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THE CHANGING FACE OF SCHOOL ADMINISTRATION: GREEN SCHOOL LEADERSHIP

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Exercising leadership in a school has never been easy. Those who have held administrative positions in schools, say it can alternately be confusing, frustrating, overwhelming, but also fulfilling. A school principal can wear a variety of hats and transition through multiple roles in a single school day. In the public eye they can be a politician, an advocate, and an educator. In unison with teachers a principal is a parent, a care-giver, and a disciplinarian. As professionals, school principals can be managers, innovators and most importantly leaders. They have to build relationships with children, parents, families, teachers, staff, and the outside community, all while giving reference to the expectations of senior administrators and elected members of the school board. School principals spend their days solving problems and often their nights attending meetings, school plays, concerts, award ceremonies and speaking at graduations. They are supposed to be able to prescribe the appropriate punishment for every disciplinary issue and yet have the patience and good judgment to know how to handle each child based on their background, capacity, stage of development, and home life.

While there is a general understanding among most people of the principal's role, one aspect of this position that is not as well appreciated beyond the individuals who have been principals is how expectations change and evolve based on what is happening in society. For example, the No Child Left Behind (NCLB) act of 2001 in the United States forced principals to drastically change how they lead and manage in their school systems. "Accountability," "Adequate Yearly Progress," and "highly qualified," all became common language, and the implications of NCLB for principals involved spending "significant amounts of time on the development of effective classroom teachers" (Varrati & Smith, 2008), and finding ways to ensure that children are reaching their academic benchmarks.

Other social dynamics also influence the role. In the past decade information technology has dramatically expanded the amount of information students receive and the ways in which they access it. Not only

have principals been forced to find ways to incorporate these new technologies across curriculums, they have also had to create policies that would help school staff monitor and control appropriate access to this information during the school day. As Schiller (2003) states, it also became important for principals to understand the technologies themselves so that they could be able to promote a school culture which encourages exploration of new technologies while also managing their use. In effect principals find themselves creating policies that do not close off the outside world, while using new technology to broaden a student's understanding of our global society.

Another social trend that has changed the principal's role in recent years is the increased emphasis on STEM (science, technology, engineering and mathematics) related subjects in the curriculum. When it became apparent that the United States was graduating students who were greatly behind their international counterparts, many believed that something had to be done to "improve the way students learn science, mathematics, technology and engineering and that the business and education sectors had to work together to achieve this goal" (STEM Education, 2009). It again became the principal's job to collaborate with experts in the field to find out how to incorporate this new subject matter into the school day so that students from the United States could be competitive in the global job market.

Finally, and perhaps most recently, school level administrators are now confronting the need to incorporate environmentalism into school policies and curriculums. While concern for environmental issues and how natural resources are being used is not a new idea, the manner in which they are being built into educational programs is relatively novel. The impact of this social trend is compounded by the rate at which organizations are recognizing that a movement is upon them and their responsibility to take part in this environmental initiative. The Green Movement has exploded in the United States in recent years, and the most obvious influence on this trend is a perception of changes in weather patterns and environmental trends (Doherty, 2002) documented by environmental scientists around the world (United Nations Foundation & Sigma Xi Scientific Research Society, 2007 p.1).

With a broader acceptance that our natural environment is becoming ever more sensitive and at-risk, an increasing number of educational leaders are making preservation of the environment and environmental consciousness a top priority. The result of this marriage between education and the environment is something called a "Green School." A green school, as it is defined by the American Association of School Administrators (2008) is a "facility that creates a healthy learning environment for children and educators while reducing environmental impacts and lowering operating costs, thereby saving schools energy, resources and money. A green school observes green building and maintenance practices by using green chemicals or other alternatives to toxic chemicals; seeks to be energy efficient and mindful of resource consumption; serves nutritious food; and teaches students the importance of school, community and the earth's environment and resources."

While the idea of principals acting as environmental advocates is a developing process for educators in general, Orr (1992b) believes that the relationship between environmental advocacy and education is a natural one. He feels that education should not be the only priority for principals but instead administrators should embrace "…signs of change in educational priorities and directions" (p.7) and that "no institutions in modern society are better able to catalyze the necessary transition than schools…" (p.7). Allowing educators to managing the education of our next generation of environmentalists, has ultimately resulted in what we now know as the Green School Movement.

Green School Leadership in the Literature
While the most recent environmental movement has resulted in the green school evolution, the research and literature on the topic is still relatively new. With this said research on the impact of environmental education and environmental leadership has resulted in literature that sheds light on who green school leaders are, and their role in the movement.

