1
2004	73.6	36.2	48.3
2005	80.9	49.2	60.9

Note: Tested grades include grades 3 & 5.
*Similar Schools are those defined as having a similar percent of students eligible for the Free Lunch program, a similar percent of tested Special Education students, and a similar percent of English Language Learners.

Level 4: Students exceed the learning standards for English language arts. Their performance shows a superior understanding of written and oral text.

Level 3: Students meet the learning standards. Their performance shows a thorough understanding of written and oral text.

Table 2. *New York City Test Results in English Language Arts (ELA)*

Percent of students far below the standards in all tested grades (performance level 1).

Year	**School X**	**Similar Schools**	**All City Schools**
2003	2.8	19.5	14.1
2004	3.3	19.1	13.8
2005	1.1	13.2	9.3

Note: Tested grades include grades 3 & 5.

Level 1: Students do not meet the learning standards for English language arts. Their performance shows minimal understanding of written and oral text.

Table 3. *New York City Test Results in Mathematics*

Percent of students meeting the standards in all tested grades (performance levels 3 & 4).

Year	School X	Similar Schools	All City Schools
2003	73.4	41.2	52.3
2004	77.2	44.1	55.1
2005	88.2	55.1	65.1

Note: Tested grades include grades 3 & 5.

Level 4: Students exceed the learning standards for mathematics. Their performance shows a superior understanding of key math ideas.

Level 3: Students meet the learning standards. Their performance shows a thorough understanding of key math ideas.

Table 4. *New York City Test Results in Mathematics*

Percent of students far below the standards in all tested grades (performance level 1).

Year	School X	Similar Schools	All City Schools
2003	5.7	23.4	17.5
2004	4.1	21.6	15.7
2005	3.2	16.2	11.3

Note: Tested grades include grades 3 & 5.

Level 1: Students do not meet the learning standards for mathematics. Their performance shows minimal understanding of key math ideas.

Note: Grade 4 students take the New York State ELA (English language arts) and mathematics. These test results show three year increases in the number of students who meet or exceed performance levels (levels 3 & 4). Performance over three years (2003-2005) on the state ELA increased slightly from 74.2% to 78.6%, and compared quite favorably to the performance of similar schools, where the percent of students scoring at levels 3 & 4 rose from 42/2% to 49.9% over three years. Performance over three years (2003-2005) on the state mathematics exam showed large increases from 78.1% to 90.2%, and compared quite favorably to the performance of similar schools, where the percent of students scoring at levels 3 & 4 rose from 58.1% to 71.3% over three years.

Discussion

What struck the authors in reading the literature about connecting leadership/supervision of instruction to student outcomes were two blatant omissions: 1) the absence of specific references to supervision of instruction (as noted in the Background section above), and 2) the lack of resolution of the dilemma that Leithwood et al. (2004) refer to: Principals, . . . are being admonished to be "instructional leaders" without much clarity about what that means." This dilemma arises in part from the difficulty in distinguishing instructional leadership from supervision of instruction. In fact, the Special Interest Group (SIG) under which this paper falls recently changed its name from "Instructional Supervision" to "Supervision and Instructional Leadership" because of this quandary. In examining one school that had made significant increases in the State standardized tests since a new principal and assistant principal were appointed three years ago, we realized that a clear expanded definition of "supervision of instruction" could encompass most of the strategies and practices that we found were the link between supervision, teaching, and learning, and student achievement based on achievement tests and a descriptive evaluation of curriculum and practices.

Therefore, we have expanded on the following definition of supervision of instruction included in our methodology, "that process which utilizes a wide array of strategies, methodologies and approaches aimed at improving instruction and promoting educational leadership as well as change" (Glanz & Behar-Horenstein, 2000, p. 85). The collegial model that Glickman, Gordon, and Ross-Gordon (2006, p. 6) describe provides a more specific link between leadership, supervision, and teacher growth that can impact on outcomes:

1. A collegial rather than a hierarchical relationship between teachers and formally designated supervisors.

2. Supervision as the province of teachers as well as formally designated supervisors.

3. A focus on teacher growth rather than teacher compliance.

4. Facilitation of teachers collaborating with each other in instructional improvement efforts.

5. Teacher involvement in ongoing reflective inquiry (Gordon, 1997, p. 116).

Our interviews and observations revealed the actualization of these five tenets through specific beliefs, strategies, and practices that resulted in improved classroom instruction and consequently higher student outcomes. We believe that the description of what actually occurred in school X contributes towards an understanding of that black box of what it means to be an "instructional leader," or more precisely a collegial supervisor of instruction.

The field of instructional supervision has been struggling to find its role in contemporary leadership because the search for the understanding of what effective instructional

leadership is has disregarded the fact that collegial supervision of instruction may be the key underlying factor in improved classroom instruction and student learning. Our findings enable us to connect leadership to improved student outcomes in two significant ways. The two significant concepts behind certain strategies and approaches the administrators in this school have implemented that fall under the umbrella of collegial supervision are:

1) The role of the teacher in developing and modifying programs and practices to improve teaching and learning. The teachers made decisions about the use of the "America's Choice" support. For example, they reduced the "Monitoring for Results" student tracking program from four to three times a year because they felt that it was taking up too much time and didn't coincide with their report cards. The teachers are responsible for much of the professional development within the school and turnkey in the school what they learn in the off-site professional development that the principal strongly supports.

2) The leader's ability to offer supplementary support for teachers and students beyond the support programs already in place, to allow them to be the most effective possible i.e., adding an in-school mentor to the Department of Education mentor and the school coach to ensure sufficient support for new teachers, freeing teachers up for intervisitations, adding a second year of individualized reading support for at-risk children, and adding an extra prep period for common planning.

