Chapter 10
Green School Principals: Making the Connection among Student Achievement, Healthy School Environments, and Project-Based Learning

Pamela A. Lemoine
University of Louisiana – Lafayette, USA

Evan G. Mense
Southeastern Louisiana University, USA

Michael D. Richardson
Columbus State University, USA

ABSTRACT
Green schools are places for children to learn and environments for leaders and teachers to flourish. In this chapter, the authors examine why green schools are more inviting, more receptive to creativity, and more open to learning for everyone. Further, the authors postulate that creating a positive environment for learning is tasked to today’s green school leaders who are using authentic instruction to academically challenge students and engage them in issues that have personal or social significance. Finally, the authors conclude that green school leaders are environmental advocates influenced by the need to take action, to inculcate problem-based learning strategies, and to increase knowledge about the environment; yet, maintaining the balance of creativity and cooperation is critical to the effective operation of green schools.

INTRODUCTION
With school leaders identified as second only to teachers as the most important influence on student achievement (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; Darling-Hammond, LaPointe, Meyerson, & Orr, 2007, 2010; Leithwood, Louis, Anderson & Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005; Shannon & Bylsma, 2007; Vescio, Ross, & Adams, 2006; Vidoni, Bezina, Gatelli, & Grasetti, 2008; Waters & Marzano, 2006); school leaders’ behaviors...
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are critical to success. School leadership and student achievement have positive relationships that correlate to student achievement (Waters, Marzano, & McNulty, 2003). Principals need to establish clear articulated performance standards for teaching and learning; utilize proactive change processes; support school cultures conducive to learning; facilitate collaboration and communication; ensure use of common core curriculum and state content standards, frequently monitor teaching and student learning; establish focused professional development; establish a supportive learning environment; and facilitate a high level of family and community involvement (Dufour & Marzano, 2009; Hall & Hord, 2011; Shannon & Bylsm, 2007).

While most educational reform reports released during the past decade presented compelling arguments for improving curriculum, classroom instruction, and student performance, research findings have suggested an “empirical link between school leadership and improved student achievement” (Wallace Foundation, 2012, p. 3). Leithwood, Louis, Anderson, and Wahlstrom (2004) and Waters, Marzano, and McNulty (2003) found effective school leadership is critical to student achievement and even more important in turning around low-performing schools (Darling-Hammond, Meyerson, LaPointe & Orr, 2010; Orr, King, & LaPointe, 2010; Wallace Foundation, 2012).

Leithwood et al. (2004) suggested in How Leadership Influences Learning, that leadership is a key attribute for school improvement stating, “There are virtually no documented instances of troubled schools being turned around in the absence of intervention by talented leaders” (p. 5). Cheney, Davis, Garret, & Holleran (2010) suggest, “schools need effective principals who create a school culture of high expectations, focused on learning, for both students and adults” (p. 5), further suggesting that the job of the school principal “is one of the toughest in our nation—and one of the most valuable” (p. 6).

Student engagement in their learning is important for student long-term academic success (Minner, Levy, & Century, 2010). Proactive school leaders are connecting learning goals to real-life relevance using socially responsible environmental agendas through constructivist learning (Cassell & Nelson, 2010; National Research Council, 2007; Neo & Neo, 2009). Constructivist learning is an “active process in which learners are active sense makers who seek to build coherent and organized knowledge” (Mayer, 2004, p. 14). With the principal and teachers as facilitators, this process accomplishes two goals: (1) connecting students to inquiry-based learning in the form of real world problems thus increasing content knowledge, as students construct questions and find the answers, and (2) increasing engagement—engaged students need less discipline, have less absenteeism, and gain life-long interest in learning (Battistich & Horn, 1997; Mayer, 2004; Neo & Neo, 2009; Schmoker, 2011). Minner, Levy, and Century (2010) reported inquiry-based learning has a greater impact on learning as students gains understanding of a problem and retains knowledge.

Principal’s primary responsibilities are to establish a positive school culture, a climate for instruction and learning, ensuring curricula are taught, and everything else “a principal does during the day to support the achievement of students and the ability of the teacher to teach” (Marks & Printy, 2003, p. 373). While secondary to instructional roles, building operations are also important to the learning environment in terms of physical appearance and maintenance (National Research Council, 2007; Tanner, 2009; Woolner, Hall, Higgins, McCaughey, & Wall, 2007). Ensuring school buildings, classrooms, and play areas provide a safe and healthy learning environment with all facilities in working order is a necessity (Lofness, 2009; Wyon & Wargocki, 2007).

Teachers, students, parents, and community members expect the school to have an inviting appearance, to be well maintained, orderly and clean. Physical aspects of the building contribute