One of the first of factors influencing the Green School Movement appears to be the role of environmental education in the schooling of the nation's youngest generation. Environmental education as defined by the United States Department of Energy (2008) is:

> Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (United States Department of Energy, 2008).

Prior to the current green school movement many researchers (Orr, 1992a; Palmer and Neal, 1994; Palmer 1998; Chalmers, Scott and Gough, 2003) discussed the need for incorporating environmental education into the traditional schooling of society's youth, but felt that the educational systems were falling short in the way that the

curriculum was implemented.

One of the major complaints with the way in which these specific educational programs were being taught is that they fail to be promoted throughout the students' whole schooling experience. Orr (1992a) blames traditional schooling for shutting students off from the natural world and feels their educational environment forces them to be "sealed in a cocoon of steel, glass and concrete" (p.134) which makes the students disconnected and uninformed about the outside world.

Researchers believe this problem is further exacerbated by educators who feel that students can learn all there is to know about the environment through a biology textbook or a specific environmental education class.

> [Environmental education], is considered one more subject to be added to the already dense, environmental education is usually reduced to the transmission of knowledge or facts related to nature study…environmental education has been subjected to the same dominant culture that requires mastery of textbook facts or mastery over information processing (Williams & Taylor, 1999, p. 83).

Orr (1992a) feels that this abstract learning is out of touch with the reality of the natural world and as a result students become apathetic to their natural environment. "By capturing only a fragment of reality, unrelieved abstraction inevitably distorts perception. By denying genuine emotion, it distorts and diminishes human potentials" (Orr, 1992a, p. 127).

Many believe a potential answer to this concern is through the creation of an academic program that supports each aspect of the environmental approach throughout the entire academic experience. This method not only builds citizens capable of understanding the natural environment, a prerequisite for environmental change (Bryant, 1995; Berry, 1981), but also to benefit students' overall learning. Williams and Taylor (1999) report that an all encompassing approach to environment and education gives students the opportunity to transfer knowledge into action and to provide for a deeper "holistic connection with aspects of the curriculum" (p.91).

While these ideas are currently being built into the most recent green school initiatives by public schools officials, politicians and architects who are spear-heading this effort, it's important to also understand how leadership takes place in green schools by reviewing literature concerning environmental leaders.

Environmental leadership is "different" than traditional leadership theory. Shrivastava (1994) elaborates on this thinking by stating that "transformation to ecological

sustainability requires a new form of eco-centric management and leadership" (p. 225). While environmental leaders must keep environmental concerns as the central focus for their leadership, school leaders traditionally must keep the education of children at the forefront of their leadership, the green school leader is a hybrid of these two positions. The green school leader's challenge is not only to be a school leader, but also to be an environmental leader. The roles and responsibilities for an individual in this position are different than a traditional school leader as this individual must be able to make decisions that not only influence the school population, but to also address a litany of environmental problems (Gordon & Berry, 2006) , by incorporating the ecological issues into the school culture and curriculum.

Much like the instructional leader that Begley (2008) describes, a green school leader must be able to incorporate a large number of stakeholders in this process while also "collaborating to develop a learning community which fosters cooperation, encourages professional risk taking and promotes lifelong learning" (p.27), a task that is necessary in developing environment advocacy. A green school leader, if looked at as Begley (2008) suggests must be able to bring together both environmental and educational professionals, bring out the important issues and then communicate this information to their staff and students so that the two worlds can grow together with one educational plan.

Stevenson (2007) believes that being a strong leader is not enough, in that the individual working in a green school must have strong values that are in line with the school's environmental purpose and then have the ability to incorporate these values into the "organizational processes, activities and relationships" (Egri & Herman, 2000, p.572) of the school.

While Wenzhong (2004) agrees that having a set of values that are in line with the school mission is necessary for a green school leader, it is also important that this individual acts as an "initiator" within their school. The administrator, in Wenzhong's view, should provide guidance, influence and support for their staff and students in order to find ways to weave the environment and the issues that surround it into the student's educational experience. An administrator in this role should be a creative problem solver and have experience in dealing with school-wide policies so that they can act as a resource to supplement the environmental mission.

