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**LEADERSHIP IN GREEN SCHOOLS:
SCHOOL PRINCIPALS AS AGENTS OF SOCIAL RESPONSIBILITY**

A Dissertation in

Educational Leadership

by

Carly R. Ackley

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The dissertation of Carly R. Ackley was reviewed and approved* by:

Paul T. Begley
Professor of Education
Dissertation Advisor
Chair of Committee

Gerald K. LeTendre
Department Head
Education Policy Studies

Roger C. Shouse
Associate Professor of Education

Jacqueline A. Stefkovich
Professor of Education

Edgar P. Yoder
Professor of Extension Education

*Signatures are on file in the Graduate School

ABSTRACT

This study examines the leadership practices of school principals who are promoting a social responsibility agenda; specifically through their work in a “green school.” The study specifically investigated how social responsibility agendas like green schools are promoted and advanced on a daily basis by school based advocates in administrative roles. The role of the green school principal was specifically examined throughout this study to gain an understanding as to how principals lead and function on a daily basis.

The central questions that guided this research were grounded in three separate bodies of literature that were all necessary to gaining an understanding of the principal’s role. These research questions are: (1) Green Schools: What is the genesis of the Green Movement and its integration as a component of educational processes? Are there roles and responsibilities associated with leadership within a green school? If so, what are they? Is there a relationship between the Green Movement and the leadership styles adopted by school leaders working in green schools? If so, what is it? (2) School leadership practices associated with green schools: Do individuals come to the school leadership role as a priori advocates of green schools or do they become advocates as an outcome of their appointment? What educational leadership styles, models, and frameworks, documented by research and literature, are most representative of the practices of school leaders in green schools? How is school leadership in a green school similar or different from that in other schools? What are the challenges faced by school principals who are involved in a green school? (3) Social justice, responsibility, agency and the school principal: What are the attitudes, values and actions of school leader advocates of social justice, responsibility and agency? What do school leaders describe as their motivations for becoming involved in the Green School Movement?

A case study methodology was adopted to conduct the study with five green school principals whose schools were located in Maryland, Washington D.C., Arizona and the two remaining schools were in Pennsylvania. The researcher implemented a three phase methodology that included examination of a document related to the principal's work as a leader of a green school, an observation in the principal's school and two separate interviews that focused on both the principals' day to day work and also their values, beliefs, motivations and challenges. The document analysis shed light on the principals' early experiences with ecological issues and in the greening process. The in-school observation period allowed the researcher to see how the green school was currently functioning and the actual degree to which the principal was implementing green school agendas in their school. The two rounds of interviews with the participants allowed the researcher to gain insight into beliefs and practices that could not be properly observed in the first two steps. In particular, the interviews revealed information about the principals' previous experiences, influences, and what they believe about the Green School Movement.

The participants of this study provided a detailed view of the green school principal's role. The study shows that a green school leader plays six distinct roles. The roles are: inspirational/motivational/role model, supporter, collaborator, student, instructional leader and manager/planner.

The study also revealed that the principals demonstrate actions related to instructional, participative, transformational and environmental leadership. Additionally it was discovered that while some of the participants came to the Green School Movement as a prior advocate for environmental issues, other principals became advocates of environmental education after the greening of the school began.

In looking at what green school principals' value, five key values were identified. Green school principals are student-centered, they have a profound respect for teaching and

collaboration, they feel it is important to include families and communities into the school, and then also promote ownership and stewardship of environmental action in the school. Finally the principals each communicated their own personal commitment to the environment and were able to discuss at length why it is important to them. These values motivated characteristic actions on the part of the principals. The key actions that the principals manifested were self-educating, shaping the curriculum around environmental issues, and then promoting powerful professional development experiences for the staff so that they too can be motivated to promote ecological issues in their practice.

The study also found that green school principals are motivated by an internal need to feel challenged and the opportunity to take risks for what they feel are worthwhile causes. The principals discussed being externally motivated by environmental issues which in turn motivates them to become dedicated advocates. Finally, the researcher found that there were characteristic challenges associated with being a green school leader. The challenges were the construction and building process that takes place, the need for additional funding for green building and the hiring of teachers who are both highly qualified as educators as well as having knowledge of how to incorporate the environment into the subject matter.

The findings from this study contribute to the literature available for researchers interested in green schools, school leadership, environmental leadership, and leadership for social responsibility. While this study provides for a theoretical model for green school leadership it also provides for practical information for practitioners who are in the greening process. Finally, a number of future projects are suggested for study including comparing principals in leadership roles in a number of socially responsible school settings, and also further research that could provide for a more comprehensive look into how the greening process internally influences school leaders toward a position of environmental advocacy

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Chapter 1

INTRODUCTION AND RATIONALE FOR STUDY

“Without food to eat, water to drink and air to breathe we are going to be in some pretty sad shape. We can have all of the math and literacy we want but without those basic things we will not have a planet to live on, to do what we are here to do.”(Diane)

Though I have been surrounded by environmentally conscious people most of my life, it was not until recently that I realized how it would influence me as an adult. As an educator I have always tried to separate my personal interests from my professional role and my work as a student. It was not until recently that I realized how these values would influence my work as a researcher. The groundwork for exploring the topic for my dissertation studies was developed as a result of my participation in an administrative internship that took place at a local school district during my third year in the Ph.D program. As a new intern in the school I spent my first few days learning about the student population while monitoring the cafeteria during the lunch hour. I will admit that I had not stepped into a public school cafeteria since my own high school experience so I was shocked to see that not much had changed. As I continued to watch the students’ interactions I noticed that, as in many schools, the students filed through the lunch line, sat down at their tables, and unwittingly began eating a meal of processed foods that were ultimately supposed to sustain them for the remainder of the day.

While school lunches have never had the best reputation, I continued to observe the lunch room environment in order make note of anything else that might spark my interest. As I looked around the room I noticed many students who had finished eating and were left to read in a room that was inadequately lit by a few windows along the walls. My own existing environmental sensitivities drew me to continue to observe and I watched the students throw away their trash in

the one garbage can provided by the school, without a recycling bin in sight. The students finished their lunch, bounced anxiously in their seats while others sat playing with their fried French toast sticks and flat sausage patties. While this scene may be typical of every lunchroom in the United States, I was left thinking, there has to be something better than this.

Later on that same day I spoke to a classmate about my experience and he mentioned that I might find it worthwhile to look into the concept of green schools. Up until this time, I had briefly read about the existence of this movement, and was interested in the idea of green schools, but more for my own personal interest. This single experience motivated me to look more seriously into the topic however I found that I was only able to find superficial answers to my questions. My initial searches revealed that my awareness of the issues was in a beginning stage of development and I simply needed more information on what these schools were all about. I looked into how green schools became certified, what organizational components were associated with a green school, and the way in which the students in these environments were responding both academically and physically. I became increasingly excited to discover that there were options out there and that a, "Green Movement," already existed in education. However it struck me that something was still missing from this literature. I noticed, after searching for answers, that there was a lack of information detailing the leader's role in making the Green Movement come together.

It became apparent to me at this point that my time in the Educational Leadership program at the Pennsylvania State University had obviously had an effect on me. As I skimmed through literature searches and article reviews my focus began to narrow as I searched for text detailing what the administrator's role looks like in green schools. In my own practicum experience I began observing my mentor principal more closely and noticed how directly involved she was in the school and the vast number of responsibilities and decisions she juggled throughout the day. I started to put these two components together and created some questions

that I considered relevant to further research related to my topic: How do principals run green schools? What are their responsibilities? How do they make decisions that are different from a non-green administrator? If they were at this school before it went green, what was their role in changing it? What draws these individuals to this cause and how do they work with it? As I looked for answers to these questions through journals, books and dissertation searches I continued to come up empty-handed. Clearly, there were gaps in the literature on the subject, and as I became aware of the scarcity of information, and my own personal need to find these answers, the topic of my dissertation became clear.

In my opinion the Green School Movement is an exciting one, and although the movement continues to grow on a daily basis, it is still in the early stages. If the movement is going to continue to progress it would benefit from having a visionary leader who understands the needs of the population while considering ways in which the school can continue to promote its green purpose. Due to the exceptional experience it provides for students, knowledgeable administrators must be in place, who understand the needs of the school, the environment, and their student population. While green schools make the environment a priority in the physical building, curriculum and culture of the school, an administrator in this setting must be aware of their role and have the ability to make decisions that will positively impact the current students and also consider how this school can be successful and educate children in the future.

Statement of Purpose

The purpose of my study is to examine the leadership practices of school principals who are promoting a social responsibility agenda; specifically through their work in 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." With this definition in mind, I investigated how social responsibility agendas like green schools are promoted and advanced on a daily basis by school based advocates in administrative roles. To conduct such an inquiry, I compared the practices and intentional actions of a sample of school leaders working in green schools to the documented practices from the literature on leaders of more standard public schools. This comparison highlighted the differences and similarities of practice between the skills and knowledge necessary to perform the leadership duties of a green school versus that of a standard public school. With this information, insights from the study have been revealed and provide a look at the nature of leadership in this specific social responsibility context.

Research Questions

While green schools are becoming an increasingly popular theme in educational systems, the literature on this topic is still relatively new, and therefore limited. With this in mind it is important to conduct the research through the lens of both current bodies of literature as well as through the experiences of individuals working daily in green schools. For the purpose of this study three major themes are highlighted and explored through the research questions listed below.

Green Schools

- What is the genesis of the Green Movement and its integration as a component of educational processes?
- Are there roles and responsibilities associated with leadership within a green school? If so, what are they?
- Is there a relationship between the Green Movement and the leadership styles adopted by school leaders working in green schools? If so, what is it?

School leadership practices associated with green schools

- Do individuals come to the school leadership role as a priori advocates of green schools or do they become advocates as outcomes of their appointment?

- What educational leadership styles, models, and frameworks, documented by research and literature, are most representative of the practices of school leaders in green schools?
- How is school leadership in a green school similar or different from that in other schools?

Social justice, responsibility, agency and the school principal

- What are the attitudes, values and actions of school leader advocates of social justice, responsibility and agency?
- What do school leaders describe as their motivations for becoming involved in the Green Education Movement?

Significance of Study

The Green Movement is constantly evolving and impacting more and more facets of our everyday life. In the early stages of carrying out this study the literature on the green school topic seemed limited however it expanded significantly even during the few months during which this research was carried out. This study is therefore very timely in the literal sense of the word and makes an important contribution to our current understanding of the Green Movement and will contribute to the growing body of literature available on green schools. Through its existence, this dissertation will help to inform, both practitioners and researchers and will provide for significant implications for future study and practice.

Most importantly this study acts as a support for the actions that are currently being implemented by principals and individuals leading in green schools. While this study highlights the leadership styles, actions, and beliefs of school principals, it should not overshadow the steps that these individuals are taking every day, in their schools. While this study provides a glimpse into what green school principals are doing, what they believe, and how they interact on a day-to-day basis, it also allows for the researcher to convey the importance of their actions to this audience, and to future researchers and leaders who are interested in this topic.

Structure and Organization of Dissertation

The structure of this dissertation has been organized to give both the background on green schools, school leadership and social responsibility, while also allowing for ample

discussion of the specific study and its relevancy to the Green Movement. The dissertation begins with an introduction of how this topic came about and its meaning to the researcher.

Chapter two provides a review of current literature available on the green school topic as well as supplemental information on important background literature. The literature review opens with a discussion of the green school research and how this movement came to be. With a significant portion of the section dedicated to the history of environmental education, the chapter then shifts to the current organizations, policies and actions that are in place.

Chapter two also highlights literature that focuses on school leadership, environmental leadership, social justice and social responsibility, which helped to tie the study and the information together. The school leadership discussion uses Leithwood's "Changing Leadership for Changing Times," as a framework with which to assess the leadership styles employed by school principals, which is a substantial portion of this study. Finally the literature review closes with a discussion of social responsibility practices in schools, and what school leaders need to consider when working in this environment.

Chapter three of this study provides for a detailed description of the methodology that was employed for the data collection, analysis and display of results. While the data for this study was collected through four distinct steps: document analysis, observation, and two interviews, the data was analyzed using multiple coding methods which ultimately resulted in the final analysis and results that are provided.

Chapter four provides a detailed description of the data that was collected from the five participating principals in the form of five portraits of practice. Through this chapter, the researcher was able to describe the kind of school that the principal was working in, the population of children in that environment and then a detailed profile of the leaders who were involved in this study.

The display of data provided in chapter four sets the stage for the cross-case discussion and analysis of the data which is presented in chapter five. Chapter five brings all of the data together to create a comprehensive image of what the role of a green school principal looks like.

Finally, the dissertation closes with a concluding chapter. The concluding chapter, chapter six, provides a brief overview of the study, an overall profile of green school leadership, the final results, as well as discussion of implications for practice, research and theory, plans for future projects and of course a closing discussion about the study as a whole.

Key Terms

Ecological Literacy: “An understanding of how people and societies relate to each other and to natural systems and how they do so sustainably. It presumes both an awareness of interrelatedness of life and knowledge of how the world works as a physical system” (Orr, 1992a, p.92).

Green School: “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” (American Association of School Administrators, 2008).

Leadership in Energy and Environmental Design (LEED): “...a voluntary, consensus based national rating system for developing high-performance, sustainable buildings. LEED addresses all building types and emphasizes state-of-the-art strategies in five areas: sustainable site development, water savings, energy efficiency, materials and resources selection, and indoor environmental quality” (USGBC, 2008a).

US Green Building Council (USGBC): “Non-profit organization that certifies sustainable businesses, homes, hospitals, schools, and neighborhoods. USGBC is dedicated to expanding green building practices and education” (USGBC, 2008b).

Sustainability: is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987)

Chapter 2

REVIEW OF LITERATURE

The following literature review is provided to elaborate the purpose of the proposed study, as well as present the current research available on the Green School Movement. The literature review is organized into four sections. Each section highlights a separate body of literature, relevant to the research questions. The first section focuses on the historical background of the Green School Movement and closes with an overview of literature on environmental leadership, and how this practice applies to green schools. Section two offers a review of the leadership styles potentially appropriate to a green school leader and presents information on the leadership practices the researcher might encounter while conducting the study. The third section discusses environmental leadership and its importance to the Green School Movement. The literature review closes with a discussion on the place of social responsibility in education and how a leader with this perspective might perceive their work.

The Green School Movement

In highlighting how it is that green schools have come to be, it is first necessary to look at where the Green Movement started. With our natural environment becoming ever more sensitive and at-risk, many educational leaders have made preservation 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 can take a number of forms and are usually schools that possess certain architectural attributes and have an eco-aware curriculum aimed at instructing students on the importance of environmental awareness and conservation.

While environmental advocates and information about ecological issues have been around for quite some time, it has not been until recently that this information has been communicated to the public in a way that has made many people feel threatened and driven them to consequently take action. There are a variety of reasons why the Green Movement has

exploded in the United States in recent years, the most obvious reason emerging as a response to recent changes in weather patterns and environmental trends (Doherty, 2002).

Scientists all over the world have acted as medium for progress in this movement by conducting and reporting on research that supports the overwhelming need to move toward an environmentally conscious society. According to a 2007 report presented by the United Nations Foundation and the Sigma Xi Research Society:

The imminence and severity of the problems posed by the accelerating changes in the global climate are becoming increasingly evident. Heat waves are becoming more severe, droughts and downpours are becoming more intense, the Greenland Ice Sheet is shrinking and sea level is rising, and the increasing acidification of the oceans is threatening calcifying organisms. The environment and the world's societies are facing increasing stress (p.1).

This panel of researchers, which was a group of approximately 2500 scientists from 130 different countries and was formed by the United Nations and World Meteorological Organization, reported that many of these changes in environmental patterns took place due to actions taken by humans.

Many people believe that the current "stress" (United Nations Foundation & Sigma Xi Scientific Research Society, 2007 p.1) humans are putting on the earth requires immediate action, in order to maintain a tolerable quality of life for future generations. While many people believe this process requires rethinking the distribution of resources, it also takes reconsideration of an individual's priorities and the decisions made in their daily life.

The idea of environmentalism has been around for quite some time. The first evidence of how humans influence the environment dates all the way back to 1798 with the publication titled, "An Essay on the Principle of Population," by Thomas Robert Malthus, (Papadakis, 1998, p.11) which detailed how as time moves along, the increase in population will ultimately have a negative impact on society and the earth, as the growing population will have superior power to the earth, and the resources it can provide (Malthus, 1999).

The Green Movement has also had its ups and downs throughout history. One of these upswings in popularity came during the mid 1900's when many Americans caught on to the need to address environmental issues during the early 1960's through the 1970's after the publication of Rachel Carson's "Silent Spring" in 1962 (Papadakis, 1998). Carson's book documented the effects of pesticides on the environment and on birds. She specifically discussed the impact of DDT on egg shells and how it leads to reproductive problems in birds. Carson targeted officials, in her novel, for providing false information about the chemical, which ultimately made people start to think critically about their environmental choices.

Many believe Carson's book was the beginning of the Green Movement during this time period because of several outcomes that resulted from its publication in 1962, including the creation of Earth Day, The Environmental Protection Agency (EPA), and the passing of the Clean Air Act. Nevertheless, the Green Movement throughout recent decades appears to be spotty in terms of the influence it has had during given periods of time. Despite the efforts toward environmental reform during the 1960's and early 1970's, by the late 1980's "little or no progress had been made on...global warming, ozone depletion, toxic waste accumulation and mass extinction caused primarily by habitat destruction" (Snow, 1992). The Green Movement lost its momentum during this time and lacked the social and political support necessary to promote continual development.

In recent years the Green Movement has again found the spotlight, as people are beginning to see the impact that humans are having on the environment, and questioning their own actions, once again. While small steps were initially taken by some grassroots organizations (Doherty, 2002) to promote public knowledge on these environmental issues, it is no surprise that people began to step up and pay attention when Vice President Al Gore and the UN's Intergovernmental Panel on Climate Change were awarded the Nobel Peace Prize in 2007, for his

work on promoting information about global warming. In noting the increase in environmental awareness, this award was presented to the former vice president the same year that:

- Lewis Pugh, a British adventurer, swam one kilometer in ice-free waters of the North Pole.
 - Malaysia suffered the worst flooding in decades, and 110,000 people were evacuated.
 - Bangladesh had the coldest temperatures recorded in over 40 years.
 - China had the heaviest snowfall in 56 years.
 - Buenos Aires, Argentina experienced its first snowfall since 1918.
 - 55 percent of the U.S. West and 78 percent Southeast remained in a state of drought.
- (Green Living, 2007)

With this information confronting them, people in the United States began looking for answers and many people began doing their part in the best way they knew how. For some, it was through their own personal actions, while others felt they needed to think more globally and that the place to begin was with the creation of “private and nonprofit advocacy entities whose major purpose was to lobby legislative bodies on behalf of their particular environmental causes” (Egri & Herman, 2000, 571).

Finally, many of these same individuals agreed that the place to truly have an impact was by connecting with the 20% of the United States that attends school everyday. This audience includes 56 million students and 4 million teachers and staff during the 2008-2009 school year (U.S. Department of Education's Institute of Education Sciences, 2008). As Orr (1992b) states in speaking about the role that schools play in moving toward an ecologically conscious society, “...signs of change in educational priorities and directions are now more evident than ever before, and no institutions in modern society are better able to catalyze the necessary transition than schools...” (p.7). Handing over the environmental problems to the captive school audience, has ultimately resulted in what we now know as the Green School Movement.

Well before the current Green Movement, as it is now, had made its way into educational systems, environmental education had already made its mark on a number of schools. While

much of the literature on green schools is still relatively new, there is an extensive database of information focusing on environmental curriculum and research concerning environmental education programs both in the United States and around the world (Palmer and Neal, 1994). While the environmental movement in education is resurfacing, and finding an audience willing to listen, the idea of environmental education has actually existed for quite some time. The rise of environmental education in school systems is the result of many years of hard work and research, and is based on the accomplishments and failures of those that have pioneered the movement.

While the specific date that the current Green School Movement began is hard to pin down, through analysis of the literature one begins to see that this movement is the outcome of a number of factors. The first of those factors influencing the Green School Movement appears to be the role of environmental education in the schooling of the world's youngest students. Environmental education dates back as far as the 1920's with a Scottish botanist named Sir Patrick Geddes (Palmer and Neal, 1994) whose work "included extensive use of the outdoors as a resource for active learning" (Palmer and Neal, 1994, p.11) This line of thinking was reinforced in later years at conferences in both Britain and Paris, when in the 1960's the term "environmental education" (Palmer and Neal, 1994, p.12) began to make its way into mainstream society. While the process and specific definition were slow to develop, the idea of environmental education was again explored and defined in 1970 at a conference sponsored by the International Union for the Conservation and Nature and Natural Resources in Nevada (Palmer and Neal, 1994). Those in attendance, who were researchers from all over the world sat together in order to form the following definition:

Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his biophysical surroundings. Environmental education also entails practice in decision making and self-formulation of a code of behavior about issues concerning environmental quality (Palmer and Neal, 1994, p.12).

As noted, ecological concerns continued to be a topic of discussion throughout much of the 1970's, as did the need to further clarify what environmental education is and how it should be implemented in schools. Five years after a specific definition was given for environmental education The United Nations Education Scientific and Cultural Organization (UNESCO) and the United Nations Environment Program (UNEP) founded the International Environmental Education Program (IEEP) in 1975 (Palmer and Neal, 1994). This committee worked to further explicate the purposes of environmental education by creating three objectives for educators.

These objectives are listed below:

- To foster clear awareness of and concern about economic, social, political and ecological interdependence in urban and rural areas.
- To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.
- To create new patterns of behavior of individuals, groups and society as a whole towards the environment (Palmer and Neal, 1994, p. 13).

With the above objectives in mind UNESCO and UNEP created some of the most significant documents, movements, and organizations to date including, The Stockholm Declaration, The Belgrade Charter, and the Tblisi Declaration in the 1970's (United States Environmental Protection Agency, 2008a) and the World Conservation Strategy, Our Common Future and the Earth Summit (Tsaliki, 1998), in the mid 1980's and early 1990's. The definition of environmental education continued to develop and is currently defined as,

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, 2008a).

