

Revisiting the Importance of the Direct Effects of School Leadership on Student Achievement: The Implications for School Improvement Policy

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Much is left to be known regarding the impact of school principals on student achievement. This is because much of the research on school leadership focuses not on actual student outcomes but rather on other peripheral results of principal practices. In the research that has been done in this area, significant relationships have been identified between selected school leadership practices and student learning, indicating that evidence existed for certain principal behaviors to produce a direct relationship with student achievement. Further, although these relationships typically account for a small proportion of the total student achievement variability, they are of sufficient magnitude to be of interest and additional investigation. Actions taken to better understand and improve the impact of principals on the achievement of students in their schools have the potential for widespread benefit, as individual improvements in principal practice can impact thousands of students. It is in this light that potential direct effects of principal practices should be revisited.

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During the past 30 years there has been an increasing focus on students in public schools who are not achieving academically. This focus has led many to search for reasons for the lack of achievement and, from the theoretical basis of these reasons, design educational programs to better assist these students and their teachers. Effective educational leadership makes a difference in improving learning; there is nothing new or especially controversial about this idea. What's far less clear, even after several decades of school improvement efforts, is just how leadership matters and how important those effects are in promoting the learning of all children. For example, the available evidence about the size and nature of the effects of successful leadership on student learning demonstrates that leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Much of the research on the effects of leadership on student learning is unclear, at best. This is in part because methodologies employed by many of these studies significantly underestimate actual effects. Some researchers have shown that leadership effects (both direct and indirect) account for up to one fourth of total school-level effects (Hallinger & Heck, 1996, 1999; Leithwood & Jantzi, 2000).

The Principal as Instructional Leader

As the role of the principal has evolved, the concept of instructional leadership emerged as a way to categorize the activities and responsibilities of principals in relation to classroom instruction (Deal & Peterson, 1990). Practitioners and researchers have developed many differing definitions of instructional leadership since that time. The National Association of Elementary School Principals (2001) defined instructional leadership as "leading learning communities." This definition views principals as facilitators, guiding and encouraging an educational environment in which administrators and teachers work collaboratively to diagnose and solve the problems facing their schools.

Blase and Blase (2000) defined instructional leadership in a series of seven principal behaviors: (a) making suggestions, (b) giving feedback, (c) modeling effective instruction, (d) soliciting opinions, (e) supporting collaboration, (f) providing professional development opportunities, and (g) giving praise for effective teaching. Effective principals have also been said to display eight common effective traits: (a) recognizing teaching and learning as the main business of the school, (b) communicating the school's mission clearly and consistently to all stakeholders, (c) fostering standards for teaching and learning that are high and attainable, (d) providing

clear goals and monitoring the progress of students toward meeting them, (e) spending time in classrooms and listening to teachers, (f) promoting an atmosphere of trust and sharing, (g) building an effective staff and making professional development a top priority, and (h) not tolerating ineffective teachers (*Education Week*, 1998). Moreover, as previously detailed, studies of effective schools have identified five instructional leadership priorities of effective principals: (a) defining and communicating the school's educational mission, (b) managing curriculum and instruction, (c) supporting and supervising teaching, (d) monitoring student progress, and (e) promoting a learning climate (Bateman & Bateman, 2001; Blase & Kirby, 1992).

In recent decades, the importance of effective instructional leadership on school performance has been well documented in the literature (Gates, Ross, & Brewer, 2001; Leithwood, 1988; Purkey & Smith, 1983; Senge, 1990; Waters, Marzano, & McNulty, 2003). Although there are numerous constructs by which the components of effective leadership are defined, there is also a great deal of similarity among them. A consensus on the definition of effective school leadership is far from being reached; however, there are several identifiers that are commonly held as being critical factors of effective leadership.

Safe and orderly environment. One of the most fundamental responsibilities of a school principal is to provide a safe and orderly educational environment that allows for effective teaching and learning. Researchers have identified several factors of a safe and orderly environment that can be affected by principal behavior, including (a) the setting and communication of behavioral standards, (b) implementing effective processes to ensure that behavioral policies are applied consistently for all students, (c) assuring that discipline is used consistently and fairly and (d) dispersing the responsibility for discipline throughout the school, among others (Cotton, 2003; Leitner, 1994; Marcoulides & Heck, 1993; Sammons, Hillman & Mortimore, 1995; Scheurich, 1998).