A final characteristic touched upon, by Gordon and Berry (2006) and worthy of emphasizing is the ability for a green school leader to work in and create an environment conducive to collaboration and shared decision-making. Due to the cross-curricular nature of the green school curriculum and the importance of basing the daily actions

and routines around a single environmental value it becomes necessary that every individual in the school is involved in the process. Furthermore this approach allows staff and students to gain a strong understanding of the roles and responsibilities involved through shared decision-making (Kemmis and Wilkinson, 1998). As Somech and Wenderow (2006) point out, shared decision-making leads to positive leader-member dialogue which is a crucial component for the evolving green school.

Research Methodology

As part of a recently completed study (Ackley, 2009) designed to test and build on the points identified in the literature above, the leadership practices of school principals were specifically examined in the context of, "green schools." The researcher investigated how the green school agenda is promoted and advanced on a daily basis by school-based advocates in administrative roles. To conduct this inquiry, the intentional actions and practices of a sample of school leaders working in green schools was reviewed and analyzed to document what it is a green school leader does, and how this practice is unique from traditional schooling. This comparison highlighted the differences and similarities between the skills and knowledge necessary to perform the leadership duties in a green school versus that of a regular American public school. This study generated insights into the nature of leadership in a green school. A five site sample was used as the basis for collecting data through a three-phase case study methodology. The sample of schools used for this study was composed of both public and independent institutions and all of the schools were located in the United States.

Data were collected in three distinct phases to gain a comprehensive image of the principal's role in the green school environment. The first component of the methodology was a review of individual documents associated with each research site that was deemed important by the principal and the school. This step in the process allowed the researcher to gain an understanding of the context and mission of the specific environments before entering the school and meeting one-on-one with the principals. The second component of the methodology was an observation period that allowed the researcher to act as an active observer. During this phase the researcher was given a tour of the school building in order to understand how the principal is involved on a daily basis as both an administrator and advocate for the green mission. These observations were carried out at each site, so that the researcher could observe the "relevant behaviors and environmental conditions" (Yin, 2003, p.92) related to the green school leader. Due to the less formal

nature of this second phase, broad questions could be readily posed and answered by the administrators so that during phase three (informational interviews), the questions could be more detailed, specific and based on the researcher's previous conversations and observations.

The third and final phase of the data collection process was implemented through two rounds of interviews with each principal participant. The majority of the data collected for this study, came from this third phase through semi-structured interviews. As Merriam (2002) describes semi-structured interviews take place when the researcher has a mix of "more and less structured questions…where specific information is desired from all of the participants" (p.13). "The largest part of the interview is guided by a list of questions or issues to be explored" (Merriam, 2002, p.13). Five school principals took part in this study and opened up their schools to the researcher in an effort to show what it is a green school principal does in order to highlight the evolving role of this unique figure.

Findings and Discussion

Throughout this study the focus of the investigation was on documenting the nature and characteristic functions of a green school leader and what it is this individual does on a daily basis that is distinctive. There were six major areas that the leaders acknowledged as significant to their distinct leadership role. These dimensions can be used to create a portrait of a green school leader. The six dimensions of Green School leadership identified by this research are: Roles and responsibilities, leadership styles, values, actions, motivations and special challenges.

Dimensions of Green School Leadership

- Roles and Responsibilities
- Leadership Styles
- Values
- Actions
- Motivations
- Challenges

Roles and Responsibilities

There are a number of personal qualities that were highlighted by the green school leaders interviewed for this study. Yukl (2001) believes the responsibilities that a green school leader should have includes making the school community aware of what the leader is trying to achieve, by "inducing them to transcend their own self-interest for the sake of the organization or team and activating their higher order needs" (p.351). In line with this thinking and according to the participants in this study a green school leader should be inspirational, motivational and a role

model for environmental education within the school. Beyond this the individual should be supportive of creativity in terms of the actions that advocate for environmental causes. As one of the principals in the study agreed, "with faculty, these are the people who are doing the work in the trenches…I think my role is to support them and their creativity as teachers."

In addition, school leaders initiate collaboration to ensure that everyone in the school community is aware of the specifics of the environmental mission and takes part in the practice. The principals also involved themselves with this process as they use both collaboration and their own teaching experience to educate the staff about environmental issues and to act as a resource for instructional practice. The leader should be able to manage the administrative tasks that result from the Green Movement, while also balancing the needs of the staff and school. Finally, because understanding environmental issues is an ongoing process the principals should be a student of environmental education in order to ensure that they can lead in a way that is appropriate for the proper development of their school community.