This definition is still being used today as it was a result of the Tblisi Declaration in 1978.

It is important to note what the face of environmental education looks like today, in order to understand what it means for educators and its role in the Green School Movement. Many researchers (Orr, 1992a; Palmer and Neal, 1994; Palmer 1998; Chalmers, Scott and Gough, 2003)

have discussed the need for incorporating environmental education into the traditional schooling of society's youth, but feel that the educational systems are falling short in the way that the curriculum is implemented.

One of the major complaints with the way in which these specific educational programs are 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 believe 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 and Taylor, 1999, p. 83).

Orr (1992a) believes 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 gives students the opportunity to transfer knowledge into action and to provide for a deeper "holistic connection with aspects of the curriculum" (p.91). Orr (1992a) extends on this

idea by noting that the environment should not be a piece of the curriculum, but the central focus with which the rest of the subjects are built on.

Fortunately many of the concerns detailed above are currently being addressed in the United States, as both educators, environmentalists, and politicians are seeing the impact of environmental education on school students. Organizations such as the United States Environmental Protection Agency (EPA), has gotten involved by providing monetary awards for students and educators who are interested in starting a project or taking action in their school. The organization also provides training for educators who are interested in incorporating the environmental mission into their classroom and finally, and most importantly the EPA created a clearinghouse of information, resources, and consulting services for individuals and school districts who are interested in the Green School Movement, and it's incorporation into the classroom (United States Environmental Protection Agency, 2008b).

The second important piece that adds to the recent progression of the Green School Movement is the development of an organization known as the U.S. Green Building Council (USGBC). While there are a number of companies and organizations that have sought to focus on the green mission, none of which has been able to have the kind of impact that this organization has had. As a result of the agency's existence, more schools than ever are choosing to build or renovate with energy saving ideas in mind. The USGBC has promoted this cause by creating a certification system known as the Leadership in Energy and Environmental Design (LEED). As of October 2008, 118 schools held a LEED certificate, while 944 were registered with the USGBC and were being considered for certification. This is an exponential increase from the four schools that applied for the certification in 2000 (USGBC, 2008c).

The USGBC, whose mission is focused on "supporting environmental stewardship, social responsibility, and economic prosperity" (Feder, 2008) was created as a medium for evaluating buildings and structures to determine their sustainability score. Buildings that are working

toward the LEED certification are moving toward a more self-sustainable existence, where the structure itself can provide its own necessities and maintain itself indefinitely. This thinking aligns with Orr (1992a) and Williams and Taylor's (1999) notions of what the ideal green school might look like. Green buildings provide an environment that not only supports environmentally conscious thinking but also an atmosphere that embodies an ecologically-centered approach.

As stated, the USGBC certifies new buildings with its Leadership in Energy and Environmental Design (LEED) rating system, a process that was started in 1999 (USGBC, 2007). While the USGBC does not discriminate among the kinds of buildings they certify, one of the most recent projects that the organization has adopted is promoting the certification of public, private and boarding schools in the United States.

The LEED rating scale certifies school buildings based on a list of criteria that the USGBC has created. According to the LEED rating scale a school earns an award of certified, silver, gold or platinum founded on a system that distributes points based on varied conservation related characteristics (USGBC, 2007). The overarching environmental themes, with which schools can earn points toward certification, are listed below:

- Creation of sustainable sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Use of Resources
- Indoor Environmental Quality
- Innovation and Design Process
(USGBC, 2007)

Each of the aforementioned categories holds a number of subcategories that details the specific actions necessary for gaining points toward certification. Ultimately the criteria for this process are the amount of energy that is used, how the building will positively affect the students and the manner with which the building can be used to promote an environmentally conscious cause.

Initially only buildings that were built to be green could earn a LEED certification score, however, recently the USGBC expanded their services to provide a format for buildings already in existence and looking to renovate. As the development of the green building process evolved, researchers began to see that “energy-efficient operations and maintenance strategies could enable school districts to save as much as 20% in energy costs, extend the life of equipment, and improve the overall physical environment in their school facilities” (DOE, 2008a). This research alone motivated many school districts who could not afford a new building project to take action. The certification and guidelines offered these organizations, a way in which to begin to get involved. Schools now have the ability to make smaller changes, and the decision to make these changes should contribute to the green school conversation.

As the Green School Movement continues to gain in popularity, so do the ways in which the USGBC has chosen to provide services for its stakeholders. Most recently, and much like the EPA the USGBC has become a clearinghouse of information for any individual or organization interested in getting involved with environmental issues. The most recent publication provided by the organization highlights five initiatives that they are currently working on: green curriculum, workforce training, research, educator professional development, and relationship building between green networks (USGBC, 2008c).

Another important organization to include in the green school conversation is the U.S. Department of Energy’s (DOE) Energy Smart Schools program. The Department of Energy teamed up with USGBC to help promote green school building while specifically focusing their efforts on energy efficiency (Feder, 2008) whereas the USGBC looks at several categories (detailed above) to “encourage consideration of the built environment as a series of interacting systems” (Feder, 2008). The Energy Smart Schools program has moved the Green Movement forward by networking and creating a relationship between green builders, architects and most recently school officials.

While the DOE does not have their own certification system, like the USGBC, they have specific guidelines that are provided for architects and builders working with the school district to ensure schools are built with energy efficient standards in mind. Furthermore, the DOE utilizes the “Whole Building Design” (DOE, 2008b) approach. Much like the USGBC, the DOE looks at the building as one single unit to see how each component works together to save the most energy. “This approach differs from the traditional design/build process, as the design team examines the integration of all building components and systems and then determines how they best work together to save energy and reduce environmental impact” (DOE, 2008b).

With the “Whole School” approach in mind, the following guidelines are considered and utilized when creating an Energy Smart school:

- Daylighting- the use of natural light in a building to reduce electric lighting.
- HVAC Design- to address indoor air quality and energy consumption.
- Photovoltaic cells/panels- Maintenance-free, make use of solar energy to produce electricity.
- Building Envelope- windows, insulation, the foundations, walls and roofing. Innovative building envelope technologies make buildings more efficient, durable, comfortable, and adaptable.
- Water Conservation- Fixtures using gray water or rainwater catchment systems.
- Renewable energy- Use of geothermal energy, wind power and photovoltaics.

Finally and most importantly the DOE has successfully raised awareness through their Energy Smart Schools program and through the guidelines detailed above. Due to their resources and network at the Department of Energy, Energy Smart Schools has developed a following and has had the ability to spread the word and take action about environmental issues.

Research is also taking place in schools that have not yet developed a green architecture, but have found alternative ways to incorporate the green mission into their work. A recent study implemented by National Geographic’s “Green Guide,” supports this same finding, reporting that the actual architecture is only one piece of the larger Green School Movement. According to McRandle and Smith (2006) green schools can be created from the beginning of their existence, from a remodeling project, or in a pre-existing structure that is making internal changes over time.

McRandle and Smith (2006) go on to argue that, beyond the architecture, there are a variety of characteristics a school can have that helps them to integrate environmental action into their school. The following criterion was used by McRandle and Smith to evaluate the level at which schools operated with an ecologically conscious mission in mind.

- Renewable Energy Sources
 - Local or Organic Food/Reusable cafeteria dishes and silverware
 - Recycling Programs
 - Environmental Procurement Policies
 - Transportation
 - Environmental Contaminants (cleaning products, pesticides)
 - School Green Spaces (gardens, trails, wooded areas)
- (McRandle and Smith, 2006)

Through assessment of criteria taken from the highlighted seven categories, each school in the study was given a score of one to one hundred based on the number of criteria that were met, and the extent to which these criteria were satisfied. Schools were rated equally in each category, which allowed for schools that are creatively incorporating the green mission into their school to be included in the discussion of green schools.

Finally, the Green Movement has also found its place in local and state governments as well as the aforementioned organizations. Schools, in many states are now also being held accountable for implementing green initiatives due to state wide policies that mandate them to do so. Many states have already moved forward with this idea and chosen to take it upon themselves to find ways to ensure that their schools are moving toward a more environmentally conscious existence. This move toward greener policies has ultimately helped the Green Movement to progress as ten states are currently requiring LEED certified school construction on all new school buildings, and 44 states currently hold some form of “legislation, executive orders, resolutions, ordinances, policies, or incentives” (USGBC, 2008c). With support from local, state and federal governments who continue this trend and mandate the construction and use of ecologically efficient buildings, the Green Movement will continue to grow and prosper.

Leadership Styles Appropriate for Green Schools

While there is a wide range of literature and research concerning current leadership methods and styles, Leithwood (1999) does a thorough job in listing and further explicating the numerous generic forms of leadership approaches present in the field of education. Comparing the Green School Movement to the broad categories of leadership suggests which of Leithwood's discussed leadership styles would best suit administrators working in this unique setting.

Leithwood's (1999) "Changing Leadership: A Menu of Possibilities," becomes a framework with which to begin assessing the suitability and relevancy of appropriate particular leadership styles.

See Figure 2-1 for a summary of Leithwood's styles.

Leithwood's (1999) Proposed Leadership Styles	Explanation of Leadership style and Role of the Leader
Instructional	<ul style="list-style-type: none"> • Works closely with and provides guidance for teachers. • Holds "expert knowledge" (Leithwood, 1999, p.18) • Active involvement results in development and growth of students.
Transformational	<ul style="list-style-type: none"> • Exudes "charismatic, visionary, cultural and empowering" (Leithwood, 1999, p.9) leadership traits. • Focus on the organization • Inspire dedication to the organization in order to promote greater productivity and goal attainment.
Moral	<ul style="list-style-type: none"> • Practice and decision making is based on a set of values. • Involves organization in order to increase participation in decision making. • Value conflicts are encouraged for a morally just end.
Participative	<ul style="list-style-type: none"> • Promote communication and collaboration within the organization. • Decision making is the central focus • Distribution of decision making responsibility in order to influence greater organizational effectiveness.
Managerial	<ul style="list-style-type: none"> • Focus on completion of administrative "functions, tasks and behaviors" (Leithwood, 1999, p.14). • Emphasis on hierarchy; as one moves up hierarchal ladder, gains more power and authority to distribute tasks. • Completion of tasks results in attainment of goals.
Contingent	<ul style="list-style-type: none"> • Actions and decisions based on the context of the environment. • Each environment is viewed as special with differing backgrounds, experiences and problems. • Mastery of problem solving and reflection skills in order to decide appropriate action.

Table 2-1 Leithwood's Synthesis of Leadership Styles

Among Leithwood's six leadership styles the moral, participative, instructional, managerial and transformational approaches are seen to have the greatest relevancy to the green school environment. Examination of these five leadership styles and a closer look at how they relate to green education will help one to understand how green school leadership might be promoted.

In the case of moral leadership, for example, administrators are asked to consider a number of value sets when looking at their organization. According to Leithwood (1999) decisions are made by a moral leader who considers a set of values. Through examination of the organization's values or those of the leader, decisions are made that best suit the overall organization.

In the case of green schools, it is apparent that environmental values are also the guiding force for those promoting a green purpose. According to Nath, Hen, et.al. (1998) environmental education is defined as:

...the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among man, his culture and his biophysical surroundings (p.424)

It is the leader's acknowledgement of their values in a green school setting that he or she can begin to consider how to implement moral leadership.

While there are a number of ways that a school can become green, a moral leader would be one who understands this mission, places importance on it in practice and makes decisions that could move the school in a more environmentally conscious direction.

One way that a green school could benefit from moral leadership is by centering the values and mission of the school on the green purpose. According to Starratt (1994) a major piece for a moral leader in building an ethical school is to keep the ethics and values of the school constant and consistent:

When youngsters encounter various teachers throughout the school day who model ethical values, when ethical concerns are discussed in various subjects across the curriculum, when guidance counselors, coaches and moderators of student activities all consistently speak about ethical concerns, when the school corridors are hung with posters which reflect ethical values of self-respect, loyalty and honesty, and when the school and the home express consistent concern over ethical issues, the message is pretty hard to ignore (p.60).

The method that Starratt (1994) suggests is also supported by the topics discussed earlier with the work of Orr (1992a) who feels that “environmental education is most often regarded as an extra in the curriculum not as a core requirement or as an aspect, pervading the entire educational process” (p.89). A moral leader in this matter could assist a school by placing an emphasis on including the environment in all parts of the educational process and subsequently including both a shared value set and environmental concerns into the entire educational approach.

Another way in which a moral leader could assist a school in meeting the designated goals is by holding shared or similar values as the organization. The first step in this process for the administrator is having an understanding of his or her own values. As Begley (2004) notes a major piece of being an authentic leader is “self knowledge” (p.5), it is important for an administrator to know his or her own “personal beliefs, attitudes and values as components of a clear philosophy of education. The practitioner of educational supervision who is unable to articulate basic thoughts concerning professional issues, will find successful leadership difficult” (Daresh & Playko, 1995 p.32). Gaining an understanding of what the administrator believes will help guide their practice, their work with staff members, and also how much they buy-in to the Green Movement.

The second leadership style that would be effective in the green school environment is participative leadership. According to Leithwood (1999) participative leaders work with everyone in their organization in order to share the decision making process.

Due to the shared decision making that takes place under a participative leader, the entire organization is involved in bringing about changes for the school. Furthermore, by working as a team the participative leader creates unity within the organization, which can ultimately promote and support policies and initiatives within the school.

According to Williams and Taylor (1999) the environment should be “at the core of the educational program” (p.80) in green schools. In order to implement this approach all members of the staff must be involved in working toward the same purpose. Part of what makes green education special are the relationships forged between administrators, students and staff. By creating a curriculum that holds the environment as a constant within all of the subject matter requires cooperation, commitment and participation by both the administrators and the staff.

Relationship building is an important part of the participative leader’s role and is vital for success in the green school environment. While the educational leader is responsible for creating an environment where relationships can be built, this also leads to a necessary component in the building and implementing of the green school curriculum. Williams and Taylor (1999) believe that in order for environmental education to have a lasting effect on educators “building relationships with parents, students, staff and community” (p.100) is a necessary and time intensive process. A participative leader, under these conditions would aid in this process, by having an understanding of the school’s needs, and how to involve the staff in the established participatory environment.

The third leadership style that is appropriate for the study of green school leaders is instructional leadership. According to Leithwood (1999) administrators who work from the instructional leadership approach focus on “the behaviors of the teachers as they engage in activities directly affecting the growth of the students” (p.8). Leadership in this manner ensures the administrator’s active involvement with their staff and in the school building. While the administrator or teacher leader (Davidson, 1992) may be the one who holds the “expert

knowledge” (Leithwood, 1999, p 18), their job is to work closely with their teachers to ensure student achievement through appropriate classroom practices. According to Leithwood, Begley and Cousins (1994) the key result for instructional leaders is to promote student growth and development. Instructional leadership allows the administrator to spend time working with issues in the classroom and achieving the discussed goal.

Begley (2008b) believes that in order for a principal to be a successful instructional leader he or she must “engage in deliberative, data-driven processes to maximize student learning and achievement and to improve instructional practice” (p.19). This process should be evident throughout the “professional learning community,” in the “school plans, inclusive education” and in “staff development” (p.19).

In the case of the green school leader the instructional leadership technique is evident in many cases because the principal is the one who is the appointed person for moving the Green Movement along. As this is a relatively new idea in education, it is the leader’s role to help the teachers in finding ways to incorporate the environment in their classroom, through curriculum that is built around environmental issues.

Green schools are popping up in every state and in many cases it is the district’s decision to implement this initiative. It is in this case that the teacher has little say in how the district will promote environmental actions, and it is unlikely that all of the teachers will have experience in incorporating the environment into their classroom work. It becomes the principal’s job then, to ensure that the curriculum is built around environmental issues as well as appropriate pedagogy, in order to guarantee student learning.

According to Fink and Resnick (2001) a high quality instructional leader is not only aware of the content knowledge but also has the ability and understanding to improve the teaching in their school. The principal in this role should have the specific capabilities for:

... knowing individual teachers well enough to suggest specific improvements, creating a culture in which deep knowledge of instruction and learning serves as the foundation for an interdependent professional community (Fink & Resnick, 2001, p.1).

An important point to mention is that the instructional leader is not the teacher. They should have a strong understanding of the content knowledge, but their focus is on leadership and guiding the teachers to provide the best education possible to their individual students. It is the green school leader's role in this case to be a role model for the teachers and collaborate with them in order to find ways to work the environment into the curriculum in a way that is comfortable for the teacher, while also meeting the needs of the student.

Managerial leadership is demonstrated by an administrator who focuses on organization of the "functions, tasks and behaviors" (Leithwood, 1999, p.14) of the school. Curtis and Sherlock (2006) add that managerial leadership is focused on a "set of goals" (p.120) and that it is through achievement of these goals that a leader is successful (Yukl, 2001). Managerial leadership is focused on the overall goals of the organization which in turn drives the leader to complete the discussed tasks so that the organization, working as a rational body, can benefit from the practice.

Managerial leadership, when incorporated with other leadership styles is appropriate for green school leaders because there are a number of tasks associated with the movement, that take place. The goal, as mentioned above is to ultimately have a green school. In order to reach that goal a principal must attend construction meetings, balance the needs of the builders and the school population and in many cases look over building budgets to ensure that the cost of the project will in the long run be worth the outcome.

As mentioned managerial leadership, in itself is not an appropriate style for green school leaders. Coupled with other leadership styles mentioned in this discussion, it becomes a medium for getting tasks accomplished that are necessary in the greening process.

Finally, administrators who demonstrate transformational leadership show a commitment to the members of their organization. Leithwood (1999) describes a transformational leader as believing that the “central focus of leadership ought to be the commitments and capacities of organizational members” (p.9). Through the participants’ dedication to the organization, Leithwood (1999) feels that there will be a greater commitment to the overall educational goals and extra effort put forth by the community so that these goals can be attained. This commitment by all of the parties will ultimately result in “greater productivity” (Leithwood, 1999, p. 9) and a successful organization.

According to Leithwood (1999) the term transformational leadership is all encompassing for leaders who exude “charismatic, visionary, cultural and empowering” leadership traits as well. It is through demonstration of these traits that a leader delegates responsibility and gives power to their organization, which will ultimately result in greater buy-in and production for the school community.

The green school environment is an appropriate place for a transformational leader because it allows the organization to “develop mutual goals, to recognize and achieve higher order needs” and to make substantive progress (Rada, 1999, p.1). While many times it is the principal who is in the leadership role, the overall goal of the transformational leader should always be to inspire significantly greater commitment so that the organization as a whole can continue to improve (Leithwood & Duke, 1998). Due to the nature of the Green Movement, action in this environment is a team effort, and ecological issues cannot be solved alone. Buy-in from the organization is necessary and important in, not only building and constructing a green mission, but then to also follow that plan.

A transformational leader in a green school exudes influence on their organization in a number of ways. Leithwood (1992) suggests that one might focus on collaboration in working toward a green vision, creating a school culture based on the environment, fostering teacher

development and finally helping teachers solve problems and decide how to incorporate this into their classrooms and lives (p.8).

A transformational leader in this green environment is necessary because of the need for the organization as a whole to buy in. While it might be a goal or value of the leader's to develop a green school it is only through inspiration by a leader and collaboration of the unit, that a green school can be taken from an idea and turned into a reality.

Roles, Responsibilities and Characteristics of a Green School Leader

While understanding the specific roles and responsibilities of the green school leader is difficult, due to the early stages that this movement is in, the literature on school and environmental leadership is lengthy and ultimately hints at what a green school leader's job might entail.

According to Berry and Gorgon (1993) environmental leadership can be defined as "the ability of an individual or group to guide positive change toward a vision of an environmentally better future" (p.3). Furthermore Egri and Herman extend on this definition to include a leader's ability to apply a vision of "long-term ecological sustainability" (p.572). While the above definition is purposefully general, the leadership applied to each organization is contextual and should lead in a manner that is relative to the nature of the unit and its participants.

With this said, environmental leadership is "different" than traditional leadership theory. Shrivastava (1994) elaborates on this thinking by stating "transformation to ecological sustainability requires a new form of eco-centric management and leadership" (p. 225). Looked at it in this way, it appears there is a distinction between an "environmental leader," and a "green school leader." While an environmental leader must keep environmental concerns as the central focus for their leadership, a school leader must keep the education of children at the forefront of their leadership. 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 (2008b) describes, a green school leader must be able to incorporate a large number of stakeholders 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 critical to developing environment advocacy. A green school leader, if looked at this in this way must be able to bring together environmental issues as well as educational issues and communicate this information to their staff and students so that the two worlds can grow together in one educational plan.

Egri and Herman (2000) believe that there are two main features that should be present for environmental leaders working in any field. Initially a leader must be guided by a personal “belief systems that deeply values and identifies with nature” (p.572). If the environment is a personal cause for the leaders, it is more likely that they will act with this in mind and as an advocate for its safety. Much like Leithwood’s discussion of moral leadership, Egri and Herman agree that holding the environment as a central value, helps to motivate environmental action in school leaders.

In looking specifically at the green school administrator, Gordon and Berry (2006) expect the successful environmental leader in an academic environment to be:

- Compassionate and respectful of self, others, and the environment.
- Understanding the present and having a vision for the future.
- Promoting cooperation between all individuals and units.
- Sharing power within the organization.
- Honoring and conserving the work of everyone in the organization.
- Working with others to promote change.

The academic environment is a sacred and sensitive place and in order for a leader to make progress while managing the unit is an important task that takes skill and understanding of the culture.

Furthermore, 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 also be able to articulate these values across the policies and purposes of their school. In order for a green school program to reach its potential, the program must have a leader who has similar beliefs in order for that individual to create the change and progress necessary in this environment. As mentioned, it is with these deeply held values that a leader is motivated to act and work so that the policies and practices held by the school are functioning at the highest level.

Secondly Egri & Herman (2000) believe that these values must be incorporated into the "organizational processes, activities and relationships" (p.572). The environment under these circumstances should be the central point from which the organization works from. While this might become more difficult depending on the kind of organization in operation, it is the leader's job to decide how ecological issues might be included in the daily routines.