Mission and vision. The importance of a clear mission and vision to successful schools has been frequently supported in the literature (Cotton, 2003; Johnson & Asera, 1999; Louis & Miles, 1992; National Commission on Education, 1995; Scheurich, 1998). Researchers have identified transformational leadership, which is focused on improving the overall culture and organization of a school, as being closely related to clear understandings of vision and mission (Fullan, 2003; Hallinger, 2000, 2003; Hallinger & Heck, 2002; Leithwood & Jantzi, 2000; Murphy & Louis, 1994). Similarly, purpose-driven leadership is often related to schools that are considered effective

(Mortimore, Sammons, Stoll, Lewis, & Ecob, 1988; Rutter, Maughan, Mortimore, Ouston, & Smith, 1979; Sammons, Thomas, & Mortimore, 1997; Teddlie & Stringfield, 1993).

Stakeholder involvement. Another component of effective leadership is the principal's ability to garner outside resources toward the improvement of the school. Researchers consistently cite community/stakeholder involvement as related to high-achieving schools (Johnson & Asera, 1999; Marcoulides & Heck, 1993; Sammons et al., 1995; Scheurich, 1998; Yap & Enoki, 1995). To this end, effective principals have been shown to (a) build the leadership capacity of teachers and staff, (b) encourage team learning focused on schoolwide goals, (c) use organizational flexibility to enhance effectiveness, and (d) distribute leadership responsibilities throughout the school (Rea, McLaughlin, & Walther-Thomas, 2002; Yap & Enoki, 1995).

Monitoring school progress. Personal monitoring of school progress by the principal has been shown as a predictor of school effectiveness in most studies where it has been included as a variable (Levine & Lezotte, 1990). It is generally held that effective principals routinely visit classrooms, participate in team-level meetings, and pay close attention to student performance within their school (Elmore, 2000; Fink & Resnick, 2001; Gullatt & Lofton, 1996; McCallum, 1999; Sammons et al., 1995). Further, it has been argued that personal interactions are the best way for a principal to effect positive change within a school (Deal & Peterson, 1990).

Murphy (1990) found that effective principals utilized several monitoring strategies, including (a) using assessment to inform instruction; (b) communicating information on student data to all stakeholders; and (c) constantly evaluating the instructional quality and academic progress of the school. Effective principals have also been shown to routinely use school- and student-level data to guide programmatic and instructional decisions (Leithwood & Jantzi, 2000; Reynolds & Stringfield, 1996; Spillane, Halverson, & Diamond, 2001; Stringfield, 1995).

Instructional focus. One of the key responsibilities of an instructional leader is to maintain a schoolwide focus on critical instructional areas. Principals of effective schools have been shown to take personal interest and responsibility for instructional matters (Klingner, Arguelles, Hughes, & Vaughn, 2001; Leithwood & Jantzi, 2000; Waters et al., 2003). Johnson and Asera (1999) found that high-performing principals created opportunities for teachers to plan and work together regarding instructional issues. In fact, the school schedule was planned around the key instructional needs

of the school in an effort to protect critical instructional time (Cotton, 2003; Evans & Teddlie, 1995; Johnson & Asera, 1999). Heck (1993) identified the principal's willingness and ability to promote meaningful discussion around instructional issues as central to their effectiveness as a school leader.

Murphy (1990) stated that there are three areas where leadership in instructional focus is most important: (a) creating focused school goals and communicating them to stakeholders; (b) managing the instructional environment by frequent monitoring of instructional processes; and (c) promoting an academic learning climate by maintaining high expectations, providing sufficient instructional resources, and ensuring adequate professional development opportunities for teachers.

High expectations for student performance. Research has also pointed to the performance expectations held by the principal as an important aspect of effective schools. Consistently communicating expectations for high performance has been linked by researchers to positive results in school and student achievement (Cheng, 1994; Gullatt & Lofton, 1996; Leithwood & Jantzi, 2000; Waters et al., 2003). Teddlie and Reynolds (2000) found that high-performing principals monitor classroom-level expectations to ensure alignment with the high expectations of the school. They further suggested that effective principals (a) expect staff to work at understanding school conditions and issues before they start work, (b) expect high levels of participation in professional development activities, (c) expect high-quality instructional practice, (d) expect staff to prioritize student achievement as the primary goal, and (e) expect staff focus time management toward instructional priorities.

Professional development. Research provides extensive support for the idea that much of a principal's success comes through the professional development opportunities that he or she provides for the staff, especially those in instructional positions (Deal & Peterson, 1990; DuFour & Berkey, 1995; Leitner, 1994; Levine & Lezotte, 1990; Peterson, Gok, & Warren, 1995; Wagstaff, Melton, Lawless, & Combs, 1998). Effective principals have also been shown to participate in professional development activities to gain understanding of classroom practices (Wagstaff et al., 1998). An additional practice associated with professional development that has been cited as being displayed by effective principals is the ability to acquire professional development resources for their school. This includes time for training, funding to pay for training, as well as professional development materials (Bamburg & Andrews, 1991).