Leadership Styles for Green Schools

Leadership styles also emerged as a focus for the conversations with green school leaders. For the purposes of this research study, Leithwood's (1999) "Changing Leadership: A menu of possibilities," was employed as an initial framework with which to begin assessing the suitability and relevancy of appropriate particular leadership styles. From the interactions that took place with the principals, four leadership styles emerged as the most relevant. These were instructional, participative, transformational and environmental leadership. A principal in a green school demonstrates instructional leadership by acting as a leader and as an advocate for incorporating environmental issues into the curriculum and then supporting this practice by helping the staff in guiding their practices. Secondly the principals demonstrated participative leadership by involving everyone in the school community in the decision-making process. The principals agreed this leadership style was appropriate because the environment should not be an external circumstance but something that the staff and students take ownership of and promote in a manner that is appropriate for them. Beyond participative leadership, the principals discussed the overwhelming need to be a transformational leader. In doing so they spoke about the importance of collaboration and in letting everyone's voices be heard, but also being inspirational and using the collaborative process to promote individual action.

Finally, the green school principals discussed the importance of acting as an environmental leader. According to Williams and Taylor (1999) the environment should be "at the core of the educational program" (p.80), and therefore requires a leader who understands this challenge. It is not enough that a principal promotes environmental actions because it is the district's decision. The principals should be aware of environmental issues and ways in which to promote action in their school. While the three leadership styles just discussed may offer a medium through which to do this –for example through collaboration, and support through instruction, it is an internal desire to advocate for the environment, which motivates leaders to align themselves with the cause.

Values of Green School Leadership

The green school leaders in this study describe a number of values that they hold, and discussed how these values motivate their practices. First and foremost the principals discuss the desire to consider the students and their needs. It is the principal's belief that as well as their own needs or those of the staff, the students and their learning should always come first.

Additionally and of the utmost importance is the need to convey their genuine respect for teachers and the work that they do on a daily basis. This value manifested itself as the principals used the words and experiences of the teachers as part of their own decision-making and in understanding what is best for the school. Collaboration among the staff was also an important component of a principal's practice and helps in guiding their decision-making. The principals also talked about the importance of caring for and respecting both the family and community connection to the school. As Gordon and Berry (2006) suggest working with the staff and outside parties to use all available skills and ideas is an important component of an environmental leader's position. A green school leader who can incorporate the experiences' of the students' families while also involving them and the community into the school helps promote the cause and the need for environmental advocacy. Beyond this it gives everyone involved with the project ownership of the school building and the work that is taking place there. Furthermore, involving the community allows for networking opportunities with local stakeholders, which opens doors for continuing projects and the opportunity for children to act as stewards of the environment.

Finally, a green school principal has a responsibility to protect and act as an advocate for the environment. Green school leaders should have, and be able to communicate their own environmental values and the way in which they advocate for them. In reflecting on their own relationship

with the environment and then communicating how this experience shapes their work helps one to think creatively and deeper about their practice.

The Characteristic Actions of Green School Leaders

The values that are communicated by green school leaders inspire action on the part of the principals. Much like the environmental values discussed above, a green school leader should be responsible and eager to educate themselves on environmental education and issues. This action can take shape as formal education, such as a class or participation in an organization, or it can be as simple as reading and reflecting on one's practice and how to develop and evolve within the Green School Movement.

Secondly a green school leader is responsible for building the environment into the curriculum. There are a number of ways in which to do this, and if a leader is not knowledgeable about ecological issues, they can collaborate and seek out people as associates in order to move the curriculum in this direction. As the principals explained the curriculum shaping piece can come from a number of resources and individuals, but it is important to keep the students at the center of this discussion:

> Well we are continuing to look for things we can do for children, and how to get them invested in the environment and making a difference. We want the kids to feel like they can make a difference, whether it is the environment, social justice or democratic sorts of things. We want them to know they have choices and a voice and can make a change.

While many of the participants detailed specific examples that this has taken place in their school, they all ultimately felt that curriculum building and shaping is one of the most influential ways a principal can involve the school community with this undertaking.

Finally a green school leader is responsible for creating meaningful professional development for the staff so that this enthusiasm for learning trickles down to the students. Ultimately it is the principals' actions that influence the teachers' learning, which in turn motivates them in the classroom with students. Professional development when looked at in this way is important in creating a culture around the environmental advocacy.