While a set of values that are in line with the school mission are necessary, Wenzhong (2004) argues that an educational leader must also have a strong understanding of what actually makes high quality green education and then be able to implement it in practice.

It turns out that in the schools that have a firm grasp on environmental education, there is a school principal who has a very strong awareness of environmental protection. An environmentally aware principal is, by way of applying his values, ideals, and beliefs about environmental education, able to influence every member of the school and allow environmental education to develop prosperously in his school (Wenzhong, 2004, p.87).

Wenzhong (2004) also describes the need for a green school leader to act 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 into the

student's educational experience. This action, in turn, goes back to the administrator working with an environment in which they are knowledgeable. An administrator in this role should be creative in problem solving and have experience in dealing with school-wide policies so that they can ultimately supplement the environmental mission.

The "initiator" that is described above can also be viewed as a visionary leader. As Begley (2008b) sees it, a visionary leader is one who "collaboratively develops a shared vision of a transformational learning environment, builds trust, inspires action and motivates stakeholders to attain educational goals" (p.33). The goal in this case is the environmental one, and as this literature suggests, in order to lead appropriately in this environment the leader must have a clear vision of the goal, and then have the ability to connect with the educational community in order to inspire these individuals to take action and ultimately achieve the environmental goal. The focus in this case is on the leader and their clear environmental vision. If a leader has a clear idea of what they want their school to look like, and then couples this vision with the resources to make it happen, they will be more likely to take a risk and initiate a project such as this one.

A final characteristic already touched upon, by Gordon and Berry (2006) but worthy of emphasizing is the ability 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). Finally 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.

Social Responsibility and School Leadership

While there is a rich body of literature available concerning educational leadership many researchers have chosen to refine their leadership focus on the link between school leaders and social justice. According to Leithwood and Riehl (2003) school leadership is defined as “those persons, occupying various roles in the school, who work with others to provide direction and who exert influence on persons and things in order to achieve the school’s goals” (p.9).

Leithwood and Riehl (2003) make an argument for concerning oneself with social justice theory by saying that one of the main components for becoming a successful educational leader is to build a socially just school environment.

The idea of social justice refers to the “distribution of rights, opportunities, and resources among human beings” (Miller, 1999, p.151). Social justice is an umbrella term that refers to equity, and the need to give a voice to marginalized groups and issues. Furman (2002) elaborates that social justice becomes an issue when “communities exclude those who are different” (p.3) The differences that Furman (2002) discusses “can and often are, created or utilized to justify and carry out social injustices, that are seemingly incompatible with the democratic ideals of equality and justice” (p.3).

When considering how an administrator leads through a social justice lens, it is necessary to determine how the environment is integrated into social justice theory. With ideas in line with Fondacaro and Weinberg (2002) and Prilleltensky and Nelson (1997), the following quotation helps one to understand how social justice can be defined.

Social justice reflects a fundamental valuing of fairness and equity in resources, rights, and treatment for marginalized individuals and groups of people who do not share equal power in society because of their immigration, racial, ethnic, age, socioeconomic, religious heritage, physical ability, or sexual orientation status groups (Constantine, Hage, et. al, 2007, p.24).

Miller (1999) notes that while many times social justice issues are concerned with the rights of human beings, environmental concerns must not be forgotten and need to be included in

the discussion involving social justice and social responsibility. It should be noted that while few researchers relate environmental issues to social justice theory, as stated, it appears that this theory is directly related to the rights and freedoms of individuals, and while this study examines people who are working for environmental injustices, the literature suggests a closer relationship with social responsibility theory.

Those who work in support of environmental causes feel that they are socially responsible, due to their position and beliefs, to advocate for this specific cause. An educational leader in this manner feels that it is their obligation to fulfill a responsibility to society in a rapidly changing world outside of the school walls. More specifically Starratt (2003) notes, that a socially responsible leader is someone who “conveys a continuous state of obligation or accountability; put more positively, a continuous state of attending to the other person, a continuous state of caring and loving” (pg.111). Starratt (2003) goes on to make the distinction that someone who is socially responsible has an understanding of both what their purpose is and what they are responsible for. Educators alone may feel a responsibility to make a difference in the lives of their students, which is why they chose a career in teaching. Similar to a moral leader, many times this responsibility comes from one’s own set of values (Fullan, 2002, p.17), and is driven through awareness of this value and for the betterment of the organization or society.

In order to define how school leadership supports socially responsible practices, it may be appropriate to look at the characteristics necessary for a leader in this environment. The first characteristic that one must hold in order to work towards a socially responsible cause is awareness. According to Constantine, Hage, Kindaichi and Bryant (2007) a successful leader must be knowledgeable and aware of social inequities, participate in self-reflection to understand one’s own beliefs on the matter and also question practices that might be inappropriate. An awareness of self, society, one’s immediate environment and the cause that they are working for

will help an educational leader to make a decision that can positively affect their population and their agenda.

The term awareness refers to the assumption that educational leaders should first understand themselves, their cause and how this affects their population. According to Senge (1990):

In a learning organization leaders may start by pursuing their own vision, but as they listen carefully to others' visions they begin to see that their own personal vision is part of something larger. This does not diminish any leader's sense of responsibility for the vision—if anything it deepens it (p.392).

It is through understanding oneself, their staff and their environment that a leader can begin to understand how to implement their values and advocate for their cause. As Covey (1994) agrees a leader should first understand their environment in order to be understood by their population. A leader that is observant and reflective of their values, the needs of their population and their cause, will have a better chance at being effective in the role they occupy.

Another characteristic associated with socially responsible leaders is the ability to build relationships within one's learning community. While a leader, in this manner, has an added obligation to pursue work toward a specific cause, conversation and collaboration with the staff are necessary to make this vision happen. According to Starratt (2003) responsibility is a product of the "daily negotiation of our relationships; if these relationships are going to work in any humanly satisfying and reasonably predictable fashion, then we have to take responsibility towards those relationships and for those consistent actions that make them work" (p. 110). Relationships discussed through this perspective are seen as a major piece to being responsible.

An outcome to building positive relationships is the development of trust. By making the vision of the school known and creating a place where conversation toward reaching this mission is welcomed will help to build trust within a school (Howard, 2007). Furthermore, if administrators can model the behaviors that they would like to see in their learning community,

the staff will be more likely to work together toward the acknowledged goal and in unison for the betterment of the educational environment.

The final characteristic that is necessary for educational leaders promoting a socially responsible agenda is the ability to support “powerful forms of teaching and learning” (Leithwood and Riehl, 2003, p.8). According to Howard (2007) the first step in this process is in constantly examining pedagogical methods to ensure that they are in line with the school’s goals. The administrators in this case may take on a more active classroom role, as they have to “become co-learners with the teachers to transform classroom practices” (Howard, 2007, pg. 20). “Beyond work with individual teachers, administrators work at developing a sense of shared responsibility among all the teachers to all the students in the school for their quality learning” (Starratt, 2003, pg.115). It is the administrator’s job in this case to become a liaison between the school’s vision and the actual classroom work.

From this point the educational leader should focus on actively working with their staff to ensure that the learning experiences that the teachers are producing are helping to cultivate social responsibility. By creating a socially responsible community, the administrators and staff have a better understanding of the needs of the students and their role in working toward a vision for the school.

An effective educational leader is one who understands that the above characteristics cannot work alone, but must be employed in unison, in order for the environmental mission to be accomplished. While each characteristic is necessary, it cannot be effective without dedicated attention given to others. A socially responsible leader under these conditions must be one who understands their role, the mission of the school and has the ability to bring the two together for the betterment of the educational community. “The responsible community is a community that knows it is on a journey, a journey that is never complete; the virtue is in the striving much more than in the definitive achievement” (Starratt, 2003, pg. 154). Social responsibility inherently

necessitates a fusion of all of the aforementioned characteristics, and as Starratt states, social responsibility is not an isolated goal that can be quantified by objective statistical analysis, but rather is an ongoing process that must be tended to like a garden, for even the healthiest of gardens, if neglected, can suffer.

In looking at the role of the green school principal, there are many theories and ideas that one must be knowledgeable of, and characteristics and qualities that one must hold. While the body of literature concerning green schools is constantly growing, the research implemented on the administrator should not be left behind. As environmental issues and action oriented conversation becomes the norm, so will the focus on green schools and the individuals who are leading them. As Wenzhong (2004) points out “if one wants to discuss a school, he must first talk about its principal” (p.1). In similar fashion, and for the purposes this study, in order to fully understand the Green School Movement, one must begin with an investigation of their leaders.

Chapter 3

RESEARCH METHODOLOGY

As discussed in chapter one, the purpose of this study is to investigate the perspectives and orientations of principals and their leadership practices in the context of the Green School Movement. The goal of this study was to gain a deeper understanding of administrators' roles and how they came to this position in order to promote environmental consciousness through the Green School Movement. The following methodology was developed and employed to answer the research questions posed in Chapter One.

Research Sites

Five individual school sites and their respective principals were utilized for this study. Each research site is situated in its own district or area and is not related to the other four participating schools. The five schools (pseudonyms used) that were studied are listed below:

- The Huntington School
- Hyatt Elementary
- Mountain Top Elementary
- Webster Middle School
- Wooded Creek Elementary

The Institutional Review Board (IRB) application and materials that were necessary for the study of the participants listed above have been completed and approved for this study.

Research Design

Due to the descriptive and exploratory nature of this study, and the potential variation in contexts among the schools, it was appropriate to adopt a methodology based on a qualitative research approach. Strauss and Corbin (1998) describe qualitative methods as “research about persons' lives, lived experiences, behaviors, emotions, and feelings as well as about organizational functioning, social movements, cultural phenomena and interactions between nations” (p.11). Because the Green Movement is still a relatively new phenomenon, it is

important to get at the heart of what this cultural phenomenon is, and what composes green school leadership. Qualitative research was the appropriate method to employ for this study because it allowed the investigator to enter the environment, make observations, conduct interviews, and ultimately portray this experience as a snapshot in time.

Furthermore, various qualitative strategies allowed the researcher to gain an in-depth understanding of the participants' lived experiences. The qualitative approaches applied to this study also helped the researcher understand the values and motivations of the participants. These values and motivations form the heart of this study and their importance cannot be overstated.

According to Bogden and Biklin (2007) having interactions with a given environment and subsequently using this knowledge to create descriptions of the lived experience helps one to meet their objective. It is through the describing process that a researcher can begin to create "meaning" (Bogden & Biklin, 2007, p.7) out of the data and ultimately obtain a sense of what this experience is like for those who are living it. Qualitative methodologies brought to life the focus of the research and gave a voice to the participants being studied.

Case Study

A multi-site sample was used as the basis for building this study. It focused around the tenets of the case study methodology, and while a number of samples can be further compared for analysis, each unit is itself a single independent entity. Merriam (2002) goes on to explain that each case should be studied as the "specific, complex, functioning thing" (p.176) that it is. Looking at this experience more practically, implementing methods aligned with the Case Study methodology as the research design, allows the researcher to "gain a detailed examination of one setting, or a single subject, a single depository of documents or one particular event" (Bogden & Biklin, 2007, p.59).

This researcher has chosen to use aspects of the Case Study methodology instead of strictly following case study guidelines so that a number of samples can be looked at from a

variety of lenses. While a traditional case study might have the researcher look at one or two schools and interview a large number of people at each site, this researcher has chosen to look at five schools, and engage in four different data collection methods with the participants. This methodology was chosen because the researcher was specifically interested in the school principal's role, and she felt that by restricting the pool of participants to one or two, she would limit how much meaningful information could actually be collected and used for analysis.

Furthermore, there are benefits that come from this practice, and despite using a greater number of participants, the methodologies applied for collecting the data stems from the case study methodology and therefore resulted in "deep meaning and understanding" (Merriam, 2002, p.179) on the researcher's part and a "richly descriptive product" (Merriam, 2002, p.179). The Case Study methodology, allows the researcher to collect high quality data which ultimately allows for the rich analysis necessary for understanding what a green school administrator's role actually entails.

Sampling

Once the case study framework for this study was established, deciding the method for selecting the participants was the next step. Deciding the proper sampling method would allow the researcher to consider what qualities were necessary for the participants of this study to have. Maxwell (2004) describes this process as "essential" (p.87) to the research process. "Even a single case study involves a choice of this case rather than others (Maxwell, 2004, p, 86) and the parameters that were used to identify the appropriate population were critical in deciding who would provide insightful and useful data. As Miles and Huberman (1994) explain, choosing the right sampling method "is crucial for later analysis" (p.27). On a practical level it became very clear that the necessity to choose an appropriate sampling method was critical for ensuring a robust analysis.

Purposeful sampling appeared to be the best option for finding and recruiting appropriate participants. Maxwell (2004) describes purposeful sampling as “a strategy in which a particular setting, persons or activities are selected deliberately in order to provide information that cannot be gotten...from other choices” (p.88). Patton (1990) clarifies “the logic and power of purposeful sampling lies in selecting information-rich cases for in-depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research” (p.169). Due to the specificity of the green school leader’s role, and the nature of the work that they carry out, creating a sample using this method, was necessary.

Purposeful sampling was initiated by making note of the limits and boundaries necessary to “define aspects of the case that one can study within the limits of time and means” (Miles & Huberman, 1994, p. 27). With the proposed research questions in mind, the researcher set up guidelines which helped to detail characteristics that a principal would need to have in order to be involved in the study. These limits helped to focus the study, and allowed for directed data analysis.

The researcher created the following guidelines for principals who were interested in participating; the participants must be a principal in a public, private, or charter school that has a green focus, in the United States. While the criteria initially seemed quite general, it was purposefully set up in this manner because of limited number of schools who were promoting a green mission at the onset of the given study. While this was the case in the early stages, as time has progressed the number of schools who have taken on an environmental purpose have skyrocketed. With this said, the guidelines remain as they are and at the time were appropriate for recruiting potential participants.

In order to implement proper purposeful sampling the researcher reviewed a number of potential green school participants by researching them on the internet and through a database provided by the U.S. Green Building Council (USGBC). Schools that have completed the

Leadership in Energy and Environmental Design (LEED) certification process, those that were reviewed for certification, or those schools currently implementing a school mission based on environmental issues, were contacted for the purposes of this study. While the initial feeling of the researcher was that only schools who had achieved a LEED certification would be contacted, it became clear as time passed, that green schools and their leaders were increasing in number, but for some reason they could not, or had not gone through the LEED certification process. It was the researcher's feeling that leaving out these potential participants would not allow for a proper representation sample, as these individuals had found alternative ways in which to "go green," even without the LEED certification.

The initial contact was made with the principals of the appropriate schools through e-mail and by telephone. During the first contact the researcher spoke with each principal about the purpose of her research. She subsequently collected information about the schools to gain a better understanding of the school's relevance to the study. This task was accomplished by asking about the background of the school and the principal's role in the greening process. If the school principals were interested at the conclusion of this conversation, they were invited to join in the research.

Participant Selection

After initially contacting twenty-one school principals who met the sampling criteria, five principals agreed to participate. Each principal represented a different school and district, but they all have the environmental focus in common. It is with this knowledge that the principals agreed to speak with the researcher about their involvement in the Green Movement. After the initial e-mail, phone or face-face conversation Diane from Wooded Creek Elementary, Kristen from The Huntington School, Laura from Webster Middle School and Charles from Mountain Top High School were invited to participate in the study. The fifth volunteer dropped out after a pre-screening was completed, and Kaitlin, a principal at Hyatt Elementary was contacted and agreed

to participate. Once the participants had verbally agreed to be involved and then formally consented to the study, the researcher began the data collection process.

Data Collection

While the methods of data collection for this study are appropriate for that of a case study methodology, three distinct phases were employed to not only build credibility for the study, but also to gain a whole picture of the principal's role in the green environment.

Phase One:

The first component of the methodology that was implemented involves a document analysis process at each of the school locations involved in the study in order to gain an understanding of the context and mission of the specific environments. Document analysis is the process of reviewing physical artifacts to note the "presence or absence of information" (Anderson, 1998, p.155). Gillham (2000) describes physical artifacts as anything that is "made" (p.88) and therefore, document analysis is the review of these made objects. Physical artifacts can be "written, oral, visual or cultural" (Merriam, et. al, 2002, pg. 13), and are typically "public records, personal documents, and physical materials" (Merriam, et. al, 2002, p. 13). Gillham (2000) also believes that physical artifacts have the ability to be the most "important evidence" (p.88) to the case study researcher because of the essence and validity they add to the research study.

The document analysis methodology was utilized in this study to gain background information into how the green mission was currently being implemented in the school, and how the principal was involved in this process. This was also the first step in the data collection process and it was implemented and completed before the researcher actually spent any time in the school. Once each principal had agreed to take part in the study, a website, mission statement or article was examined to understand its relevance to the larger research questions. The researcher asked the participants for a document of their choice, and also reviewed documents

and school mission statements as they were relevant to the second phase of the study. Upon completion of the document review, notes were made about this document, so that the information that was gained could be used throughout the observation and in the interviewing of the each principal. Finally, the researcher worked with the administrator to understand the leader's role in creating this document and how it impacts his or her specific environment.

At the completion of the first phase of the study, the researcher held information about the principal and their role in the green school. The information that was collected during this time laid the groundwork for the next steps and gave the researcher a central idea about what to look for during the second phase of the data collection process.

Phase Two:

The second component of the methodology was an observation period that allowed the researcher to act as an active observer while gaining valuable information for the study. Merriam (2002) believes the "observational approach represents a firsthand encounter with the phenomenon of interest rather than a second hand account obtained in an interview" (p.13). As Gillham (2000) suggests an observation has three very basic components: "watching what people do, listening to what people say", and asking clarifying questions (p.45). This approach allowed the researcher to ease into the environment, to gain a sense of the principal's role in the specific setting.

The observation that took place in this study was made up of two specific parts. During this phase the researcher engaged in an observation of the principal while also taking a tour of the green facility in which this individual worked. During this portion of the study the researcher spent between one to two hours in each school. 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 in the implementation of the green mission. The researcher also used this time to act as an active observer as this was an opportunity to participate in casual conversation and

ask questions about the leader's role. 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.

Prior to coming to the school, the researcher arranged for a time that was convenient for the administrator, and then gave this individual enough notice so that they could inform their building staff, if need be. Talking to the principal ahead of time and then gaining entrance upon their acceptance, helped to immediately build a relationship between the researcher and the participant. This relationship ultimately helped the researcher to better understand the principal's impact and their specific role.

During the observation and the building tour, the researcher took field notes to document what she saw. Additionally, the researcher took digital photographs of the school building and its components throughout the tour to supplement the field notes. These images were only taken of the school building, and no children were photographed. The images were used as a resource for documentation after the researcher left the school. The field notes that were created were used to create detailed interview questions that were implemented in phase three of this study, the interview phase.

Prior to beginning the third phase and at the conclusion of phase two the researcher piloted the questions that came out of the observation to check their relevancy and effectiveness in collecting the most accurate data. In doing this, the questions were initially implemented through a preliminary interview of a colleague. Maxwell (2004) suggests piloting questions with another person prior to the actual interview, because it allows the researcher to "anticipate...how particular questions will work in practice-how people will understand them and how they are likely to respond" (p.93). When the researcher felt that the questions were collecting the kind of information she was interested in, they were implemented with the participants in the third phase of this study.

Phase Three:

The third and final phase of the data collection process was implemented through two rounds of detailed interviews with each principal participant. The majority of the data collected for this study, came from the third phase due to the semi-structured nature of the interview. 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). The researcher used the interviews to explore a number of topics and areas for this study.

Depending on the participant’s time frame, and convenience for travel, the school principals decided whether or not he or she wanted to do the interview on the same day as the observation, or if it would be implemented on a different day. Tentative interview questions were planned for those that chose to do the interview on the same day as the tour, and the questions were then manipulated depending on the conversation and observation that took place.

Each interview lasted between 45 and 90 minutes and was used to address details of the principal’s role that could not be observed prior to the interview. As mentioned the questions that were posed to the participants were prepared in advance in a semi-structured form, but the open-ended inquiries were intended to collect rich and meaningful data. Each interview was recorded with a digital tape-recorder and was then used for transcription and analysis upon the completion of the conversation. When the conversation was transcribed, the information was then given to the participants in order to check the accuracy of the document as well as to give each individual the opportunity to elaborate or clarify on a topic of discussion. Upon approval of the transcribed document by the participant, follow-up questions were prepared.

The second piece of the third stage was implemented through a follow-up interview that was completed with each principal over the telephone. The participants were given the option to

either follow-up over the phone or through e-mail, though each participant chose the telephone. The questions that were posed for these interviews came from the field notes taken during the observations and the first set of interviews that were completed. While many of the responses from the first interviews were complete and sufficiently answered many of the research questions, the follow-up interview was much shorter and allowed for an in-depth look into the specific topics that each participant had already raised. Each telephone interview lasted between 15 and 30 minutes and again simply clarified many of the statements made in the previous interview. Similar to the first interviews, the text from this conversation was transcribed and then analyzed to reveal a clear image of what the green school leader's role looks like, from the perspective of this study's five participants.

Data Analysis

Analysis of the data was an ongoing process throughout each phase of this study. While a specific sequence was applied, in order to gain rich data as the collection methods were implemented, it also assisted in revealing new layers of data as they became available. While the two rounds of interviews were the most specific source of data, they were developed and supplemented through the observations and analysis of artifacts that took place early in the study. As mentioned, the methodology applied to this study, is rolling in the sense that each phase is based on the one before it. Much like the data collection phases, the analysis of the data was set up to allow the information to "unfold, cascade, roll and emerge" (Lincoln & Guba, 1985, p.210). After each interview took place the researcher transcribed the data and immediately began coding and analyzing the information, so that as information was being collected the researcher was also continually gaining an understanding of the study. Ultimately this method helped the researcher to prepare follow up interview questions that were specific and appropriate for collecting the most worthwhile information.

As this process was taking place, the basic tenets of a grounded theory approach were applied to the data in order to find major themes or patterns weaved within the work. It is through a comparison of the different data sources, that the researcher analyzed each phase of the study.