Principal Behaviors and Student Achievement

There is little controversy over whether educators and educational researchers think that school principals make a positive impact on school performance. Indeed, there is ample evidence in the body of research and in educational practice to confirm that the school principal is regarded as critical to school success and student achievement. In particular, several decades of research on the topic has resulted in a body of knowledge that details the positive relationships between the practice of school principals and student academic achievement (Cotton, 2003).

Despite the large body of literature on educational leadership, the causal relationship between principal behaviors and student achievement remains unclear, at best (Hallinger, Bickman, & Davis, 1996; Witziers, Bosker, & Kruger, 2003). Some studies in this area investigate the relationship between school-level variables and student achievement yet fail to bring specific principal behaviors into the model. Examples of this type of study includes those focused on school mission (Bossert, 1988), school culture (Deal & Peterson, 1999), organizational variables such as school size (Lee & Loeb, 2000; Lee & Smith, 1995), or the placement of highly qualified teachers in school classrooms (Ingersoll, 1996). A second type of study investigates the principal's role in shaping the educational environment but does not use student achievement as a dependent variable, (e.g., Sanders & Harvey, 2002). The lack of consensus regarding the components of leadership has led to the proliferation of these types of incomplete methodologies that fail to answer some of the most relevant questions regarding the impact of school leadership.

In addition, much of the research conducted on the potential relationship between principal behaviors and student achievement has consisted of basic statistical methodologies relying on bivariate statistical models (Hallinger & Leithwood, 1994; Hallinger et al., 1996; Witziers et al., 2003). This type of research generally seeks to establish a direct link between the actions of principals and the achievement of students but does not allow for the partitioning of variance at the appropriate levels. Overall, the view that principals have a direct effect on student learning has largely been abandoned and replaced by a focus on the indirect relationships that principals create through their interactions with teachers and the educational environment (Hallinger et al., 1996; Hallinger & Leithwood, 1994; Heck, 1993; Witziers et al., 2003).

Hallinger et al. (1996) suggested that because previous research in this area has been weakened by the use of oversimplified methodological approaches, future research designs will be strengthened if they include sufficient sample sizes, theoretically defensible models, reliable data

collection instruments, and sophisticated data analysis tools. The use of more complex methodologies can be used to gain a more comprehensive understanding of the impact of principal leadership on individual student achievement (Hallinger et al., 1996; Witziers et al., 2003).

There are, however, some effective models of research focusing on leadership that include the behaviors of principals and their effects on individual student achievement in the research design. Hallinger and Heck (1996) identified approximately 40 studies conducted between 1980 and 1995 that displayed sufficient rigor and used sophisticated methodologies. They included studies that investigated principal effects on student achievement measures, whether those effects were direct or indirect. The study concluded that research incorporating sophisticated modeling methods showed that the effects of school-level leadership on individual student achievement were generally small; however, these results appeared to be educationally significant in relation to the small proportion of student-level variance that can be explained outside of exogenous (student-level) variables. In this sample of studies, school leadership effects were shown to explain only up to 5% of the total variance. Although this amount of explained variance seems small, it represented approximately 25% of the total variability explained by endogenous (school-level) variables (Hallinger & Heck, 1996).

Scheerens and Bosker (1997) also reviewed studies that included leadership and student achievement in the methodology, resulting in similar findings. They used a modeling methodology to investigate the possible relationships between principal behaviors and student achievement and found that variables more closely associated with the student (classroom-level) produced more robust relationships than did variables at the school level (i.e., leadership). The researchers found small but statistically significant principal effects on student achievement. Moreover, the study revealed that controlling for other contextual variables resulted in stronger relationships between leadership and student achievement.

In a meta-analysis of 70 contemporary classroom and leadership studies, Waters et al. (2003) investigated whether the quality of leadership has a significant relationship to student achievement and what specific leadership responsibilities and practices have the greatest impact. They concluded that school leadership is an important variable, as it correlates positively with student achievement. The researchers identified 21 key areas of leadership that correlate positively with student achievement. These key areas are culture; order; discipline; resources; knowledge of curriculum, instruction, and assessment; involvement in curriculum, focus; visibility; contingent rewards; communication; outreach; input; affirmation;

relationship; change agent role; optimizer role; ideals and beliefs; monitoring and evaluation; flexibility; situational awareness; and intellectual stimulation.

Waters et al. (2003) also stated that effective principals have a comprehensive knowledge of leadership strategies and have developed an awareness of when to use them. Further, they understand how to balance school culture, the student population, and the community to promote increased student achievement. Two variables were identified as determining factors in whether principal effects on student achievement are positive or negative: correctly identifying the focus for improvement, and understanding how closely the proposed change matches existing values norms and values.