Motivations of Green School Leaders

The green school leaders in this study identified three key motivating factors associated with their decision to get involved with the Green School Movement. The first of these motivations is their own personal need to be

challenged in their administrative position. While the administrators' role in general can be a challenge and changes from day to day, the principals felt that this new project alone was attractive as a motivation to participate. In line with this thinking, the principals also discussed the need to take risks. Much like the need to be challenged, three of the principals discussed how taking risks with their administrative styles positively impacts their practice and refreshes them as leaders. The educators felt that by taking part in the Green Movement in its early stages, would ultimately be beneficial to their school and the students. They also felt that being both open to new ideas and taking these risks opened the door for additional opportunities and growth for them both personally and professionally, as they were able to extend their previously held knowledge about environmental concerns while also finding new methods and topics to incorporate in their professional practice.

Lastly, the green school principals felt that they were influenced by the need to take action for the environment. While some of the principals felt that the project had an impact on them personally, the others said that just the idea of making an impact and how this could potentially affect their students was reason enough to get involved with the movement.

Special Challenges of Green School Leadership

The final feature that was found to be significant among green school principals was the distinct challenges one might face in this role. Initially the principals discussed the challenge of managing both the construction and the building project while also leading a school. The principals admit that the architects who are certified to build green buildings understood the needs of the school community and therefore tried to help to minimize the distraction a building project might cause. Yet, the principals agreed that the challenge of building a green building can be an annoyance while the process is taking place, but it ultimately is worth the trouble in the end.

The principals also discussed challenge of what the school can afford when transitioning into a green school. While a building project might be necessary for a school district, the initial cost of building the structure, and the extra components that go into a green school might be more expensive than that of a traditional building project. The upside of this is that over time green buildings have proven be more cost efficient because of the money that they save on electricity and energy that is used, (Edwards, 2003, National Research Council of the National Academies, 2006) but the initial costs are a challenge for a principal who is promoting this practice.

Finally, a green school leader may be challenged by the task of working with teachers who are not familiar with the

green ideals, and therefore are not qualified to teach in this environment. As one of the principals expressed:

> The problem is you don't always attract the people that have the same level of experience, and when you're building a school your job is to build a school and teach kids…there are lots of good people who would be potentially great teachers here that don't have enough background and we're not prepared to teach them everything . . . they need to know in order to thrive here. So you know there's a lot of interest. I wish there were more people that had the background.

While many teachers are certified and qualified as educators, they may not necessarily have the science background that the principals felt was necessary in a green school. The principals felt that because of the unique structure and mission pursued by green school administrators, it is a challenge hiring people who are qualified to teach in this environment, if they were not initially part of the greening process.

Conclusions and Implications

Over time issues involving environmental concerns have increasingly become part of our daily lives and ways of thinking. It seems as if every company and product has "gone green." Schools are no exception. The green phenomenon has exploded in recent years, and school leaders are the latest group affected by the movement.

While on the surface, it may appear that school leaders are being held responsible for another one of society's problems, in reality it seems as though the single act of being involved in education makes these individuals qualified to address such a concern. The idea behind the green school movement is that by changing the entire school experience, a change can be made in not only the knowledge base graduates have to draw on, but also in the way that these students have learned to live their lives. Students in green schools are apt to experience a bevy of different lessons that can originate from classroom curricula, outdoor activities, and even the school's architecture.

The green school movement aims to shake the very foundation of knowledge and the way it is obtained by school-age children and young adults by changing the paradigm through which students view the world around them. It is nothing less than a wholesale revamping of the current educational system placing importance on the knowledge of topics related to the environment thereby lessening the impact or focus on anything material in nature.

In analyzing data collected as part of the study reported here, it became clear that the principals who act as "innovators" and "early adopters," (Rogers, 1976, p.292) and initiate action within this movement are more likely to dedicate themselves to a sustainable existence in their school. Furthermore, the more invested these individuals are from early on, the more likely they are to understand the need to build this practice into each element of the students' schooling. It was clear that principals who worked in a green school, where this was a district decision became a student of the environment, not an expert, and therefore was behind in incorporating this practice in the school at a level that is required, at a time when our earth and its resources need it most.

While information on environmental concerns has been around for decades, people in all sectors of life are now coming together to talk about what can be done, to find solutions to these issues. As policies pass through the hands of local, state and federal officials, many people have decided to make a difference is in their local school, and with the education of our country's youngest generation. While it will take time to see exactly how the green school movement will turn out, one thing is certain at this point, principals and administrators at the school level continue to take on these societal challenges and find ways to address them within their communities. As these trends come, go and are recycled through time, it once again falls on school administrators to adopt these matters as their own, and prove to be agents capable of responding to the societal challenges we face. As leaders they aim to quietly solve these issues as they fit them into their own lives and build them into the culture and community of the schools they represent.

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