Grounded Analysis

Through the collection and careful examination of information derived from the participants a researcher first collects the information and then derives a theory from their data (Glaser & Strauss, 1967, p. 9). While the framework or theory that is arrived at can have many purposes, grounded theory allows the researcher to take their research in many different directions and assist in building knowledge for a number of audiences. While not abiding strictly to a grounded theory approach, pieces of a grounded analysis were used in this study to offer “insight” (Strauss & Corbin, 1998, 12) as it “enhances understanding” (Strauss & Corbin, 1998, 12) of the researcher’s work. Furthermore, taken to the next level, this procedure can provide implications for practice that can help researchers and educators in their daily lives.

Coding

During the study, and once the data was gathered, the researcher had to decide how to go about analyzing the new information. The process that appeared to be suitable for this study and in line with a grounded analysis approach was implemented through the coding of transcriptions, and field notes created during the data collection phase. Codes that are used for analysis are known as “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study” (Miles & Huberman, 1994, p.56). The coding that was completed for this study was implemented in a number of levels, in order to gain the deepest understanding of the spoken words and written text provided by the participants.

The first level of analysis is called “open-coding” (Strauss & Corbin, 1994, p. 101). The researcher implemented this approach by assigning large general phrases, subjects or words to the

data sections of text. Strauss and Corbin (1994) describe open coding as the “analytic process through which concepts are identified and their properties and dimensions are discovered in data” (p. 101). The large groups of text that were pulled out and analyzed are known as “chunks” (Miles & Huberman, 1994, p. 56), and they helped the researcher to bring about meaning in what appeared to be an enormous amount of data. These initial groups of data that were given titles, held meaning for the researcher. This group of codes is what is referred to as the “building blocks” (Strauss & Corbin, 1994, p.13) for the next level of coding.

The second level of analysis that took place is known as “axial coding” (Strauss & Corbin, 1998, p.123). Axial coding is the process by which the major themes or “building blocks” that are systematically created through the open-coding process are broken down into subcategories (Strauss & Corbin, 1994, p. 123). The purpose of this step is simple in that it allowed the researcher to look into the meaning of the text under the building blocks and then further break them down, and apply a more specific label. The reasoning for pulling out the larger categories is to “fracture” (Strauss, 1987, p.29) the “data and rearrange them into categories that facilitate comparison between things in the same category and that aid in the development of theoretical concepts” (Maxwell, 2004, p. 96). As the researcher was able to compare and contrast the overall themes present in the data, a conceptual framework began to form that ultimately was used to shed light on what leadership in green schools actually looks like.

The third phase in the coding process was “selective coding” (Strauss & Corbin, 1998, p.143). This piece of the analysis helped the researcher organize the codes so that a framework could evolve from the categories that were created in the first two stages. Strauss and Corbin (1998) describe selective coding as the “process of integrating and refining” (p.161) the framework. Through this process important themes and categories were pulled out and analyzed until saturation of the coding occurred. Finally, as a central theme began to form the major

categories and raw data were utilized to support the newly created ideas and understandings (Strauss & Corbin, 1998, p.161).

Finally, the researcher took the codes and data used during this process to apply it to the research questions posed in chapter one. Through this process a central idea formed about what the green school leader's role looks like, by applying the data that had been collected to the questions posed. By seeing answers to the research questions, the researcher could see that saturation had taken place, and that no additional information was needed.

Credibility

Due to the nature of the case study approach, validity and reliability of the data must be considered when presenting the final information. While there are a number of ways to build "trustworthiness" (Krafting, 1991) of the data, the researcher chose to pursue four popular methods for accomplishing this task.

In order to initially build credibility for this study the researcher chose to implement a method known as triangulation. Triangulation is a term that describes the approach used to increase the validity of one's work through the use of multiple researchers, multiple perspectives, and/or multiple methods (Denzin, 1970). As Yin (2003) suggests triangulation adds strength to the case study approach and should be utilized for anyone who is involved in this practice. Triangulation helps to establish validity of the final results which is a necessary piece of any the study.

The idea of triangulation in this specific study made the data collection methodology easier to formulate. Triangulation was used as a medium to build the data collection methodology, and helped the researcher because of the depth of data that was ultimately collected from each participant.

For the purpose of this study triangulation has been implemented by collecting data through three different methods. The data that was collected was through document analysis,

observation, and by conducting two sets of interviews with each principal. While each data collection method was implemented for specific purposes and is, in itself important to the study each phase overlapped, ultimately providing insight, and highlighting ideas, themes and questions for the next phase.

Secondly, the researcher chose to use the method of member checking with the participants. As Ratcliff (1995) describes member checking is accomplished when a researcher goes back to “those researched, at the completion of the study, and asks them if they are accurate or need correction/elaboration on constructs, and hypotheses”(p.1). This method was implemented after the first data collection appointment. The researcher chose to accomplish this by contacting the participants through e-mail and by the phone in order to mail or e-mail transcriptions of the initial interviews. Each participant had the opportunity to check on each transcription to ensure that the work was correct. This same task was completed for the final draft of the study. If the participants agreed that the transcriptions and final conclusions are correct with what they were saying, the researcher concluded this information valid for the final study.

The third step in promoting credibility is by building reliability for the study. The researcher listened to the taped interviews multiple times to ensure that the transcribed notes were correct. When this was checked and upon completion of this task the audio taped interview appeared to be correct with the transcribed notes. This process allowed the researcher to not only check to ensure that the data had been transcribed correctly, but it also assisted the researcher in familiarizing herself with the data, and brought about questions for the second round of interviews, and ideas for the three stages of coding.

The final manner with which the researcher has achieved credibility for this study is through a process known as inter-rater reliability. Reliability as it is defined by Merriam (2002) is important for qualitative researchers because it helps them to see “whether the results are

consistent with the data collected. One way of checking the reliability of a researcher's findings is by having outside individuals examine the findings to see if they arrive at the same result. This task is achieved by taking a piece of each transcription and then asking colleagues to check the researcher's perception of its contents.

In this specific study, a colleague was asked about his perceptions of a piece of text taken from a principal interview, and then he was asked to write down his understanding by taking notes and then discussing it with the researcher. With the completion of this task, the thoughts and perceptions of the researcher's colleague were the same with the exception of two codes that the researcher had applied. The researcher and her colleague talked about the discrepancy and then together agreed upon the appropriate recording of the text. It was with this information that the researcher was able to use each transcription as a credible source for the study.

Generalizability

An issue that should also be addressed when considering using the case study methodology is generalizability. The term generalizability refers to the "applicability of a finding from one setting or group of people to other settings and people" (Bogden & Biklin, 2007, p.272).

Merriam (2002) further acknowledges the issue in creating generalizability in a case study compared to "other types of qualitative research" (p.179) because of the limited number of participants involved in the study. Gillham (2000) also describes the difficulty in generalizing when implementing a case study with humans because of the number of elements specific to each individual site. "What is true about one school may well not be true of another school" (Gillham, 2000, p.6), and the reasoning behind these differences can be different from case to case.

In contrast, Yin (2003) points out that while generalizability should be considered when working with a case study, it should be looked at through a different lens. Instead of conducting research in order to generalize for "populations or universes" (Yin, 2003, p.10) a case study allows the researcher to make general statements for "theoretical propositions" (Yin, 2003, p.10).

The goal in this case is not to generalize for populations but instead to “expand and generalize” (Yin, 2003, p.10) theories. The theory that is created, in this case, can be extended to generalize to similar populations (Becker 1991, Ragin 1987, Yin, 2003)

For the purposes of this study, the researcher is not trying to specifically generalize for all school leaders, but as Yin suggests is only offering theory, information and points to consider. Finally, while the information and literature available for this topic is continually growing, the thoughts, ideas and theories raised here can be discussed in the larger green school conversation.

Limitations

While the reasoning for applying a qualitative case study approach is appropriate for a small research study, it also has its limitations. The voices of the participants in this study are not meant to be quantified, but to be heard. In saying this, the data that was collected from the participants is limited and based on the experiences and understandings of five individual people. It is understood that their experiences have the ability to be very different from others in their field and therefore cannot be generalized within the larger population.

Furthermore, as it has been mentioned many times throughout this paper, the green school phenomenon is still in the early stages. No one can say what will happen for these schools but it is inevitable that they will continue to evolve as time moves along. As this development occurs the look of the green school leader’s role will likely change as will the understandings that come from this specific study.

Finally, this study was implemented by one researcher within a timeframe that does not allow for collection of data from every green school, and certainly not the majority of green school leaders. The outcome of this limitation is obviously subjectivity as the findings that came out of this study were based the researcher’s experience and understandings of the data. This final limitation was addressed by having each participant check all of transcriptions and documents for

accuracy, but it is understood that the limitations listed here have the ability to influence the data and final analysis of the study.

Chapter Four

PORTRAITS OF GREEN SCHOOL LEADERSHIP

The following chapter displays the data collected from and about the five participants who chose to take part in this study. Due to the qualitative nature of the research methodology it is appropriate to describe who these individuals are and allow their voices to be heard. By beginning the process with a document review, introductory ideas were raised and helped the researcher in building observation ideas and interview questions that were in line with the principals' experience. Through the observations and two rounds of interviews that took place, the participants were asked about their background, current position and plans for the future. With this line of questioning the identities of the individuals began to reveal themselves through the transcribed text, and analysis of the information.

The five participants for this study were recruited throughout March of 2008, and arrangements were set at this time to collect an article, curriculum tool, mission statement or written document that would be looked at for analysis and to set up a date for the first face-to-face meeting. The researcher continued to maintain contact with the participants either through e-mail, phone, or in a physical meeting periodically throughout this time until the end of October 2008. Once the participant had agreed to participate in the study, contact was made on a weekly basis, in the first month, and then about once a month as the participant was asked to check over transcriptions, implement the second interview, and then to check over final transcriptions and to make final comments. The sustained contact that took place during this time helped the researcher develop a strong sense of these individuals' identities and what they bring to the Green School Movement.

By developing detailed portraits of the five participants, it was the researcher's goal to provide insights into who these individuals are, and their personal contribution to the Green

School Movement. Understanding their backgrounds and personalities also helps the reader to appreciate the personal commitment they have to the Green School Movement.

Each individual that agreed to take part in this study proved to be very different. The individuals come to this study with a variety of background experiences, values and beliefs. By looking at their practical experiences generates insights into educational leadership practice in response to this important new social expectation. Through the participants' portraits it becomes clear, that despite differences in background and school environment, each of these educational leaders can provide new and pertinent information about leadership of green schools.

Name	Sex	Experience as a Principal	School Name	Type of School	State
Diane	F	19 Years	Wooded Creek Elementary School	Public	PA
Kristen	F	3 Years	The Huntington School	Charter	MD
Kaitlin	F	3 Years	Hyatt Elementary School	Public	PA
Charles	M	5 Years	Mountain Top High School	Public	AZ
Laura	F	4 Years	Webster Middle School	Private	D.C.

Table 4-1 Summary of Participant Information

Diane

Diane is a female principal in a small city in Pennsylvania. Diane is currently employed at Wooded Creek Elementary School, where she has worked as the principal for 19 years. While she has been in school administration for the majority of her career, she started as a middle school teacher, and also has experience teaching in “gifted” education.

Wooded Creek is a public elementary school, and is one of ten elementary schools in the district, which also includes two middle schools and a large high school. Wooded Creek provides services to approximately 450 students in kindergarten through fifth grade. Wooded Creek underwent a building project in 2001, which is when the “greening” of the building began. Diane initiated the project by applying for grants and external funding that would allow for the project to take place, because it was not something that the district supported at the time. The building project was finished in the fall of 2005, and has been open to students for just over three years.

The small city, within which the school resides, is unique because of its connection to a nearby large research university. Many of the educators employed in the schools find it easy to work collaboratively with faculty and students at the university to bring together “theory and experience,” an action that Diane believes is the “ideal world for an educator to live in.”

...it gives you a place to work with the theory and an outlet to try it. If you live just in theory you are not able to test it, if you are living just with the practical work there is no foundation under it.

In thinking about Diane’s experiences, she details one specific reason for choosing to take the position at Wooded Creek Elementary School.

“I wanted to enroll in a doctorate program, but it took me 16 years to start it...”

Due to the close proximity to the university, Diane felt that this position would allow her to achieve one of her educational goals, which was to earn a doctorate. “I actually took a \$20,000 pay cut to come here, but I wanted to be able to come to,” the university, “I was crazy at the time.”

In thinking about how her environmental values might influence the position, Diane agrees that it has always been a part of who she is. “Well, it’s always been part of my life, and it’s my belief that the principal is a model in the building, their strong interests become part of the school.”

Though Diane believes she must be a role model in the school, she admits that getting people on board with her beliefs has been “gradual” but ultimately successful since her, “beliefs permeate the building in lots of ways.”

Diane feels that her school environment is a good fit for her, because despite having the flexibility to incorporate the environment into her past positions, her current role has allowed her to build from the bottom up, and create a culture that values the environment, the way that she would like it to.

Here, it was just a beginning, it was a beautiful site and it had a lot of things going on, but not really any use of the outdoors, other than the playground. So that became my opportunity to say, ‘Okay, what can we do?’

Diane speaks proudly of her role in building the environment into the culture within the school, but is quick to also give credit to the staff. In speaking with Diane about how the project was initiated and her role in that process, she speaks mostly about the collaborative effort that took place.

The faculty and I met, we watched a DVD that had been produced by the DEP about green schools, they came on board and said ‘yes, we would really like to do that,’ we wrote a letter to the board (of education) and we talked to the board...I talked to the architects about it...and then we put some of the features into it, the geothermal, the rain gardens, those things were built in. So the faculty was on board, teaching about the environment, having the children understand where their water goes, how the building is heated and all of that.

It is evident through this conversation that while Diane took on the leadership and initiated the project, she sees the importance of working cooperatively with the architects for the

construction piece, and also the teachers so that the people outside and inside the building are working toward the same goal.

Diane feels that she had the knowledge to initiate this program at Wooded Creek because of her participation and background with a number of ecological organizations. “I am the co-chair for the Governor’s Council for Environment and Ecology. I am also one of the co-chairs for the Governor’s institute for environment and ecology.” Because of her involvement with these organizations, Diane admits that she is aware of opportunities and trends for environmental learning in schools. “I’m aware of things that become available and I’m viewed as someone who is very active in the area, so things come to us as a result of that.” Furthermore, Diane is a continual learner in that she has found ways to incorporate this interest in not only her organizational involvement, but also in her personal life. “I took solar energy classes back when I was remodeling a house; it’s always been there for me.”

Diane feels that she is a transformational leader who values collaboration and “democracy.” In a conversation about her own experiences she describes the need to avoid the “top-down” approach, and allow the educational community to help in her decision making. She feels that this kind of decision making is a good model for children and they should have the opportunity to participate in the process.

It is with this thinking that Diane has found ways to get the children involved with the environment early in their academic lives. Diane has worked collaboratively with teachers in the school to assign children at each grade level a task, so that they have to take responsibility for a specific environmental component in the school.

Some students are working on the gardens, while composting is also going on and then we’ve made filter gardens and some classes have plans to take the islands in the parking lot and they’ve undone them and they’re getting native plants to put in there.

When Diane speaks about the effort that the students are showing she enthusiastically brags about the knowledge that the students have, and the ease with which they have accepted the environmental challenge.

In this same conversation, Diane also emphasizes the importance of making decisions that are best for children. “Our needs as adults come secondary, when it comes to children or when you think about the future, what helps them.” While Diane reinforces the importance of using collaboration when making decisions, she describes with some urgency that the central factor she considers when making a decision, is always in the best interest of her students.

Diane feels that she is confident in her leadership abilities, is knowledgeable of her own values and beliefs, and has incorporated them, gradually throughout her principal tenure. In speaking specifically about how she incorporates her values into practice, Diane begins by detailing her feelings on the current environmental trends in society.

The world is cycling back toward things that I have always stood for, I mean the environment has always permeated my thinking, and my schools have always maintained that this was an important piece, but I do not think the world view has always thought this way... Without food to eat, water to drink and air to breathe we're going to be in some pretty sad shape. We can have all of the math and literacy we want but without those things we won't have a planet to live on to do that.

Diane says that it is because of these beliefs that she moved forward with her green initiative. It's ingrained in me. It's what I do at home, and it's how I live my life. I am just doing the things I do to conserve. I am just able to model it here on a larger scale”

Diane is reflective about her practice and what she has achieved, but understands that the school is still a work in progress. “I want my school to be clearly committed to the environment, social justice, and democratic principles. To leave here and have all of that in place would be like, yes we've arrived, or I would feel like I have arrived...we're working at it.” As Diane reinforces this point, she also communicates her belief that children should have the opportunity to achieve these same kinds of ideals. “We want the kids to feel like they can make a difference, whether it

is the environment, social justice or in democracy. We want them to know that they have choices and a voice that can make a change.”

To summarize, Diane has been a principal at Wooded Creek Elementary for 19 years, and chose this position because of her desire to enroll in a Ph.D program. She values a high quality educational program for both herself and her students. As a student, she considers herself a lifelong learner as she takes part in extra-curricular organizations focused on environmental issues, as well as her current doctoral program. Early on in her current position she saw the lack of environmental focus in her school, but saw the principal position as a role where she could make the most out of her experience, build from the “bottom up” and make the school a community of collaboration, democracy and social justice, where the students and teachers would have a voice and feel valued.

Working with Diane’s words it appears that she does see herself as an environmental leader, but that has come out of both her “transformational” leadership style, her knowledge and motivation toward environmental issues, and support from her school community to advance these ideas and values, in order to create a school that, over time, has established an environmental focus with which to work from.

Kristen

Kristen is a female administrator in a large city in Maryland. She is the principal of The Huntington School, where she has worked for three years. The Huntington School has actually also only been in existence for three years. Kristen is one of two “founding-teachers” of the school, which came about because of her work in previous positions, and an idea that was formulated and developed in 2003. “We are a group of founding teachers that came together and actually, we came up with the idea for the school and did all of the work to put in the proposal and create the school.”

The Huntington School is a public charter school which educates students from kindergarten until fifth grade. In its first two years, the school was only opened to students in kindergarten through second grade, but as of September 2008, the students and staff moved into a new, larger building that allowed the founders to allow one class of third, fourth and fifth grade children and expand the kindergarten through second grade classes. This move allowed the enrollment to increase from about 60 to around 120, where there are approximately 20 children and one teacher in each class. As mentioned the project began as an idea in 2003 and became a reality when the school opened its doors in 2006. The recent move has allowed the administrators to incorporate additional green features into the structure including environmentally friendly “paint, carpets, flooring, windows, and cleaning products.”

The charter school is a part of the larger city school district with which it resides. As a past teacher in a traditional public school in this same inner-city school district, Kristen was familiar with the policies, and after ten years as a special educator, she decided it was time to branch out on her own.

I was a teacher, I’m a special educator, so I was in the classroom for ten years, at a school in the city, teaching elementary special education for five, six, sometimes seven and then I went to another school, I taught middle school for one year and then went back to elementary, so I’ve kind of been all over the special education continuum at two different schools in the city.

The decision to create her own school came out of an experience in her previous school, with a pilot project that took place, “about using the environment as an integrating context for learning.” As one of the nine schools in Maryland to pilot this program, Kristen became aware that this opportunity was available, and initiated getting the program into her school. “I was the person who wrote the proposal for our school to participate.” While the proposal allowed her to get involved in the movement, she was already aware of the influence that this kind of curriculum could have on a school.

It was funny because I think it was like a month before the call for proposals came out. I had gone to our principal, and said look, you pay me over the summer. I can spend the whole summer writing curriculum so that each grade has a project in the schoolyard and they're all connected and they can teach each other. He's like oh let me think about it and you know not much time later the call for proposals came from the Bay Foundation. It's like okay scrap that idea. We're going to do this. Like I said it's the exact same idea but they're going to offer some support, a lot of support.

As the pilot project came to a close, Kristen and the other founding teacher were reflective about their experience and began brainstorming how they could continue this kind of teaching in the future. Through this experience the teachers identified the many positive outcomes that came from the program's implementation including, using the environment in the curriculum across grade levels, using children as teachers with one another, the power of project based learning and hands on activities and also how collaboration positively influences a school.

I think it (collaboration) was something we hadn't anticipated... as colleagues this unified our entire school culture around the local environment—the school. So even though we were in an urban area and I think that was one of the reasons why we hadn't fully thought about using the environment as the linchpin for our curriculum that became really unifying for our kids and their families and the school community as well.

With the benefits of this practice in hand, and feeling as though, she no longer had the “curricular latitude to teach” what she wanted, because of “No Child Left Behind,” Kristen and her co-founding principal began to think of ways that they might be able to continue this project in their future work.

Initially the teachers thought that they would go to different schools and share ideas with each other while implementing the lessons at their home schools. When the idea of a charter school came about, this ultimately proved to be the best option for their shared vision.

In speaking about her leadership style and her experience so far, Kristen is hesitant to define herself as a leader.

I never envisioned myself as being a school leader; I wanted to be a teacher. And I don't mean to sound like that's all I wanted to do but that's what I wanted to do. I wanted to be a classroom teacher. It just became apparent to me that I wanted to be a teacher in a building where I had lots of other teachers who worked like I do, just like I was when I was in the city.

Kristen also passionately describes her appreciation for individuals holding teacher positions and those in the field.

I have a profound respect for teaching. Having been, I will always consider myself a teacher. And this is sort of emotional for me. I mean being a teacher is a hard, hard, hard job. You go on stage all day every day. You're expected to be perfect. You make any; you know little mistake and you know someone can zoom in on it. It's an extraordinary job that we're asking people to do. And so I have a profound deep, deep respect for that work and for the intellectual nature.

In speaking more generally about how this experience has shaped her as a leader, Kristen sees herself as a "participatory leader," because of her desire to involve the school body into the decision making process, and to reach a consensus through collaboration. While Kristen frequently mentions her respect for collaboration and its role in helping her build her school she is also influenced by her students and their experiences as well. Kristen feels that it is her students and their work that inspires her, but it has also helped shape her vision for the school.

I wanted this to be in a place where we could build tradition, where kids could come back 10, 20 years and say I remember that I planted that tree. Look, the same people are still here, they're still taking care of that tree, they're still following the same traditions that we started.