The following areas are less directly related to supervision of instruction, but result from strong supervisory skills.

Many programs were already being implemented when the current principal was appointed to school X. "America's Choice" had been in place for four years; coaches existed for two years, and additional supports such as AUSSIES (Australian balanced literacy consultants) and Reading Recovery (a first grade individualized support program) were ongoing. As mentioned in a previous paper (Shulman, Sullivan, & Glanz, 2006), the literature has confirmed the importance for improvement of continuity of efforts over a 5-10 year period. This principal chose to continue these efforts and intensify them where appropriate to insure increased effectiveness.

Another crucial area that emerged indirectly related to supervision of instruction was selection and utilization of staff. The principal revealed that she has not had to give any unsatisfactory ratings because of her careful hiring process. Several consequences result from her effective hiring: 1) time can be spent collaboratively nurturing and supporting staff because of the lack of need for monitoring; 2) strong teachers can be teacher leaders involved in all the collaborative supervision and support processes in place in the school; 3) the culture becomes a collaborative one because no one fears being fired; thus, the ease in building a community of learners. In addition, the principal's strong problem-solving skills has enabled her to resolve staffing problems over which she had limited control, such as the excessed teacher that she was obligated to hire from a school that was being

reorganized. She made the decision to use the teacher to work one-on-one with students because she felt that she was not strong enough to work with an entire class.

With respect to standardized achievement test scores, the citywide test score gains are significant for a few reasons: 1) the fact that the already high test scores continued to increase (a more difficult feat than raising low test scores) over the last two years can be attributed to continued and improved leadership. We believe that a seamless and effective transition in leadership and, in addition, practices, strategies, and leadership styles that promoted collaboration and improved instruction resulted in a continued growth in achievement. Furthermore, the increase in children eligible for reduced and free lunch from 73.1% to 93.7% during this period (2003-2005) and the increase in English limited proficient students from 173 to 268 out of 755 during these years make these increases even more significant. Although it is not possible to make a direct link between the leadership practices and the scores, the supervisory beliefs, strategies, and practices we have described are the principal changes that took place in this school over the last two and a half years.

What can we learn from this case study that might inform the practice of supervision in other schools? Conclusions are tentative because all data are not yet in, and caution is in order not to extrapolate too much from one case study. Nevertheless, a direction seems clear. In observations conducted in this school and conversations with administrators and teachers, it is clear that instructional supervision plays a central role in promoting student achievement. Supervision is seen as critical for enhancing teacher growth. Supervision, in this school, is all encompassing from building a culture of reflection, collaboration, and improvement to encouraging leadership at all levels to offering faculty flexible and differentiated professional development on specific teaching strategies aimed to promote learning. Supervision, then, in this school appears purposeful, targeted, and central to school wide instructional initiatives.

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Conclusion, or Just a Beginning?

Making the connection between supervision and student achievement has been elusive and tenuous (see, e.g., Witziers, Bosker, & Kruger, 2003). We have asked ourselves for many years, “How do we know that supervision makes a difference in terms of promoting student achievement?” This study tackled that question by offering an in depth case study of one school that may shed light on avenues for future research. Although we don’t think that this study provided definitive answers to that question (especially considering the fact that all the data are not yet it from this particular study), we have raised substantive and methodological questions that may form the basis for future research into examining how, in fact, instructional supervision works to influence teacher in-classroom behavior and attitudes toward student learning that, in turn, may affect student achievement levels.

The following questions are posed to prompt further research possibilities:

1. How is supervision carried out in different schools?
2. Does supervision at elementary versus middle school levels differ?
3. Who is performing supervisory functions in these schools?
4. Are supervisory practices collaborative and non-evaluative or are they reminiscent of past bureaucratic practices?
5. How is successful supervision hindered by organizational constraints?
6. What part does supervision play in the overall attempt to promote student achievement?
7. How is supervision different, if at all, from professional development?
8. What is the relationship between instructional leadership and supervision?
9. How do school leaders including teachers view instructional leadership and supervision?
10. To what extent does supervision of instruction positively affect teacher behavior?
11. How does teacher behavior in the classroom translate into student learning? (teacher "behavior" must be operationalized)
12. What is the relationship between supervision and student achievement? (correlational studies)
13. What impact does supervision have on student achievement? (quasi-experimental studies)
14. How does supervision compare with other school and non-school factors leading to positive student achievement outcomes?
15. What types of quantitative studies are feasible within the confines of a school building or district to assess the impact of supervision on achievement?
16. What types of qualitative studies are feasible within the confines of a school building or district to assess the impact of supervision on achievement?
17. Would longitudinal studies support a direct or indirect effect on student achievement?
18. Which principal supervisory behaviors have the greatest effect on student achievement?
19. Which assistant principal supervisory behaviors have the greatest effect on student achievement?
20. How can gains in achievement be attributed to supervisory behavior versus a plethora of other intervening variables?

Most recently, Fullan, Hill, and Crevola (2006) have underscored the critical importance of high-quality instruction and its systematic delivery as most necessary in order to ensure "continuous improvement and ongoing academic success." Our work in supervision can play a major role in such an effort. What we need is a concerted systematic approach to assessing the impact our work with teachers has in terms of promoting student achievement. We call on fellow supervision scholars to focus their research efforts over the next decade on direct measures of student achievement. As a community of scholars, we have not attended to such analyses. If we fail to do so, our work will remain inconsequential and, more importantly, we will not be able to contribute to the important work of helping teachers successfully promote student

learning, especially in light of the current and ongoing accountability exigencies we face on a daily basis.

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