Conceptual and methodological challenges notwithstanding, previous research has identified a measurable impact of effective principal leadership on individual student achievement. Principal effects have been shown to be primarily indirect, as they are typically mediated by other variables more proximal to the student level. Moreover, student achievement effect sizes in relation to principal leadership have proven to be small. These proportions of student-level variance are, however, practically (and statistically) significant. The importance of these findings is amplified when considered in light of the relatively small proportion of individual student achievement variance that can be attributed to endogenous variables.

More recently, Nettles and Petscher (2006) studied the direct effects of school principals on achievement in Florida schools receiving federal Reading First grants. This study examined the relationship between the principal's role in the implementation of effective reading programs and the reading achievement of first grade students. Data used in this study to address the research questions and hypotheses consisted of (a) 388 Reading First principal responses to the Principal Implementation Questionnaire (PIQ), a validated instrument used to measure the levels of reading program implementation in Reading First schools, and (b) the student reading achievement of more than 34,000 first-grade students as measured by the four quarterly Dynamic Indicators of Basic Early Literacy Skills Oral Reading Fluency (ORF) assessments for the 2004–05 academic year.

In this study, a three-level hierarchical linear modeling (HLM) growth curve model was used to determine the amount of student-level variance that can be explained by the five dimensions measured by the PIQ. The instrument included five dimensions that assessed the quality of principal implementation of effective reading programs. Four were retained for analysis (Professional Development, Leadership, Assessment, and Intervention), based on statistical validation. Level 1 of this model tested the growth of ORF scores over time for each of the four assessments at

the individual level. Level 2 modeled selected student-level variables, including gender, socioeconomic status—as determined by free and reduced lunch eligibility—ethnicity, whether students have limited English proficiency, and disability status. Level 3 modeled variables associated with the principal. Specifically, principals' responses on the dimensions of the PIQ were used to define and categorize principal behavior in relation to the implementation of effective reading programs.

At the conclusion of this study, Nettles and Petscher (2006) identified some significant relationships between the implementation practices of Florida Reading First principals and student reading achievement. Specifically, increased principal implementation of effective reading intervention practices resulted in the overall population of students gaining five additional words per minute on the Dynamic Indicators of Basic Early Literacy Skills ORF subtest. Increased principal implementation of effective assessment practices was shown to increase the ORF scores for the overall population an additional three words per minute over the school year and accounted for students acquiring fluency at an accelerated rate. Other significant relationships were found among student subgroups, including students with disabilities and students with limited English proficiency. As these results are cumulative, the combination of increased principal implementation across several areas was shown to have significant practical importance for the students of this sample.

Implications for Instructional Leadership and School Improvement Policy

The traditional policy focus regarding student achievement has been on classroom level factors (e.g., scientifically based curricula and teacher quality), and appropriately so, but the national focus is now turning to what the principal can do to improve student achievement. This is a significant redirection, because actions taken to better understand and improve the impact of principals on the achievement of students in their schools have the potential for widespread benefit, as individual improvements in principal practice can impact thousands of students. It is in this light that potential direct effects of principal practices should be revisited.

The intense performance requirements of federal and state accountability initiatives alone beg that the direct impact—however small—of principals be understood and exploited. This is especially true now that achievement data are routinely disaggregated by student subgroups. In addition to overall student population effects, recent evidence points to the potential for principals to have a significant direct relationship with the reading achievement of students with disabilities and those who are not

yet proficient in English (Nettles & Petscher, 2006). These groups are two of the most challenging in all of education, and every available resource should be directed at tailoring an effective educational environment for these students. Further research may substantiate additional direct effects of principals on subgroup populations. For many schools, small improvements within and among student subgroups can be the difference between making Adequate Yearly Progress or not. If principals can show a direct effect in these areas, the contributions will be of great importance.

Interest in this type of research should stem from the practical importance of the results, following calls in the literature for more practitioner-focused work in the area of leadership (Heck & Hallinger, 2005). The need for more intervention-minded research is particularly critical when considering school leadership positions for which substantial support from the academy has been sparse. Concrete research-based strategies to help principals understand and capitalize on potential direct effects of student achievement could result in considerable measurable improvement. For instance, if direct effect results can be further substantiated, professional development activities for principals—based on evidence of direct effects—should be designed to guide principals in their organizational and instructional practices. The generally weak nature of ongoing training activities for school principals could benefit from tangible advances of this nature.

Overall, it is not our intent to downplay the importance of understanding and profiting from what we have learned regarding the indirect effects of principal behaviors on student achievement. By far, the most robust impact that a principal can hope to have is via the mediated relationships within a school. However, it is essential that all potential sources of principal impact on student achievement be considered to assist these school leaders in building capacity for ongoing performance improvement in their schools. Further, researchers and policymakers should provide principals with every possible advantage in meeting the instructional responsibilities of this critical position if there is to be a serious effort to approach current federal and state accountability goals.

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