The vision that Kristen had created for the school also helped her to take her core beliefs about the environment and education and make those the "building blocks for the school."

While The Huntington School does not have the same green building elements as some of the other schools included in this study, Kristen felt that what was happening inside the building could have the biggest impact on the environment and the children. The mission for those implementing the green curriculum, which has been developed based on the environment, is to make everything in the school authentic. "There shouldn't be any of this; pretend you're writing a letter to this person. That's stupid when there are real letters that need to be written and real things that need to be done."

Kristen discusses the importance of her role in incorporating the families in the school, and within the community.

We have a green committee of parents who have sort of taken it on that their job is to highlight some things families are doing, share some information, and give suggestions to the school in terms of its operations to be green.

Kristen also has an optimistic outlook because of the school's location in an at-risk neighborhood in the city.

We don't want to label the city as a bad place. No matter where you are whether you're in a campus like ours which is surrounded by asphalt and concrete or you're on a campus that's nothing but trees and streams, you can study what's going on in your local environment and you can figure out how to improve what's going on... We wanted urban kids to appreciate those concepts and to appreciate too that living in a city is often a very green thing to do.

In thinking about Kristen's values and how they have affected her as a leader, she speaks easily about collaboration, relationships, the power of being a realist, and how giving everyone a voice has influenced her ideas about her leadership style. In talking about her own personal values for the environment, she is less articulate, but just as passionate.

I love it. I mean for me it's very much about experience, what I like... And so you know things like surfing and climbing and biking. It's where I want to be and I want it to be healthy, so it's there for everyone...but I feel like we have a huge responsibility to take care of it and we have a responsibility to teach kids how to do that. I'm finding that as we run this school we have the opportunities to teach them on levels that we didn't even realize before we began.

Despite the creation of her own school, Kristen still thinks of herself as a teacher. In speaking with her it is evident that while special education has always been her professional passion, she never saw herself as an administrator until she saw the success of a pilot program which used the environment as a central focus for a project based curriculum. In seeing how this influenced her and her students she was inspired to continue this learning in an environment that suited her values and beliefs about student learning. As an educator, Kristen values collaboration and involving the community in the school's goals.

As an environmental leader, Kristen has had the opportunity to see her school grow and evolve into what she always hoped it would be. In the past year she has moved into a bigger building where she has had the opportunity to use green products in the physical school building. Furthermore she has seen her school population grow in numbers, hired a holistic educator to take part in curriculum planning, continued the project based learning she dreamed of, while also teaching her own science class every Friday, which focuses specifically on environmental issues. In speaking with Kristen it is evident that this is just a small list of the ways in which she would like to green her school. Overtime, she feels she can reach more people and ultimately educate future environmentalists in years to come.

Kaitlin

Kaitlin is a female principal in a medium sized city in Pennsylvania. This is her third year as a principal at Hyatt Elementary, where she has been employed for fourteen years. The green initiative was the district's decision, and the project took place after Kaitlin had already taken the principal position. Prior to taking her current position, Kaitlin worked as an elementary school teacher in an inner city school in a large city in Maryland, and then entered the school district, that she is currently in, to take a job teaching first grade. Kaitlin enjoyed her role as a teacher and was hesitant to take a position as a principal even after eleven years of teaching and at the completion of her principal certification program. In speaking about how she ended up in her current position, Kaitlin reveals that she was not sure she was ready for an administrative position within her district, let alone, the school she taught in.

I was here actually cleaning my classroom and they called and said, 'um...yeah, we're going to put you at Hyatt. I said, um...no. I have been teaching here for eleven years, no no, that's not going to work, I can't do that' and they said, no seriously we think out of everyone we know, you are the only person we could put in charge of your peers.

After careful consideration, Kaitlin chose to try the position and three years later, she is happy with that decision.

Kaitlin believes that part of the reasoning for her success was because of her involvement in organizations as a teacher, and her close relationships with the academic community at Hyatt.

I was in charge of the school improvement team; out of the ten committees we had here I was in charge of nine of them. They (school superintendent) said you're doing it already and everyone listens to you.

While Kaitlin agrees her previous involvement has helped with her administrative success, she also feels that seeing a large number of principals come through the school has added to her ideas about how to lead. "We had seven administrators in nine years, so the teachers really had to step up and keep consistency and I was already doing that."

Hyatt Elementary is a public elementary school, and is one of six elementary schools in the district, which also includes two middle schools and one district-wide high school. The school district is one of seven in the city, and is considered the inner-city school district, of the seven. Hyatt Elementary provides services to approximately 560 students in grades kindergarten through fifth. The decision that was made for the school to build to green standards was a district wide initiative, and because Kaitlin was already in the position as the principal, she took part in the greening process.

Prior to taking the job as a principal, Kaitlin earned her undergraduate and master's degrees and principal certification from three different colleges, all of which were no more than an hour from the school district that she is currently working in.

While her reasoning for accepting the position at Hyatt Elementary did not have anything to do with her future plans as an environmental leader, she does feel that a position like this is constantly changing and therefore needs someone who is open to change, and has certain characteristics, in order to succeed.

I like to be challenged...you never know what you are going to get. I like the challenge of trying to run the building. I was getting to the point where I was meeting all of the challenges in my classrooms and I needed something harder, and this is it for me.

In the same conversation, Kaitlin spoke about the obstacles that she initially had to overcome during the early stages of the greening process. While the fourth and fifth graders were moved to a separate location, the kindergarten, first, second and third graders were still in the school. Kaitlin reflected on this and acknowledged that while it was difficult, she loved the “challenge of running both buildings.”

In speaking about her leadership style, Kaitlin believes that she is team-oriented.

I think that comes from my time in Hyatt, and running a lot of the teams here. I do not have time to make every decision on my own, so I disperse them, which I appreciate. We have a leadership team, we a behavior management team and my teachers, they do it. I mean I go, and I attend the meetings and I have the final say...but they run it, they take it on.

Kaitlin puts these thoughts into action when talking about how her role as a principal has translated throughout the greening process. When asked what she believed her role to be as a green school leader, she easily stated,

I am the motivator. We made the decision to do it, and I like the idea of it. We got the money and we got to do some things we would not have been able to do before. Having an environmental friendly building...how can that be a bad thing?

Through observations of her actions it is obvious that Kaitlin has many roles, but she is correct in saying that she is the cheerleader for the environmental initiative.

When we had our ground breaking here...we wanted to get the kids involved because this is their project. We went up on the hill, which was kind of cool, because it is like outdoor seating, we used the flag pole as a stage...we did our school cheer, the third grade and their teachers came up with a poem about our school and our project, one of the teachers and her daughter played a song for us. Students got to come up and shovel some dirt, just to get the project started.

In thinking about her environmental values, Kaitlin believes that while she was aware of environmental issues before starting this project, she now truly sees the importance of getting involved in this process. Kaitlin described her actions as the project was beginning and how it influenced her personal life.

I think I've gotten a lot more aware. This school had been falling down and instead of thinking about the new stuff we can bring in, I was looking at it and thinking, what can we use here? At home my husband said to me, oh we're recycling again, and I'm like we need to. It's just changed my thinking and I see teachers who are thinking about what they are throwing away and they are carrying out a box of papers with them. It's changing, and now it's trickling down here, because of me.

In a later interview, and after more time spent in the school, Kaitlin was able to further clarify her thoughts on the environment. "Well we get one world, so if we blow it we're in big trouble." Kaitlin credits the green project for her shift in behavior.

While Kaitlin admits to being a slow starter when it came to the environmental movement, she is making up for it in her current administrative actions. Kaitlin took on managerial responsibilities by attending construction and planning meetings with builders and architects, and included the children in this process whenever possible. She feels that these meetings were beneficial for her own knowledge, but it also helped her as a leader, to find unique ways to bring the project into the school culture.

As a former classroom teacher Kaitlin used this experience to influence her instructional practices as a leader. She was excited to talk about how she has incorporated the project into the school, in order to keep the environmental issues up to date.

I have been trying to come at this movement from the instructional piece. For me it's 'Yeah, but that doesn't make sense for good instruction,' okay, but how do we tie that to the instruction. So we've already been tying it in, and we've given out books to our students about geothermal wells, which are in our school so we went online and found this groundhog book about the geothermal wells and we teach this information to our kids as each phase of the school was happening. We got a webcam, so that we could use that as a teaching tool and as the phases were being put in we could use the process in the classroom.

Kaitlin also mentioned the importance for her to bring the community into this project. Because of the population of students at the school, and the at-risk neighborhood that the school resides in, Kaitlin feels it is important, to include the community not only to ensure that the school remains in good shape, but also to help educate them on the purposes of the building and the environmental cause.

I'm big on, if we include the community as we were building the building, it's going to be the communities building, not my building and therefore you are going to cut down on vandalism, and people not wanting to take care of it, and that's something the district built in and is necessary especially considering our community here.

As a leader Kaitlin appears to always look at the big picture, and tries to consider what is best for those that she works with.

I always go back to what's best for kids, if it fits into what's best for kids, then it is the right answer. If it's not, it's not the right answer. When I am trying to make a hard decision and I talk to my assistant about it, I say okay, that would be easy for me to decide to do that but how is it going to affect our kids.

While Kaitlin feels that she valued the environment prior to this project beginning, she has been influenced both personally and as a leader because of its existence. In speaking about how she as a leader fits with the mission of the school, she agrees that she does see herself as changing and feels that with the onset of this project, she knew that this was the right fit for her. Kaitlin also admits that she has not only had to step up and be an environmental role model for the children, in order to influence their behaviors and interest in the project, but she has also been influenced and motivated by the project, and is inspired to continue working for the environmental cause.

While Kaitlin is relatively new to her principal position, she is familiar with the needs of her school because of her previous teaching position there. She exhibits a strong understanding of the needs of the children within her school and is also aware of the instructional issues because she is not long removed from that position. As a leader she attributes much of her success to seeing a large number of principals come through the school during her time as a teacher, and she is also aware that her participation in organizations within the school have helped her to take on the principal role.

As an environmental leader, though she did not initiate the project, she has educated herself in order to meet the needs of the educational community and to fulfill many of the environmental goals posed by the district. Though not a self-proclaiming environmentalist,

Kaitlin feels that the project has helped her to understand the need to take part in environmental issues, and do her part to be a “cheerleader,” a “motivator” and a role model for the students in her school. She feels that because of her early lack of understanding about the Green Movement, she could use her own leadership experience to do what she thinks is right for the students in her school to keep them motivated and involved in both the school and the community.

Charles

Charles is a male principal in a high school in a large city in Arizona. Charles works at Mountain Top High School, where he has been employed for six years. Prior to taking this position Charles was an assistant principal for three years in Arizona, a school counselor and a basketball coach in an inner-city school district on the East Coast before taking the assistant principal position.

Mountain Top is a public high school, and is one of five high schools in the district, which is different than many school districts, in that the district is made up of only high schools because of the growing population in this particular area of Arizona. Mountain Top provides educational services to approximately 1700 students in grades nine through twelve. Mountain Top was built in 2002 and at the time was the first high school in the state to successfully fulfill the Leadership in Energy Environmental Design (LEED) certification. Although the greening of the school was a district initiative, Charles took over as principal at the high school after only its first year in existence and says he was drawn to the school because of the environmental focus.

The city with which the school resides is on the outskirts of a large city in Arizona with a growing population. At the time that Charles took over as principal the school had 300 students and twelve teachers. The school now has 1700 students and 91 teachers. The population that makes up the student body is a diverse mix of students both culturally and economically.

According to the district’s website the student population is 46% Hispanic, 38% Caucasian, 11% African American, 3% Asian and 2% American Indian or Alaskan Native. Spanish is the first

language for 82% of the students, while 14% say English is their first language. Portuguese, Vietnamese and Korean are spoken by 3% of the student body. 33% of the student body takes part in the free or reduced lunch program which is less than the state average of 51%.

Due to the growing population in the surrounding area, the district decided to continue building onto the school, and the high school building was put together in phases as the number of students continued to rise. The school is now in its third phase, and each new development is built to fulfill the same LEED certification criteria.

In thinking about Charles's experiences, he highlights one specific reason for choosing to take the position at Mountain Top High School. "For me it was that whole idea of starting from the ground up." Charles enjoys the challenges that are involved with his job, and feels that shaping the school to his own beliefs and values was a challenge he was excited about taking. Charles enjoyed taking part in the hiring process, where he says it's important to hire only the most proficient people, who truly believe that they will do their best for students. Charles mentioned that when making a decision he always has to consider for himself, "how is this going to impact children," he says he expects the same from his staff.

In thinking about how his environmental values might influence the position, Charles admits that the building is one piece of this process, but he sees his role as implementing it on the inside, and letting the director of operations manage the actual architecture piece.

I just think it's a concerted effort of everybody's to take an active role in conserving energy, conserving the environment. I think right now from a school district standpoint we are going to be going under a huge excess in utilities expenditures over the next couple of years and it's going to have a huge impact on our programs. So unless we all think that this is a real problem, programs are going to get cut... I try to walk the walk and talk the talk. I, I really do. I'm a real believer.

Charles also believes that part of what makes his school unique is the way in which the building itself has become a community center for families and citizens in the immediate area.

This facility, if you were to come here on a weekend, literally changes into a full-blown church. During the week we get to use it as a school. They have sermons in the auditorium, they have daycare over here, and they have youth groups in all the classrooms.

Charles also talks about how the availability of the building allows for people who would not necessarily be able to understand the importance of going green, to come in and have access to it, just as the students do during the week. This he believes is important in educating others about the environmental goals.

In the traditional sense Charles sees the importance of getting involved on every level in his school.

I have a lot of friends outside of education and when they say to me, 'you know let's get together for dinner' I'll say 'oh I'm going to be late or I can't make it that night.' I've got this or that. They always say to me Charles I don't remember any of my principals going to stuff like that. Why do you go to the drama things or the student council activities? I say it's just critical because they know I'm going to be there. I'm going to go Friday to the football games or the basketball games I have to, you know . . . I've got to go to band concerts and the choir concerts and the dance recitals....

Charles sees these activities as just a small part of his role as a principal but reinforces the need to make every student in the school feel supported and recognized. During his time as the principal he has set up a successful advisory program, finds ways to recognize the students and meets with each senior during their final year, to find out about their experience in high school.

Charles is excited and enthusiastic to share these experiences and how he feels about this role.

It's the greatest job in the world, I think. It's because you can still be with kids you know and, and that's the really fun part of it for me. I just love being you know at the high school, the energy of kids and things like that and getting to work with teachers. I think you can really, really make a difference.

As Charles speaks about his role as an environmental leader he agrees that his main concern is still with the students. Charles believes that as a principal his role, early on was to "retrofit" the building to meet the needs of the students. He became an advocate for the students during each phase of the building.

We literally had a construction trailer in the parking lot of the school and Tuesday mornings we would meet as a construction crew, much like an administrative team... they reported on the progress of the building and I would say, 'okay guys remember I asked you if you're going to be working on the roof, you can't be working on the roof between this time and this time because there are classes right next door and we're trying to have school.

While Charles describes some of his struggles he also described the people he worked with as knowledgeable and says he enjoyed his role in helping to form the environmental components that would ultimately be included in the building.

Charles sees himself as a student-centered principal who focuses his decisions and actions on the students needs. In the same conversation Charles talks about how he supports the work of his staff and gives them the autonomy to make decisions that they feel are right. While Charles has a lot of ideas of his own, he values the voices and work of the students and staff in his school. He finds opportunities to collaborate with them by including them in decisions about the curriculum, and by asking for their opinions on maintenance and policy matters in the school. Charles also feels that as a principal it is important for him to be available and visible within the school community.

Many teachers have said to me, you're very approachable as a principal. One teacher said to me 'you know all the kids in the school know you' and I said 'well of course, they should.' She said 'well no I've been at other schools where nobody knew the principal and as teachers we weren't allowed to know you, you had to go through seven different chains of command before you could even get to the principal.

In speaking about what has affected him and helped shape his leadership style Charles, very easily described his reasoning.

I would say a large part of it comes from my counseling background. I mean I'm from a very humanistic approach, very supportive approach. I like to say that to all of my assistant principals and all my support staff, we have one job, really one job and that's to support what's going on in the classrooms...and we give them a tremendous amount of autonomy to do the things they want.

Charles also believes that in giving the faculty and students the autonomy to choose how they want their education to look, and overarching goals to work toward, they will come up with

incredible results. While Charles admits the environmental focus is not built into the specific curriculum, it is however built into the culture of the school, and the staff and students are taking this initiative and doing it on their own, which he feels is the way it should be. He feels that by modeling good behaviors and using the same verbiage in the school, allows the students to familiarize themselves and understand that this is part of the school culture, and then take responsibility for their own environmental actions.

Charles is an enthusiastic principal who works with a large diverse population of students. Similar to Diane, he felt this position was a good fit for him because he could mold the school into what he envisioned, and liked the challenge of starting a school from scratch. Because of his students' backgrounds he places a high value on acceptance and community in his school. He feels that the greening project not only helps during the school day, but helps to educate the community because the school is used as a community center. Charles is student-centered and spends much of his time being visible to his students so that they feel comfortable approaching him.

As a green school leader, Charles admits the LEED certification was a district approach, but it has helped both him and everyone in the school to become more aware and conscious of their environmental decisions. He feels that the school acts as a symbol for environmental awareness, and it is the students' responsibility to become an advocate for the environmental cause. As a leader Charles feels his responsibility in the green school is to be a role model, and create opportunities that convey understanding, acceptance and value for the school system as a whole.

Laura

Laura is a female principal in a middle school in Washington D.C. Laura holds the principal position at Webster Middle School, where she has been employed as an administrator for four years. Prior to taking this position, Laura was a seventh and eighth grade English teacher,

curriculum coordinator, assistant principal and an interim principal at the elementary school at Webster. While she has been at Webster for 24 years, she took a break prior to taking her current position in order to take a middle school principal job at another school for two years.

Webster Middle School is a private Friends school, which is based on Quaker values and is part of an elementary, middle and high school, and sits on a large campus in Washington D.C. Webster Middle School provides educational services to approximately 340 students in grades five through eight. Webster began plans to undergo a building project in 2000, and it was identified at this time, by a member of the school board, that the school might look into building the school to the LEED certification standards. The board member had heard about the green school idea and felt that it would be appropriate because of the emphasis on the environment, which is a Quaker value that the school had always believed in. Due to this value already being built into the school culture, the school population agreed, and the building was constructed to the highest LEED certification guidelines, and finished in 2005. At the time it was the only school built to this level of certification in the country.

Laura was at the school when the building project initially began, went away during the construction process and then returned to Webster after the school was finished. Laura admits she was intrigued by the project and it played a role in her returning to Webster. “I should say that, that certainly was what attracted me to this, and to get back here, and also that it is a Quaker school...but yes the thought that they were going to take on this kind of project was definitely attractive to me and something I wanted to be part of.” Laura further clarified her reasoning for accepting the job, and described her own personal experiences as the reason.

Well I found that I really enjoyed being a principal...I enjoy the work, I enjoy working with the faculty, I enjoy working with kids, I would never want to be a head because I would be distant from the students, and when I started this I felt like I didn't know any of the students and now, I know all 336 of them and I like that. I would never take that for granted I appreciate their hard work and care about what they are doing.

Once Laura was back at Webster, and part of the program, she made it her mission not to just build the green building but to make sure that it was part of the whole educational approach.

There are colleges and companies and there might be one green building and then that is their showcase and they pay no attention to it, but we did not want to be in that category. We did not want to just say well we will do this once and we don't care about it for the rest of the time. We wanted to make this a commitment that is sustainable.

As a leader Laura has built the environment into her administrative actions to ensure that this is a focus within the walls of her green building. She has already accomplished this by building environmental issues into the curriculum, weekly service projects, throughout the culture of the school and by providing local foods in the cafeteria. One of the specific ways in which Laura has decided to promote this project is by opening up the doors of her school to visitors, to ensure that others outside of the school community are educated about what can be done.

We have committed resources of time and people's energy to, to do tours, I need to check the statistics, but I'm sure we're up close to 5000 visitors in the past year and a half... people who have come through the building. Most of those tours have been led by our student tour guide. The students have also done an online virtual tour of the building which has been posted on our website. They actually, are going to put material on the website, which will be educational for the city of Washington about where our trash goes and where our water goes, so you know, it has taken on a life of its own.

While Laura has not done "any formal training" in the study of leadership, she feels that her leadership has developed from her own personal experience as a teacher, a mother and through various leadership roles. When it comes to making a decision in the school she considers her own knowledge and that of the organization.

I am a very inclusive decision maker, I'm not one who just kind of sits in my office and says what I say goes, and that is very much kind of the Quaker style and philosophy. I don't think I would be happy in a different or more top-down kind of environment.

While Laura does feel that the school's population should have a voice in the decisions that affect them, she does rely on those who have experience in the area, to assist her. When considering the school's curriculum, Laura says that this is an ongoing process, and she is working with a team of knowledgeable teachers in deciding how environmental issues can be

formally incorporated into the classroom. The environment is currently built into the eighth grade science class, and Laura admits she has been greatly influenced by two teachers who have taken on the initiative, educated themselves on environmental education, and come to her about how to incorporate it into the school, and across grade levels.

It is evident through this conversation and through Laura's interactions that she values the work of teachers and feels that their role is different from hers, but just as important in the school.

With faculty, these are people who are doing the work in the trenches, so I feel that it is my job to support them, and to do what I can to make their lives simpler, and to keep the wheels running smoothly so that they can do their job without having to worry about some of that other stuff. I'm also responsible for making sure faculty members are being taken care of as people, so that the students are not losing out.

Laura also believes that while she sees herself as "the cheerleader, the supporter, the funder, and the encourager," she also has to be a role model, and to do that, she relies on her own values, to guide her in this process. "I think it was a happy coincidence that this school was moving in this direction and that this is how I feel." Laura admits that while this project has affected her, she feels this is the right environment for her, and she has been able to take on more of an advocacy role for the environment, in order to set a tone within the school.

I have to set a standard by my own behavior, making sure that I am recycling, that I am being conscious of my decisions that have an environmental impact...I was just putting together a memo for the beginning of the year, 'remember we do not have paper cups in the building, you need to bring in a coffee mug, and wash it out when you are done., re-use it, you know keep track of the dishes in the kitchen, because we are not going to have paper goods.' So just setting the tone in those sorts of ways, and reminding teachers, kids and parents to be responsible, when they are in the building and at home."

Finally Laura admits that while she has had an impact on her school, this project has also influenced her as a leader.

I feel as though I'm just so aware. I would hope that I would have grown this way anyway, but having the influence of the school here and the need for us to be in a leadership position environmentally has pushed me to keep reading and thinking about ways that we can bring this into our program...I don't know if I could have done that in another school because I don't know that I would have had impetus to do that.

As a leader, Laura feels that she is motivated and driven by a variety of sources, one of which being her Quaker values. It is apparent through interactions with her, that these values, her day-to-day experiences, and her own quest for knowledge have helped her develop into the leader she has become.

In speaking with Laura about her experiences at Webster Middle school she is quick to discuss the role that the school's Quaker values have played in her experience. As an educator at Webster for over 24 years, she has taken on a variety of roles both as a teacher and as an administrator. It is obvious that she sees the value in all of these positions and how they have influenced her as a leader. She considers herself a collaborative leader, who strives to include the entire school community in her decision making, while keeping the students' needs at the forefront of her policy initiatives.

As an environmental leader Laura admits that environmental issues have always been part of her life, and she was pulled toward the green initiative at Webster because of her own personal values. She feels the marriage between these environmental beliefs and the school's movement to become green was a "happy coincidence," for her and one she wanted to take part in. It is evident that in interactions with Laura, and as this project has progressed she has gained confidence and ultimately became a stronger leader within Webster.

Summary

Through the above portrayal of participants it was the goal of the researcher to provide portraits of each individual so that the reader could fully understand the nature of each participant's experiences and the way in which they have been involved with the Green Movement.

It was the researcher's goal to keep extraneous information relatively limited in chapter four in order to allow the voices of each participant to be heard. The profile of each participant is,

for the most part, made up of their specific quotations, and came out of their interactions with the researcher. The profiles of each participant reflect the unique context of their schools as well as how they are working with this relatively new green mission.

The organization of chapter four allows for the reader to look at green school leaders who initiated the green project, Diane and Kristen, versus principals who came to a school where the Green Movement was already in place, Charles, or where the district made the decision to pursue green building after the principal was already in place, which was the case with Kaitlin. The chapter closes with a portrait of Laura, who appears to be a mix of the other four participants and came to a school because of her own environmental beliefs. In laying out the portraits in this way, the researcher begins hinting at the findings that will appear in the coming chapters as the researcher begins to reveal what exactly a green school leader looks like, and how they might be similar or different based on their experiences and background.

It became evident throughout the interviews that a number of factors were relevant when talking to green school leaders. The key factors that stood out to the researcher include how the principal became involved in the green school and their environmental actions prior to taking the principal position. By looking at these aspects of the study, the researcher gained a deep understanding of the degree to which the principal would get involved, and then how much they, as leaders personally promoted the cause within their school.

The profiles allow the researcher to display the similarities and differences in these individuals in order to prepare the reader to look at the participants experiences as a whole, and in order to answer the research questions posed in chapter one. While the experiences of each participant are different, and the degree to which each individual has gotten involved affects their answers, they are each in their own way working for the same cause, in a manner with which they are familiar and is appropriate for them at the time of this study.

The following chapter will continue to discuss these individuals and their experiences, but also compare their responses by looking across the sites using the research questions as a structure. Through analysis of their responses and the researcher's interactions with them, each participant begins to reveal themselves and their true understanding of how they promote the environmental purpose and lead in a green school.

Chapter Five

CROSS-CASE ANALYSIS

Chapter five presents a cross-case analysis in support of this dissertation research. The research questions that were posed in chapter one of this study were the framework that was used to collect the data, and it was appropriate they be used to structure the cross case discussion of findings.

Although all of the original research questions will be answered using the data provided by the five school principals who participated in the study, data relevant to the first question, “What is the genesis of the Green Movement and its integration as a component of educational processes” is subsumed as part of the question of the discussion of the genesis of the Green School Movement in each school and coded as background information. This data ultimately spoke to how the green school was started, who started it, and what the principal’s role was in this process.

One additional question beyond those originally listed as research questions is added to the discussion of the findings. This question focuses on the obstacles that administrators faced because of their involvement in a green school, or faced in the greening of their school. This question became relevant during the researcher’s first meeting with Diane, as she spoke about challenges she had faced in getting her school to its current state.

Finally, for the purpose of discussing the findings, the researcher chose to combine two of the research questions: “What educational leadership styles, models, and frameworks, documented by research and literature, are most representative of the practices of school leaders in green schools” and “Is there a relationship between the Green Movement and the leadership styles adopted by school leaders working in green schools? If so, what is it?” Combining these questions appeared to be appropriate for the purposes of presenting research findings because it

allowed the researcher to first highlight leadership models and then apply these models to the green school leader.

To summarize, this chapter is an analysis and discussion of the data that was collected for this study. The themes that emerged from the data are also identified and supported by specific text taken from the transcripts of the study's participants.

Do particular roles and responsibilities exist that can be closely associated with leadership within a green school? If so, what are they?

Learning about the roles and responsibilities of green school leaders was vital to understanding what they do on a day to day basis. While it was apparent from the data collected for this study and from the literature, that school leaders wear many hats, and play a variety of roles (Hart & Bredeson, 1996), especially in a green school, the roles and the responsibilities in which they take part are directly proportional to how personally involved they are in the movement.

Inspirational/Motivational/Role Model

With the Green School Movement being relatively new in many school districts, many school leaders acknowledged that there was a shift in their role and that they often felt they needed to be the one to keep everyone in the school motivated to get involved in the project. The responsibilities of a leader in this role, according to Yukl (1994), include making the school community aware of what the leader is trying to achieve, "inducing them to transcend their own self-interest for the sake of the organization or team and activating their higher order needs" (p.351). The leader in this role has the responsibility for inspiring action on the part of the school members in order to motivate these individuals to fulfill the school goals.

When the project known as green schooling first began, the administrators in this study supported this initiative and believed that they were responsible for inspiring the staff to

participate in the project, and they were continually trying to find ways to motivate the school community to stay involved.

I think that when everyone got tired of the construction and they did get over it, I think that my role changed. I think as a leader I needed to be proactive, so that when we were getting tired of it I needed to find ways to be enthusiastic and get the kids involved, whether it was with the recycling program and just continue to support the positive part to this thing, and to continue to promote environmental causes while doing what's best for our kids and to instill those environmental values and promote them for lifelong learning (Kaitlin).

What Kaitlin was talking about was not just simply finding ways to fill time, but it was about finding activities that would help to instill these values in children so that they are motivated to act autonomously in the future. A key aspect of the Green School Movement is its ability to educate its students on the importance of sustainability, and that lesson extends outside of the schools.

Laura also brings up the importance of doing this with the staff as well as with students. She believes that in order to sustain the shift toward high quality environmental education, the focus should be on the individuals who are working directly with the students.

I need to be a role model and I come to believe that my behavior can speak, you know of my expectations, about the way I want the students in the school to behave and values I want them to hold...Well, I set a standard by my own behavior, making sure that I am recycling, that I am being conscious of my decisions that have an environmental impact.

Laura goes on to say that she not only has to model these behaviors but at times has to remind her staff about the push to be green, and what that looks like in the school.

I really nudged us to get rid of, paper cups in the building and you know, trying to push us in those directions, even though they may be a little uncomfortable at first, you know I was just putting together that memo for the beginning of the year remember we do not have paper cups in the building, you need to bring in a coffee mug, and wash it out when you are done. Reuse it, you know keep track of the dishes in the kitchen, because we are not going to have paper goods...Then beyond that, encourage and celebrate teachers for the initiatives that they take, because they are doing the frontline work...I cannot do it all, but I can be the cheerleader, and the supporter and the funder, and the you know, encourager for all of those initiatives.

Hart and Bredeson (1996) also highlighted the importance of the principal acting as a role model because of the way this helps to “shape teachers’ behaviors” (p.224). In Laura’s case she would like the teachers to take on an environmentally conscious role, and she realizes in order to do that, she must model this in her own actions. In this discussion, Laura highlighted two key roles that were discussed by the school administrators, a role model and an initiator. As Laura suggests she feels it is not enough to model the behavior she would like to see in her schools, she feels that she must initiate policies so that everyone on the staff acts as a role model, for the students.

Finally, each of the principals discussed a very important responsibility, which could not specifically be quantified or described, but was a powerful component of leadership in the Green School Movement. As Laura said, “I am responsible for setting the tone and atmosphere of the school.” Laura was acknowledging that she realizes her actions affect everyone in the school community, and she has a great responsibility in ensuring that these actions are in the best interest of the staff, students, their families, the board of trustees and all of the stakeholders in the school.

This action is supported by the work of Kantrowitz and Matthews (2007) who say it is the principals job to “set the tone, for what happens from the moment the opening bell rings and can turn a troubled school around with a combination of vision, drive and very hard work” (p.1) As Laura has stated through her actions and the role she assumes, she sees it as her responsibility to inspire and motivate others so that her vision for the school can come to fruition, ultimately influencing the school’s culture.

Supporter

Similar to the inspirational role, discussed above, all of the principals spoke about the necessity of acting in a supportive capacity as a green school principal. Kaitlin even admits that while she was initially hesitant about what the project might look like for her as a leader, she needed to come across with a brave front for the benefit of her staff and students. Despite these

initial feelings of uncertainty, she felt that while early on, she did not feel she had the tools to lead in a green school with great efficacy she always saw the importance of supporting the practice of conscientiousness and green principles within her building.

Kristen also touches on this idea when speaking about how she supports her teachers and their practice on a daily basis, “everything that I can do to protect the sanctity of the teacher’s work and to support them in that work that’s what I sort of view as my job.”

Laura also agrees with this thinking, and feels that supporting the teachers, is a critical part of her position as an administrator.

With faculty, these are people who are doing the work in the trenches, so I feel that it is my job to support them, and to do what I can to make their lives simpler, and to keep the wheels running smoothly so that they can do their job without having to worry about some of that other stuff...I think my role is to support them and their creativity. I cannot do it all, but I can be the cheerleader, and the supporter...I’m also responsible for making sure the faculty is being taken care of as people, but that the students are not losing out.

While each administrator described the task of supporting teachers as important to their role as leaders, they emphasized this function because of their role in a green school. Though the principals saw how the green initiative could positively influence them, they knew that they would have to bring it to their teachers and then support the teachers as they began to work the material into their classroom practices and interactions with children. Each of the study’s participants thought that it would be unfair to impose the greening of the school on the teachers without sufficient support by the administration of the school.

Collaborator

While each administrator mentioned the importance of supporting their staff, they also discussed their role in collaborating with the stakeholders, in order to stay apprised about what was happening in the classrooms and to make sure that the teachers’ and students’ voices were heard in the larger school conversation. The administrators felt that this was important when shifting toward a green mission, as they wanted the school community to feel at least a partial

ownership of this project so that it could move forward with great efficiency and efficacy. While all of the principals mentioned the importance of collaboration, Kaitlin specifically addressed how she felt collaborative efforts had helped her in her work with teachers, “I can stand here and mandate all I want and no one will care, but then they come up with it and we collaborate about it they can take ownership of it and then, that’s it, it happens.”

Kristen brought up this same idea, but extended on the importance of collaboration within the school community and its stakeholders.

I also have a responsibility to the parents...I find myself doing more and more parent education, and trying to help parents to understand the needs of kids this age and then also a responsibility to the board of this school to keep things running smoothly.

As Kristen has described she sees collaboration as a medium between her and all of the parties in her school. She feels that by listening to their opinions and bringing them into the school will help in their involvement. Kristen also goes on to mention the importance of not only involving those who use the school building, but also the importance for her to get the community involved, so that they too can take part in the Green Movement.

And I remember looking at that schoolyard and thinking... if I do this alone it’s going to take me like 20 years to get this schoolyard to be an extension of the classroom. And then who’s going to take care of it? And so we would start with some projects but there was, there was vandalism and, and you start to think about, how do you do this kind of work in a way that everyone feels ownership of it and, and a way that they’ll take care of it and be stewards of the environment?

With these thoughts in mind, Kristen began to plan ways in which she could develop her school as a teaching tool for not only the children and their families but also for members of the community. She sees benefits in this action because of how it can assist in keeping her school safe and also help the Green Movement to develop in larger populations.

Beyond collaboration, Diane also makes it her responsibility to network with outside organizations, in order to help her school realize the environmental opportunities she has envisioned.

...there are things that I have been connected with... and it has ripple effects on this school. I mean, I'm aware of things that are available and I'm viewed as, well I don't want to say expert, but someone who is very active in the area. So things come to us as a result of that.

This idea is highlighted by Conley and Goldman (1994) as they discuss how "spanning boundaries to create intra-school and community networks that provide recognition" (p.238) can positively affect a school and its leader. In Diane's case, she sees this as she goes beyond her own school district, and works with outside parties to help her advocate for the things she wants for her school. It is with this information that she can have the flexibility to build her school into what she wants it to be.

Leaders as Learners

One of the roles that was addressed by the administrators participating in this study was a surprise to the researcher, but in hindsight seems obvious, was the need for the principals to act as, not only a leader, but also as students of environmental issues, in order to positively influence their schools.

As Kaitlin previously mentioned, many of the administrators had questions going into this process. Depending on the level at which they understood environmental issues and environmental education. Each of the principals mentioned some level of learning that took place throughout their individual process of ascension to the position of principal. It is interesting to note that for Kaitlin and Charles, the two principals who did not initiate their respective green projects found their teachers through the architects, builders and individuals who sat in on construction meetings. As Kaitlin mentions:

A guy came in and talked to us about all of the things that can be recycled and what they can turn these things into, and I had no idea about that. He's like yeah we can use this on the playground and we'll recycle this and we'll put it here, I mean I never even thought about where these things might have gone. But now I see how they are going to break this stuff down and make it backfill and we're just going to save thousands of dollars on dirt alone, it's just amazing where this can go.

Charles had similar thoughts but felt that his learning has been an ongoing process since the project began.

I just think that you just become a student as you go through this whole thing and you process through things and you try to get better each time. We do a debriefing after every meeting and each phase, to speak about how we can continue to improve.

Kaitlin and Charles appear to be interested in the environmental processes but their focus is more on school leadership, and not necessarily on environmental issues, other than what is provided by their school district. On the other hand, Diane, Kristen and Laura, because of their personal interest in environmental education, found different ways to educate themselves, that would ultimately benefit their leadership practices. As Diane mentions, she participates in organizations that keep her up to date with current environmental issues, and she does so for her own benefit and growth,

I have to be continual learner so that I can know what is going on. Not that I have to know everything, but I also need to keep relevant. I am continually learning you know, I just found the new Thomas Friedman book; the world is hot, flat and crowded and it's all about the green revolution and how we can survive if we really look at the things that are really important, and that is what I am striving to do.

Laura also mentions how she has found ways to continue learning about this process:

I do a lot of reading, as a faculty we read a book over the summer, together, so a couple of years ago, we read *The World is Flat* by Thomas Friedman, and we talked about global issues and even though that is not specific to this, we have pushed ourselves to keep reading and to keep learning. As an administrator, we have trained the faculty about the building and how it works, going to conferences, and then actually two teachers you saw on the tour have started a network and so now they have an annual meeting, and it's been going probably 6 or 8 years and we hosted it last year and we sent an organization down to a Friends school in North Carolina, so they've been e-mailing and they come and talk to each other to find out what the other is doing, so also connecting with other people who are doing similar things.

In speaking with Diane, Laura and Kristen it is clear that their environmental interests and values motivate them to take responsibility for their own learning. The researcher found that the level and kinds of learning that took place on the principals' part depends on how invested they are personally, which ultimately influences the educational experiences they seek.

Instructional Leader

In thinking about how their role as a student influences the principals, each of the administrators spoke about his or her responsibility and the importance in helping the teachers build environmental issues into the curriculum and into their practice. Kaitlin sees her role as asking the hard questions and getting the teachers to think about how they would like to use environmental issues in their classrooms.

I have to say 'yeah, but that doesn't make sense for good instruction,' 'okay, but how do we tie that to the instruction.' So we've already been tying it in, and we've given out books to our students about geothermal wells...and so we taught this information to our kids as each phase of the school is happening.

In this role Kaitlin sees herself as an advocate for good pedagogy in implementing environmental education. As a former teacher she feels that she has the insight to assist in this process, and she feels that the curriculum can be the best way to incorporate green initiatives into the school.

Diane and Laura agree and both see their responsibility as initiating these projects, and collaborating with the teachers to make sure that the environment is being implemented through classroom projects.

We have started to look at composting on campus and those kinds of programs and we have different people spearheading that. But we're really trying to also coordinate that and keep that going. We're talking about how to get kids to use public transportation and, well we just had a meeting about that yesterday. What can we do to get kids out of cars and into busses and things like that. (Laura)

Both Diane and Laura agreed that the greening initiatives were slow to be incorporated into the curriculum and the process has been implemented in small but effective steps. They also noted that while curriculum building was a gradual process it helped to get the staff involved in the project which ultimately motivated them to take the work back to their classrooms. As leaders Laura, Kristen and Diane mentioned that they saw the importance of building the

environment into the curriculum, and if they were the ones who wanted to initiate this action, they would also have to be the instructor who pursued it with their staff.

Manager/Planner

The final role that the principals mentioned was the importance in managing and planning the green school initiative. While this role was not the most frequently discussed and the responsibilities that coincide with it were not necessarily the most entertaining or fun to talk about in the larger leadership discussion, the principals did bring up managerial tasks that were important in putting this movement together.

While each administrator mentioned something about managing within his or her school, Kaitlin and Charles talked about the importance of managing the project itself more often than the other three principals. Throughout this discussion both Kaitlin and Charles talked about the construction meetings and the role that they played in this part of the process.

We literally had a construction trailer in the parking lot of the school and Tuesday mornings they would meet as a construction crew and each person, much like an administrative team would do, the assistant principal reports on the activities for the week, AD report on the athletics for the week and who's covering each event. They did the same thing. They reported on the progress of the building and I would report on kind of the interfacing of 'okay guys remember I asked you if you're going to be working on the roof. You can't be working on the roof between this time and this time because there's classes right next door and we're trying to have school.' (Charles)

Diane also discusses her role as, less of a manager for the project but instead more of a planner within the building. She is careful throughout this conversation to specify that the planning tasks she took part in were focused around planning for the environmental features that would be built into the building. "I, well and the architect, put some of the features into it, the geothermal, the rain garden, I made sure those things were built in." While Diane enjoyed her time planning the building she now sees her role as more of a motivator and role model within the school.

In looking at the principal as a manager, Kristen and Charles also highlighted the importance of hiring the right people for this environment.

Teachers want to spend their career here. When I hire, when we look at candidates we're looking for people who want to be here for a while because you're building something. This isn't just a way station.

Because of the unique environment, and the incorporation of the green components, Kristen and Charles felt that as administrators, it was their responsibility to ensure that while many teachers may want to be in their schools, they needed to hire people who understand the green mission, and then also have strong teaching skills to incorporate the environmental components in the classroom.

Summary: Roles and Responsibilities Relevant to Leadership of Green Schools

In talking to the principals about what roles and responsibilities they take part in their green school environment, they highlight six roles or general themes that are important to consider in their daily practice. Being an inspirational and motivational leader was the role that came up most frequently with the principals. They felt that while being a role model is also important for them, it is their responsibility to inspire the staff to take action for environmental issues and use this inspiration to motivate practice in their classrooms.

The second role that the principals discussed was the importance of being a supporter. The principals felt strongly that this was necessary in working with the staff and everyone involved in the school community. They believe that in organizing and implementing a new initiative it is necessary to support the thoughts and needs of everyone involved so that issues can be resolved and the school community can come together to bring about the change necessary as the initiative is implemented.

The third role that is important to the discussion on green school leaders is that of a collaborator. All of the principals agreed that collaboration was a key component to this practice and in order for the leader to bring about change it was necessary to gain support from the staff

and the students. Each principal detailed how collaboration has helped them in moving the Green School Movement forward, and also helped them to grow as a leader as they saw many of their own beliefs and values be put into action as the school community got on board with the help of open discussion from each party.

The principals also raised the idea of acting as both a student and as a teacher in the Green School Movement. They felt that while being a student was important for their own practice it also assisted them in educating the staff about how to build environmental issues into their curriculum. An important point that came out of this discussion was that while each principal has acted as an instructor in some way throughout this movement, the manner with which they act as a student was based on their own personal interests and how involved they were in initiating the Green School Movement. For Diane, Laura and Kristen, their quest for information came in the form of environmental leadership, and they chose to educate themselves through experiences with the outdoors, reading and personal reflections. For Kaitlin and Charles they focused more on educational leadership and their work ultimately came out of district decisions and formal training.

Finally, the principals highlighted the role of managerial tasks when working as a green school leader. As mentioned each principal talked about the managerial responsibilities that they are a part of, and are necessary for them as leaders. Though the managerial tasks are not necessarily the most glamorous part to the administrator's position each principal identified tasks that are necessary for completion in order to ultimately create an evolving green school.

What educational leadership styles, models, and frameworks, documented by research and literature, are most representative of the practices of school leaders in green schools?

Using Leithwood's six suggested leadership styles proved to be an effective way to interpret how the principals see themselves as leaders and how they make decisions regarding their school. The leaders highlighted instructional and participatory leadership, but

overwhelmingly articulated issues and characteristics related to transformational leadership. Additionally, each of the leaders without necessarily intending to, also saw themselves as environmental leaders and discussed characteristics associated with this leadership style. While more of the principals conformed totally to one or more of Leithwood's styles, the actions they highlighted were representative of the four leadership styles previously mentioned.

Instructional Leadership

As Hart and Bredeson (1994) describe, instructional leaders are "guided by their values, especially those focused on teaching and learning" (pg.223). Kristen and Kaitlin abide by this definition in that they go so far as to believe that, despite holding a job as a principal for three years, they still consider themselves teachers. Foskett (1967) believes this is natural for principals to do, as many principals "sometimes see themselves as members of the teaching staff" (p.228). Hesitant to move away from this role, both principals have found that the green school shift has helped them to find out who they are as principals, while still being able to take part in classroom activities.

In speaking to Kristen about her principal assignment she admits she was not ready to consider herself an administrator. "I was a teacher. I was, I'm a special educator, so I was in the classroom for 10 years, 7 years at a school in the city, teaching elementary special ed for 5, 6, sometimes 7."

As an administrator she has found ways in which to still remain a teacher in the classroom, and also in her work with the staff.

We made a decision to hire a wellness coordinator... she and I teach 'Science Friday' together and during Science Friday we teach kids about food and making choices, making food choices that keep their bodies healthy. We introduce them to new fruits and vegetables. We don't cook but we make recipes you know dips and salads and teach them about vitamins. We think, we do it all through the lens of thinking and working like a scientist. So at our school we're scientists. Scientists . . . well if you look over there we've been doing this whole study of soil and what kinds of soil . . . what are the elements of soil and what kinds of soil are better than others for growing plants because we're moving to this new site. And so now we've set up a fair test to figure out which

soil is mostly sand and if it is better or worse for growing plants or seeds than this soil sample which is mostly humus. So you're teaching kindergarteners to set up a fair test and we do that work through Science Friday. It's all connected to food and to wellness and to making choices about keeping your body healthy.

As Kristen describes, because of her interest in being involved in the instructional piece of her school she has found ways, as an administrator, to ensure that she can remain an educator.

Laura also sees the importance of remaining in an instructional role, and feels that this is important for the Green School Movement. Laura feels that while the architecture and external pieces are helpful, environmental issues must be worked into the curriculum, in order to have the biggest impact. In saying this she also describes her deep respect for teachers and is happy when she can find ways to directly influence, in a positive manner, what is happening in the classroom.

You just really have to, you have to be a good teacher, to be in this job, the preparation of coaching was just critical for this job because I feel like that's what teachers are doing you know on the broader scale... And so we'll continue to push in the curriculum area, we've got people working this summer to see if there are things we can do with the building... but I know what it feels like to be in the trenches and to be with children and to do the kind of planning and grading and organizing, so I feel like I bring that lens to this job as well.

As Laura mentions, it is important for her, to not only have a background in teaching so that she can understand the instructional issues facing her staff, but also she must have the initiative and vision to push for the changes she feels are important for implementation.

While each of the principals described the importance of the teacher's role, Kaitlin, Kristen and Laura were thorough about the importance of this practice to them, and the viewpoint they bring to their administrative jobs. While an effective green school is based on being energy efficient, it only makes sense that a strong academic program that supports and teaches children how to re-create their physical, energy efficient surroundings, is beneficial to their overall learning.

Participative Leadership

In speaking to the administrators about how they make decisions, each of the participants reported the importance of taking into count the thoughts and opinions of each stakeholder. Laura describes herself as a “very inclusive decision maker” who, “does not feel that she would be comfortable in an environment that did not support this approach.” She feels that this combined with the values of her school, make her decision making processes easy to discuss. “I mean the things that we talk about may be different, but because we are a Quaker school, it’s always been a participatory decision making process.”

Kristen agrees with this idea and goes on to explain that it is her nature to use basic principles of the participatory leadership style, when making decisions for her school:

I want this to be a place that everybody feels like they have a voice. So it certainly is participatory in terms of I want to listen. I want to know what you think but we also can’t function if every decision is made by consensus. So it’s collaborative in terms of input but when it comes down to making the decisions, I’m prepared to make them and stand by them and take the heat for them or not.

Kristen admits that building her school has been a joint effort, and she has seen the value of collaboration, and is therefore aware of the benefits of this practice.

While participatory leadership appeared to appropriate for Laura and Kristen, in this discussion, the two principals emphasized the importance of collaboration and using the voices and experiences of the stakeholders to help in their decision making.

Transformational Leadership

Overwhelmingly, the principals who participated in this study defined themselves based on Leithwood’s idea of what a transformational leader looks like. Whether they realized it or not the principals discussed the need to be student-centered, inspirational, collaborative, and inclusive of all of the stakeholders’ perspectives to ensure that their school was accomplishing the goals that they had set out to achieve.

In speaking to the principals it appears that the participants who have made the most progress with the green initiatives were the ones who set out with an environmental goal in mind, and then motivated the school stakeholders get involved by giving them autonomy and ownership of this project. They listened, collaborated, and involved everyone in the school community from the start of the project, which ultimately helped the leader make their green vision become a reality.

In speaking about transformational leadership it is easy to speak about Diane and Kristen because they both created a green school with nothing more than their own backgrounds and a vision for how they wanted it to look.

Diane detailed the process of getting the teachers on board, and how she initiated the project with them. In speaking with her, it should be stated that because she had been such a strong leader at her school, there was a lot of trust from the staff in that they believed that she had their best interests and those of the school in mind.

The faculty and I met, we watched a DVD that had been produced by DEP about Green Schools, they came on board, and they said yes we would really like to do that, we wrote a letter to the board and we talked with the board, I was the representative to talk to the facilities committee, I talked to the architects about it...

Despite some obstacles in her district, Diane continued making movements toward this vision. She believes her school should be a place where everyone has a voice, every participant is treated fairly and is dedicated to these principles. As Diane mentions these values have been implemented over time, but she is slowly building her school into what she has always dreamed it would be.

Kristen deserves to be mentioned in this conversation because she to, has started a school on her own and over time has designed it to be exactly what she wants it to be. Kristen agrees with the values that Diane describes and highlights the importance of democracy and the voices of everyone in her school community. She has committees of parents, community members,

teachers and students who give her input and ultimately help in her decision making. At the start of Kristen's project, she knew that she wanted to start a green school, but it has taken time getting many people on board with her ideas to make that vision a reality.

Environmental Leadership

Throughout all of the conversations that took place with participants in this study, every principal thought it was important to talk about the environment and how they incorporate it into their practice. As Gordon and Berry (2006) suggest, there are six actions that are required of leaders who actively employ environmental leadership. These six actions include, having a clear vision and a way to communicate this vision, the ability to find, understand and transmit environmental information, working with the staff and outside parties to use all available skills and ideas, defining and pursuing an action agenda, formulating standards for success, and using empathy and humanity in dealing with others who are new to the environmental ideas. In highlighting these attributes of environmental leadership, all of the principals spoke about some or all of these ideas, even if they do not formally consider themselves environmental leaders, each principal has found ways to incorporate environmental issues into their leadership practices.

As Laura mentions, she feels it is her responsibility to not only be an advocate for the environment but also to initiate activities that support this interest. Because of her administrative position she found that she had the flexibility to be creative in implementing environmental activities, and found ways to incorporate them into traditions that were already built into her school. Laura highlights this as she discusses how she found a place for environmental learning in a school wide event that takes place each year at Webster. Because of her decision, families and community members were asked to take part in the process.

...we have an annual event for Founders days, which celebrates the founding of the school and every kid was there, from the youngest through seniors and it happen to be, and this year it fell on Earth day, and this day we really wanted to celebrate that, so I went into the office and sat down and thought about what were some great things we could do, and the kinds of activities we could do so I thought about Pine Cone Bird

Feeders and those typical kind of things, kids made bee boxes to take home. So they sat down and we came with our little information sheet so kids were able to do that while they were there and we got some things started which I hope really sticks, which is, we had everyone come around and make Earth Day resolutions which was neat and people just said one thing they will do next year so they live greener. And this environmental consciousness is something I would not have had and this community supports that.

This single account of Laura's environmental focus sheds light on how she is viewed as an environmental leader. Not only did she find ways to integrate learning into her school, but she has also become an advocate for the environment by sharing this learning with parties that would not necessarily be provided with this opportunity. One of the most important things one can do in the Green School Movement is educate and spread the work for environmental advocacy. In this single example, Laura has described how she has taken this step.

Diane also addresses this idea as she voices her interest in continuing the projects she is doing with students, in and out of the classroom in the hope of, "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..."

The Green School Movement has given people who would not necessarily have gotten involved with environmental issues an opportunity to do so. As Charles suggests, the building alone is a teaching tool for people in the school and in the community. As mentioned in chapter four, because his high school building has so many uses it gives community members the chance to learn about the building, and the ways in which it is energy efficient. This alone helps to educate community members who would not necessarily be interested without the presence of the building.

The leadership styles that the principals employ were many times based on their community, district and the school's many stakeholders. While the formal leadership style they convey may be appropriate for their school, it was apparent from this study that the way in which the principals became environmental leaders was a very personal decision. Without designated

literature to follow, the leaders used their own interests to guide their practice and how much or how little they chose to incorporate this in their day to day routine. It is apparent through this study, that the more personally invested the leaders were, the more likely they were to take risks and chances in how they would build the environment into their school.

Summary: Leadership Styles Associated with Green Schools

In speaking with the five green school principals who participated in this study, four leadership styles were overwhelmingly present in their conversations. The administrators spoke about instructional, participative, and transformational leadership styles, while also incorporating environmental issues and actions into the conversation, which highlights their roles as environmental leaders within an educational context.

Through their words and experiences the principals related how they came to implement the leadership styles, discussed in the chapter above, as well as what has influenced them to believe that this is appropriate within the Green School Movement. These leadership styles coincide with the Green Movement because they allow the principals to lead in a way that gets everyone in the school community involved, while still remaining an advocate for environmental issues, and an educational leader. Furthermore, the principal has the flexibility to remain an instructional leader so that they can help to guide the curriculum and pedagogy in a way that is appropriate for high-quality environmental education.

Do individuals come to the school leadership role as a priori advocates of green schools or do they become advocates as an outcome of their appointment?

In looking at the principals' experiences prior to taking the position as a principal in a green school, it is apparent through their conversations that the participants either came to the school with a prior interest in environmental issues, or have been influenced by the project and now after its existence have taken a larger role in working for these issues.

Throughout the data collection phase it was apparent that Kristen, Diane and Laura were, prior to the project beginning, interested in environmental issues. In conversations with them they were knowledgeable of ecological concerns, and specific in describing how they felt they could make an impact through their administrative position. Furthermore, each of the women was able to clarify how the environment has affected them in their daily lives. In speaking about her personal life, Laura laughed as she explained her actions on a day to day basis:

Yes, I certainly made my kids crazy, I would go through their trash cans and take out their papers, and now they do it too. Yes, my son now installs solar panels for a living. He just completed college.

Laura went on to agree that she is happy that Webster chose to take on this initiative because she feels her personal leadership style aligns well with it. She speaks about this idea below in saying whether or not the green initiative at Webster had anything to do with her coming back to the school, as she was in an administrative position at another school, at the time of the project's kick-off, "and yes, the thought that they were going to take on this kind of project was definitely attractive to me and something that I wanted to be a part of."

Like Laura, Kristen and Diane are able to communicate their specific environmental viewpoints and how they have been involved in past initiatives. While both of the principals initiated the green project in their school, it is obvious, from this single experience that they have a respect for the environment, and it is incorporated into their thinking. As Diane simply states below:

It's a lifestyle. It's ingrained in me. It's what I do at home, and it's how I live my life. I am just doing the things I do to conserve. I am just able to model in a larger scale here.
(Diane)

In speaking about this idea, Diane highlights Leithwood's (1999) ideas about moral leadership. Her personal values are used as a guiding force for the decisions she makes in her school. In this conversation Diane was clear to communicate, that the environment is part of who

she is. She chose to start the greening process at Wooded Creek because it was her opportunity to combine two of her interests, the environment and education.

While Charles and Kaitlin are also both green school leaders, in their case, it was a district wide decision to build a green structure and they both admit that while not always the most environmentally conscious, they have been influenced by the project.

...now, I am more strict with myself about it. Everything must be recycled, and I walk around on the weekends and when I have a can I say, okay this really needs to be in a recycling thing, where is the recycling bin? I think it has just made everybody more conscious overall.

Charles agrees that as an educational leader there is a specific level of consciousness that formed in him as a result of this project. "I think the significance of it is to raise the awareness for students and the faculty who work on conservation and look at new ways to save energy."

While both Kaitlin and Charles are considered principals in green schools, the decision to go green was not initiated by them, and instead it was something they took part in because of their involvement in the school. At no point during this process did Kaitlin or Charles make a negative or demeaning comment about the greening process, but the lack of information they could provide alluded to their previous lack of interest.

Summary: Are green school leaders a priori advocates of the Green School Movement?

Determining how invested the principals are in the Green School Movement prior to their being named the principal of a green school helps to determine, the level at which the school is invested in environmental issues, how knowledgeable the leader is in getting the environment built into the classroom, and how motivated the principal is to find new ways to sustain the environmental focus in the overall school culture. In this case, Diane and Kristen can provide examples of how they have been involved in environmental issues, prior to their involvement in the greening process. As leaders, this individual interest ultimately motivated them to create their own green school. In Laura's case, the decision to build the school around an environmental

focus was a board decision, but ultimately became a key factor for her returning to Webster, because of her own interest in it. As a green school leader she has demonstrated this interest in the level with which she became involved, and the ways in which she supported practices based on the environment in her school. In the cases with Charles and Kaitlin, both principals admit that it was the district's decision to move forward with the greening process. As mentioned, they are unable, through their conversations, to detail specific ways in which they were an environmental advocate, before this process started. While they speak about the importance of being environmentally conscious, they do not detail how it has affected them in their lives, prior to acting as a green school leader.

How is school leadership in a green school similar or different from that in other schools?

In looking into this research question, all of the principals agreed that the green element of schooling added something different to their administrative actions. While none of the principals felt that their decision-making strategies would vary from those that they would employ if they were not in a green school, each of the principals agreed that it did make a difference, in their thinking. Much like in previous areas of this study, the degree to which the principals felt their leadership styles varied depended on the degree of interest and their respective level of involvement in the project's beginning stages.

Kaitlin and Charles both agreed that the way in which they felt this movement was different from their previous experiences was displayed in their new found consciousness about the environment.

I think I've gotten a lot more aware, this school has been falling down and I thought what can we use here, but I've been watching everything that everyone has been doing and recycling and talking about, and now I'm a lot more of conscious of it. (Kaitlin)

Charles takes this statement a step further, because the green element has always been part of his school, as the school was built to LEED standards in its initial construction. Charles conveys this by simply saying, "It's a big part of our culture." Looking at the physical school

building itself, the LEED plaque sits in the front doorway, and energy saving reminders run along the walls. Charles feels that the reminders alone help mold the environmental values into the school culture.

Laura agrees that her experience at Webster is not like one she has experienced before, and feels that this project alone has made her a more active student. A role she did not feel she would have taken if she was not in her current position.

I just think again, it makes me more aware of the what we are doing, for example, you know I would never have known about the fact that landfills,, well $\frac{3}{4}$ of what is in landfills is construction debris, I would never have known that, so knowing that information because participating in the process was very helpful.

While Laura has spent the majority of her career here, she feels that her reasoning for seeing the differences in the school is more of a personal experience for her.

Well, I should say that certainly was what attracted me to this, and to get back here, and also that it is a Quaker school. The other school that I worked in was a secular school, and I was always grasping for reasons to explain to the kids about the values that we have, and instead of saying, it's just the way we do it, here we say, there's a foundation that you can rest on. And yes, the thought that they were going to take on this kind of project was definitely attractive to me and something that I wanted to be a part of.

For Laura, these beliefs help her with this project as she feels they have motivated her to ensure that their project stands out as a model for environmental education, both in her community and beyond.

There are colleges and things and there might be one green building and then that is there showcase and they pay no attention to it. But we did not want to be in that category. We did not want to just say well we will do this once and we don't care about it for the rest. We want to make this a commitment that is sustainable.

The idea that Laura is raising here, is that not only does she feel this experience is different from her previous positions as a leader, but that the project at her school is different from many greening projects currently being implemented. In this conversation Laura identified, one key difference that she sees between her school and others she has observed, the overall "commitment to sustainability."

Summary: Differences between Traditional and green school leadership

The principals identified a number of ways in which their current school was different from others that they had worked in or seen. In some cases, the differences seemed small, but important. As Kaitlin and Charles mentioned, they saw the difference in Hyatt and Mountain Top as being more conscious and considerate in the environmental decisions that are made. In turn, the principals saw how these decisions have ultimately made their way into the school culture and influence the policies that take place.

In Laura's case she sees the differences in her school as being committed to the values of the school, which influence the high level of commitment for building and implementing green initiatives. Her previous experiences lead her to believe that without a common set of values to base actions and policies on, the leader is lost in providing reasoning for their decisions.

Finally, Diane and Laura made the most revolutionary decisions by branching out on their own, and creating their own green schools because they were not satisfied with what was currently in place. Both leaders saw the most significant difference, as being the need to address environmental issues and incorporate them into the daily educational practices and school culture.

What are the characteristic values and actions of school leader advocates of social justice, responsibility and agency?

In order to understand who a green school leader is, it is essential to know their personal educational values, and how these values influence their actions and decisions. As Hoy and Miskel (2005) state, it is the shared "values, norms, beliefs and ways of thinking" that "distinguishes one organization from another" (p27). By having a leader look at their own values and actions will shed light on how the green school culture is developed and the level with which it extends beyond traditional schooling.

In speaking to principals about what they value as an administrator, it is very clear that the students and their educational needs always come first. When building the green school

element into the conversation it was clear that the principals were more likely to speak about environmental values, and they also spoke more holistically about the school environment and the importance of valuing collaboration between teachers, the importance of family and community, and the need for teaching environmental stewardship while giving children ownership of their schooling and their environmental actions.

Values

Students

First and foremost in every conversation the principals were clear to state that in every decision they make, they always think first about what is best for the students in their school. “I think first and foremost, I think it is always what is in the best interests, educationally, of the kids. So, you know that is what drives everything that I am trying to do.” (Laura).

Similar thoughts were verbalized by Diane:

Children first, I mean I do look at what I believe would be the most advantageous for them, moving them forward with whatever it is. You know our needs as adults come secondary, when it comes to children or when you think about the future what helps them. (Diane)

Kaitlin also felt strongly that the work she does, is always focused around the needs of her students:

...we are here to do good things for kids, and if it's not allowing us to do good things for kids or is a distraction from that, when why are we doing it? It always comes back to that. It's funny, I hear my teachers say things, well I am doing this because it's good for kids and I think to myself, yes, because that is what we should be doing. We are here to be customer friendly to our students and they are our customers, so if it's not good for our customers, why are you doing it. (Kaitlin)

Finally Kristen explained how she has incorporated this value into the culture of her school.

I want kids to know that this is a place where they're valued and we do things in here for a reason, not just . . . we're not quiet in the hallway because that's the rule in every school, we're quiet because we respect each other and the work we do here.

As Kristen highlights here, while the decisions she makes are student centered, she has found ways to ensure that the needs of the children are also being respected by the children themselves.

Teaching

While each of the principals brought up the importance of considering the children and their needs, they also discussed the need to support teachers and the work that they do on a daily basis.

I have a profound respect for teaching. Having been you know, I consider myself a teacher. And this is sort of emotional for me. Being a teacher is a hard, hard, hard job. You go on stage all day every day. You're expected to be perfect. You make any little mistake and you know someone can zoom in on it. It's an extraordinary job that we're asking people to do. And so I have a profound deep, deep respect for that work and for the intellectual nature. I think teachers are often not appreciated for how smart they have to be. You don't just open a book and deliver what someone else has written. You know you create it you know you're, you're creating it in response to what you see from your kids. You're driven by research. You have to read you know what people are learning about instruction and how people's brains work. You have to know what's going on.
(Kristen)

Principals also voiced the importance, especially in the green school environment, of supporting the teachers in making the changes necessary to effectively help them transition into this role. Valuing the teachers' work is not only necessary for the climate and culture of the school, but also crucial to the implementation of the curriculum. There are a number of ways that the principals have found to support their teachers, whether it is through recognizing teacher efforts or through asking for collaboration and input, and also by giving principals autonomy and flexibility to make their own choices.

Charles highlights this when he discusses how he views his relationship with teachers and how he interacts with them on a day to day basis. During this conversation he brings up the importance of trust and the significance of,

...giving them (teachers) accountability but yet autonomy to just create and do your own thing because you can't do this job by yourself and you have to be able to just trust people... (Charles).

Kristen also brought up the importance of trusting teachers, because as a teacher she felt that this helped her develop her own ideas and grow from her experiences. In this same conversation she raises a point about collaboration, and how it has helped her develop as an administrator and in turn helped her to develop Huntington be what it is today.

...we had a team of teachers, at least one teacher at each grade level that was part of the project and it really changed the way that we thought about instruction, not just I mean I think a lot of us came with those ideas already about what it could look like in the classroom.

Collaboration

While Yukl (1994), describes the influence of leaders over followers, he also admits that followers also have influence on leaders (p.193). This was true in this study as the administrators described the importance of considering the stakeholders' opinions as they made school-wide decisions. In many cases, throughout this study the principals discussed the need to collaborate with teachers, students, parents and community members throughout this process.

While Kristen was detailing how she felt collaboration assisted her in developing the curriculum, she also discussed how she used collaboration between the students as a medium for learning in her school.

... we had never really thought about what it could look like across grades and the idea that kids could be teaching each other about the things they're learning about. They could become experts in a field of study and then they'd be responsible for teaching the other kids in a building. And it very much changed the way that we worked together as colleagues, as teachers.

Families and Community

In thinking about Kristen's comments in bringing the school together as a single unit, both Kristen and Kaitlin discussed the importance of involving both families and the community in the environmental undertaking. As Potter (2002) writes, involving the community not only "provides new and important learning experiences" (p.25) for the students and the community members, it gives ownership of the building to the community as a whole. Furman (2003) also

adds that building community in school “emphasizes the importance of relationships, collaborations and communication” (p.4)” Whereas, emphasis on these community building strategies result in reducing “alienation for students” (Furman, 2003, p.4), improved academic achievement, collegiality between staff members and democratic practices evident in the school (Furman, 2002; Louis & Kruse, 1995; Sergiovanni, 1994). Kaitlin agreed with this idea and felt that because she operates in an inner-city school district, as an administrator she must consider the community, as well as her immediate building.

I’m big on, if we include the community as we are building the building, it’s going to be the communities building, not my building and therefore you are going to cut down on vandalism, and people not wanting to take care of it, and that’s the something the district built in and is necessary especially considering our community here.

Kristen also raises the point about both community and family involvement. It was apparent, through an analysis of her actions that she values the students’ families in her school, and was interested in finding ways to include them in the school initiatives.

We had a green fair planned...It was planned with some folks in the community...So I think that was the very first attempt to really reach out and share both to provide something fun for the community to do but to reach out and, and we had invited people from a bike riding organization and from a store in the city, you know about reusing products. Just lots of little things . . . Rain barrel workshop plants and all different kinds of stuff going on. So I think that was our first attempt at really doing something that reaches out to the community. And I think that’s the kind of thing we’ll expand next year. Next year we’re certainly looking at doing that a lot through the gardens and having workshops like holding dinners once a quarter for families where kids who are doing some of the teaching. And it’s using food from our gardens and sort of involving people that way.

Ownership and Stewardship

As Kristen articulates below, because of the placement of her school she felt that the community should also be involved. She discusses the importance of,

...doing this kind of work in a way that everyone feels ownership of it and, and a way that they’ll take care of it and be stewards of, of the, that environment? And unless it goes beyond the walls of one classroom it’s an impossible task.

With this same quotation, Kristen brings up the importance of ownership and stewardship, two values that were also highlighted by Kaitlin and Laura. As Laura mentions below that she believes the idea of stewardship also helped her school accept the green transition.

Because it resonated with the Quaker values, the school and the stewardship idea, people jumped on board and really it has become way more than just this building, and has infused the culture of this school and I'm really proud of that.

While each of the principals highlighted similar thoughts on the importance of family, and community; Laura, Diane and Kaitlin were able to relate these values to the environmental experience. Furthermore, the principals described how implementation of these values has become necessary in order to help their teachers' transition into the green environment and in helping the administrators to gain support for the movement in their schools.

Environment

Finally, it seems obvious but should be noted that all of the principals mentioned their own environmental values. It was through a discussion on the implementation of these values that the researcher was able to see how they truly resonated with the participants. Diane and Kristen were able to communicate these values, and in looking at their experiences, it seems appropriate to include them below.

I mean environment has always permeated my thinking, and my schools have always maintained that this was an important piece, but I do not think the world view has always thought this way. Without food to eat, water to drink and air to breathe we are going to be in some pretty sad shape. We can have all of the math and literacy we want but without those basic things we will not have a planet to live on, to do what we are here to do.
(Diane)

Kristen details similar feelings:

I feel like we have a huge responsibility to take care of it (earth) and we have a responsibility to teach kids how to do that. And I'm finding that as we run this school we have the opportunities to teach them on levels that we didn't even realize before...
(Kristen)

While a number of values were hinted at throughout this process, the researcher has highlighted the most commonly discussed values in the above section. In the synthesis below, the

researcher will detail how these values have permeated the actions of the principals involved in this study.

Actions

Each administrator involved in this study was able to readily describe their role as a principal and detail how the environmental component of their school influences their actions as organizational leaders.

Self-education

In discussing their leadership actions as principals, Laura and Diane felt strongly about the importance of educating themselves on how to implement the Green Movement in their school. They felt that this action has influenced their experiences and decisions as administrators.

Both Laura and Diane described how their experiences and quest for knowledge has helped them to sort out their leadership focus in their respective schools. As Laura mentions the Green Movement has been the shaping force in her personal education as a leader. “This has pushed me to keep reading and thinking about ways that we can bring this into our program, and obviously into the science curriculum.”

Laura also revealed that in her personal life, and on trips she has taken, she was more inclined to travel to places that provide for a connection to nature. She said that the decision to do this has helped her to personally reflect on the environment and make a personal connection with the aspects of the environment that she hopes to promote in her school. She feels that this has motivated her to grow as a leader and to have a stronger environmental influence on her school.

Through this discussion Diane brings up the importance of education, in her specific leadership practice, but believes that for her, the decision to pursue a college based education has been the single strongest factor in her role as a leader.

It's reading and coursework, that has made an impression with me. Our work with the university has probably been the strongest factor in seeing my own leadership style emerge and evolve.

Curriculum Shaping

The principals also discussed the importance of incorporating the environment into the curriculum. The principals felt that this single action would ultimately have the biggest impact on their students. In questioning the principals about their administrative actions, Laura, Kristen and Diane detailed how they have chosen to incorporate green values and ideas into the school's curriculum.

Well, the most significant way, is our 8th grade science course, which is specifically an 8th grade science course and the kids study environmental issues, but the first thing they do is study the building and what we have done, so we use that as a spring board to work this into language art and literature, into the math program, so that is all coming and of course, all of the science teachers infuse it into their class work. (Laura)

Because of the unique environment at Webster, and the availability of funds, much of the curriculum is also focused on charity work that is initiated by the student's own interests. This work is built into the curriculum, and the projects that the students choose to do are their own. Laura was also excited to share how she has seen students take the information they had learned throughout their classes and incorporate it into a service project by connecting with an organization which allowed them to send "solar cookers to refugee camps in Darfur." Laura explained that the children had researched the organization and found out that the "refugee camps do not have any fuel or wood, so they are finding that the solar cookers are the perfect way for them to do that." In addition to this, she has seen students use the project to find ways to inform others about environmental issues, by creating websites or art pieces that were highlighted, and used for educational purposes in the outside community.

Kristen was eager to discuss how she and her team of teachers have built the environment into the curriculum. As mentioned earlier in this chapter, Kristen built her school on the basis

that the curriculum would come from a project based approach. In further detailing this assertion she gives an example of how she is currently seeing this play out in the classroom.

...on Monday our second graders went to plant their bay grasses. So they're out, it's cold, it's windy, they're out in the water planting, having a ball. Like that's an experience that will live with them forever. And there are things that happened that day that we can go back and teach them for a very long time, and every time we finish a project, like this, the kids write books. We've got that spiral binding machine and we publish copies, every kid in the building gets a copy, we have big parties, you know, kindergarteners are sharing their books with older kids and vice versa.

Finally, Diane was able to detail how environmental issues had been built into the students' science classes at every level. In saying this, she admitted that building this into the curriculum was an important piece for a number of reasons.

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.

As Diane alludes to in this statement, building environmental components into the curriculum connects directly to what she is trying to achieve within her school. She sees the importance of incorporating principles of the environment and social justice into their daily lives, not because she has decided it should be there, but because this action helps the students become active and informed citizens, capable of making good choices.

Professional Development

A final category of leadership action that the principals in this study employed is professional development. They educated their faculties in order to guarantee that the Green Movement would be weaved throughout the school culture. Professional development for teachers is essential in creating effective educational organizations and ultimately raises the standards of learner achievement in the school (O'Brien and MacBeath, 1999; Moon, 2000).

Professional development has been associated with improving classroom performance, engaging with opportunities created by change initiatives, preparing teachers for specialist roles within the organization, preparing teachers for roles in management and leadership, and enabling the sharing of good practices through networking arrangements.

'any activity that increases the skills, knowledge or understanding of teachers, and their effectiveness in schools. (Rhodes & Stokes, 2004)

With this thinking in mind, the training and development of teachers was clearly a priority for the principals in this study, and it should be noted that the principal felt that with high-quality professional development, aimed at environmental issues, they were developing support for the Green Movement.

Kristen highlighted her professional development techniques in the quotation below.

I try to do things here that are around building experiences for adults. So when we do professional development we go to an island in the middle of the bay for a week you know and we're in it. We're out on a boat. We're dredging for oysters, we're eating crabs you know we're doing all those things because that's where we build bonds with each other, that's where we ask interesting questions about how people learn and what experiences mean. And so I think it's just about walking the walk through all aspects of the work that you do.

In this discussion, Kristen, Laura and Diane discussed the professional development responsibilities shared by principals in their position, and the importance of involving the teachers in the process so that environmental issues could be integrated throughout every aspect of the school.

Summary: What are the Characteristic Values and Actions of Leaders in Green Schools

The principals highlighted values which ultimately influenced the actions they make in their school. The principals spoke about what a green school leader should believe in order to make the most out of this experience for the children. First and foremost, the leaders spoke about the need to be student centered, and consider needs and interests of children. Each administrator believes that the decisions that they make, should always have the students' best interests in mind.

Secondly the principals spoke about the need to respect the role of the teacher, because this is the individual who puts the policies into place. The way in which the principals agreed that

this should be implemented is through trusting their staff and giving them the autonomy to make the decisions that they feel are best for children.

In a similar discussion the principal spoke about the way in which they value collaboration. While each leader had a different way to utilize this in practice, the principals agreed that collaboration with everyone in the school community, ultimately helped the principals in making the most progress.

The principals also touched upon how they felt collaborating with the school's stakeholders gave ownership to everyone involved in the educational process. They felt that this helped the teachers to develop their own ideas, with the assistance from the administrator. It also allowed the students to explore environmental issues and take ownership of the ways in which they wanted to become a steward of the environment.

Finally, each principal spoke about their own environmental values, and the way these beliefs have either influenced this project or the manner with which the project has impacted them. It was clear from this conversation that Diane, and Kristen have always been guided by environmental values, while Laura still sees this as an ongoing journey, where her values direct her, as she directs the project.

In this same discussion the principals spoke about how these values have motivated them to act with regard for the environment in their schools. The administrators highlight three major ways in which they have found these actions to be helpful. The first of those actions is through education on environmental issues. While the ways in which the principals do this varies, they highlight both formal training, and personal reflection as a guiding force for their own education.

The principals also discussed how their own personal environmental values motivated them to incorporate these issues into the school curriculum and in the teacher's professional development. The principals felt by fulfilling these actions they could incorporate the

environment into the entirety of the educational experience for everyone in the school community.

What do school leaders describe as their motivations for becoming involved in the Green Education Movement?

Motivation, as defined by Hoy and Hoy (2003) is the internal state that arouses, directs and maintains behavior” (p.112). With this definition in mind, the researcher analyzed the responses of the principals and found that, while each principal described their own reasoning for getting involved in the Green Movement, three dominant themes transcended the conversation and provided insight into what influences green school leaders and motivates them to lead in a green school.

The first of these motivations was the need of the principal to feel challenged. Both Kaitlin and Charles discussed their internal drive and need to be challenged in the workplace.

For me it was that whole idea of starting from the ground up...I liked the challenge and the chance to come in and really like a principal’s dream, build from what would be ground level.

Kaitlin described similar reasoning for her decision to take the principal job at Hyatt:

I like to be challenged. And I love teaching, but I was ready for a challenge and in this position it is a challenge you never know what you are going to get. I was getting to the point where I was meeting all of the challenges in my classrooms and I needed something harder, and this is the next thing for me.

In a similar discussion, and an unexpected discovery, Laura, Charles and Kristen talked about the importance for them to be in an environment that allows them to take risks, and lead in a school that gives them the flexibility to do something special, or an element the three leaders referred to as the “wow-factor.”

Laura details this motivating factor, and describes her reasoning for feeling this way:

Thinking back on their middle schools years, of course they (students) will have a good feeling about the English teacher they had and of course they will remember the knowledge from this class, but it's the trip or the special program or the opportunity they had and those are teachable moments too, and I've sort of realized that and I'm trying now to push us toward a balance. I want to have the meat and potatoes but I don't want to throw away the ice cream, sort of the fun stuff... Well, I should say, years ago I would not get caught up in the "showy" things and felt that what happened in the classroom was the most important, and not that I got after the flash, or the sexy stuff but also I think it is stepping out of that box and taking a chance, because these are the things that get remembered.

As Laura highlighted through this statement, she feels that, while she did not realize it before, her current administrative actions are motivated by her desire to take risks and make this a memorable experience for the children. She has found that there is more to education than the traditional subject matter, and the actions and expressions from the students. Ultimately she feels that the positive impact it has made in the classroom, motivates her to continue with the large projects and risk-taking.

Kaitlin also spoke about the importance of incorporating these big ideas into her school, but she felt that they should be integrated in with the environmental curriculum.

I think if you asked anyone, what do you remember about being in elementary school, you don't remember the day-to-day grind. But you remember sort of the big things like we had this party or we did this project. We wanted every grade to have that. We wanted every kid in the building to know that when I'm in kindergarten I'm going to study pollinators and I'm going to be the pollinator. And I'm a pollinator expert. And it doesn't matter that I'm five years old, cause eight year olds are going to come and ask me about it. When I'm in second grade I'm going to plant bay grasses. And when I'm in third grade we're going to compost works and when I'm in fourth grade we're going to do an oyster restoration project. We want you to know that that's what you've got to look forward to. That's powerful stuff.

While Charles, Kaitlin and Laura discussed the positive outcomes that can come from the special projects and big ideas, Kaitlin felt that these projects should be incorporated into the formal curriculum to ensure that students are getting the most out of them. She uses these projects and the students' interest in them as a motivator for her work.

Finally, Diane discussed how environmental issues are a strong motivating factor in incorporating green initiatives into her school.

Well it's always been a part of my life, and it's my belief that the principal is a model in the building, and their strong interests become part of the school. It's been gradual, but my beliefs permeate the building in lots of ways.

Diane was also able to communicate how she has seen the students take this project on, and become teachers for other students in the school. While she enjoys seeing children and teachers accept the environmental challenge, she feels that at its core, this work stems from her desire to do work that is ecologically centered.

Summary: Motivations of Green School Leaders

As described above the administrators mentioned three major motivating forces for administrators who decide to get involved with the Green School Movement. Initially the administrators were able to discuss their internal need to be challenged, and how this has motivated them to take their current positions, and build their school into what they envisioned it could be.

Secondly, the principals highlighted their desire to take risks and participate in large memorable projects. Three of the principals identified this as a source of motivation because of the results that came out of it. They felt that not only does this positively influence the students' educational experiences it has also opened the door for additional large scale projects, because of the attention this work gets. While the principals admit this was not a motivating force, prior to taking the position, it has developed because of the project's existence.

Finally, Diane, Kristen and Laura detailed the importance of addressing environmental issues in their professional lives. They felt that while they understand the importance of the students' educational experiences, the idea of developing environmental advocates and educating children about environmental issues was an important factor in the decision to green their school. While the principals utilized these motivations to incorporate their own personal leadership style, there were challenges that the principals faced along the way.

What are the challenges faced by school principals who are involved in a green school?

The conversation about green school administrators cannot be complete without discussing the obstacles or challenges that the study's participants faced while leading in their respective schools. Throughout the conversation, the administrators spoke freely about challenges they had faced and how it has influenced who they are now, and how they lead in a green school. In looking at this information, the researcher felt that these conversations added insights into the impact of principals in the Green School Movement.

Construction

To begin, both Charles and Kaitlin highlighted how the actual building process became a challenge. Their focus from early on was on the education of students, and they felt that the building process negatively affected the students education. In saying this, both administrators found a solution to this issue by involving themselves in the construction meetings and by being aware of what was going with the actual architecture of the building.

For Kaitlin, as a school leader, she felt that although it was difficult, the process of her school's construction forced her and those that work along-side her to clarify the needs of her school.

I think it has made me realize how explicit you have to be with everything that you do. Like with the fence, I just asked so many questions, when he was putting it in I was just like where does it go? how does it work? what do we do? How long does it take? He was like, 'what is wrong it you?' I was like, wait, you do not understand, I have to get 350 people moving around what you are doing. I mean in the end the whole process, took an hour and a half to put up the fence, but I was just worried about our kids. It's just interesting to see how I perceive things and how they perceive them. They were like it's a fence and I was like, yeah but...it changes our main entrance, which means I have to reconfigure everything that we are doing.

Kaitlin admits now, that as a new principal this was an important lesson for her, and one that she had not considered before facing this challenge. She agrees that as an outcome of this experience she is now more open to work with external parties and is careful to prepare and clarify the needs of her school.

For Charles, he was not as involved in the construction process but felt that from early on, the design of the building was an obstacle for the student-centered environment he was trying to create.

The thing is that the people who are building schools are not always the people who work in schools. And like I said, when I first got here I thought, wow this is not going to work, we cannot sit that many people in the cafeteria, we have to have this outdoor eating area. So that is what we try to do and fit the school with the understanding that there are going to be 1600 teenagers here everyday.

Money

Along with the architectural issues, each of the principals brought up the funding challenges that they were forced to face, and the way in which they were able to overcome them. For Kaitlin, while the green initiative was the district's decision, she felt restrained in the green features that could be included because of money restrictions.

I think when we figured out more of the money situation and what that came out to, I was encouraged by some things that were going to happen and some did not happen... It comes down to, whether or now you can you pay for it.

Diane also discussed financial concerns, because the green school initiative she was trying to spearhead was not supported by her school district.

...it came down to dollars, as to what was feasible to do. It was great that the architect incorporated things originally, but then as the facilities committee looked at it, they said, well geothermal, we do not feel as strongly about that. It's just, you know, cost over time, they really did not cost it out to see savings over time. So, they were looking at dollars they have available right now, and not in the future.

In response to this obstacle, Diane, because of her outside environmental connections, was able to find and gain access to grant monies that would allow her to implement her own initiatives. In looking over her provided documents, she gained valuable experience in writing grants and being able to spend this money on the additional features she was interested in implementing.

Kristen also discussed monetary issues, but felt that this experience gave her insight into what other administrators may have faced. She felt that, as a young administrator she was learning to be fiscally creative, because of this new found role in her school.

When you see sort of the financial constraints that schools are in you understand some of the decisions that, that they make that you never really understood before in terms of the products that they choose or sort of the structure of the day...Like wow, these are economic decisions driven by economic factors, not decisions that's based on what's best for children or what's healthiest.

Like Kaitlin, Kristen was new to her administrative position and although the monetary issues were frustrating, she eventually admitted they provided her insight into what an administrator is capable of doing, and how she will have to handle this issue in the future.

Hiring Qualified Teachers

The final challenge that was discussed by the administrators in this study was the importance of hiring people who are knowledgeable about environmental issues to teach in green schools. Kristen highlighted this point as she described her own difficulty in hiring highly qualified teachers who understand the importance of incorporating the environment in their daily classroom work.

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. While I say I have all of these beliefs about supporting teachers and growing teachers you have to come at a certain place in your own development and 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 . . . that 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, had the background.

Charles also highlighted this idea, and both principals felt that in order to ensure that the Green School Movement can continue to make progress, it must not only have qualified leaders who understand both educational and environmental needs, but also a staff that understands and supports these same issues.

Summary: Challenged Leadership in Green Schools

Anytime an individual takes a chance at implementing a new idea, challenges will most likely be part of the process. The principals in this study are no exception. In looking at the green school leader's position, a discussion of the challenges they have faced should also make its way into the conversation. The first of these challenges was the construction process that took place, as the school was being built to green standards. While the outcome of this experience was a positive one, the principals had their doubts throughout this time, as they wondered if the distraction of the building project would negatively affect the students' educational experiences.

Secondly the principals overwhelmingly spoke about the funding issues associated with going green. Financial concerns are no stranger to individuals in the education field, and it appears that the short-term cost of this project can seem overwhelming to administrators. It should be noted that in the schools where this was a district decision, the principals had an easier time getting the kinds of features and support they needed. For the principals who worked on their own or in Diane's case, where this was not supported by the Board of Education at her school, they had to overcome this challenge by finding alternative sources of funding.

Finally, the principals identified the need to hire qualified teachers who understand environmental issues and are willing to incorporate this practice in their classroom. While the principals agreed that they had interviewed people who were interested in the green initiative, it was difficult for them to find people who were knowledgeable enough about both education, and about the environment.

Summary

As the data reveals, there is a clear difference in the role of the green school leader than that of traditional school principals. The beliefs, actions and interests vary between the principals but overall the principals must consider additional aspects of environmental advocacy that are not typically incorporated in schooling beyond a single science class.

As stated throughout chapter five, green school leaders who come to the school because of the environmental focus or who initiate the project tend to value and engage in an advocacy role before the Green School Movement came to fruition. Additionally these individuals are more likely to be optimistic about the project and the impact it can make on the school community. These individuals also take on a more active role to ensure that the environment is built in as holistically as possible, so that the movement can move beyond the school walls and promote environmentalism in the surrounding community. Leaders who were put into a principal position before the project began and took part in its implementation because it was a district decision were more likely to be influenced by the project, see obstacles or negatives in the process, and felt that this process was helping them to grow into the environmental role, instead of being an expert in it.

Through this conversation the researcher has highlighted the major themes necessary for discussion when talking about who a green school leader is, and what they do on a daily basis. While this chapter provides insights into what this position entails, chapter six will highlight final conclusions and implications for action, and how this information can be utilized for school leaders, and individuals interested in related research.

Chapter Six

DISCUSSION, IMPLICATIONS AND FINAL CONCLUSIONS

Throughout the preceding chapters a number of variables were identified and explored to assess their relative merit in providing insights on the nature of green school leadership. While chapter five highlighted the actual words and thoughts of the participants in this study, chapter six will bring this information together in the form of a single profile or generic image of what a green school leader looks like, and the practices that characterize his or her professional work on a daily basis. The researcher will use this summarizing image of practice as the foundation for a final synthesis of three of the key themes that emerged from this study. Secondly the researcher has included a relatively lengthy discussion of future projects that she would be interested in participating in and implementing as implications for research. The ideas behind these projects came about during this study or were points that were raised by the participants, and seemed worthy of further research. This chapter also includes a discussion of the implications for practice and theory that became apparent as outcomes of the research process. This discussion highlights key elements recommended for consideration by anyone who might choose to conduct a study similar to this one, as well as changes in process and methods the researcher would consider for future studies. The chapter ends with a number of final thoughts and reflections on this process and an expression of hope for continued support of environmental education and green school practices in the future.

Profiling the Green School Leader

Throughout this study the researcher focused the entirety of her research on investigating and ultimately displaying the nature and characteristic functions of a green school leader and what it is this individual does on a daily basis that is distinctive. In order to do this, as was conveyed in chapter three, the researcher implemented a methodology over an eight month period. During this time the researcher collected data in three distinct phases to help shed light on

the questions to which she sought answers. Through analysis of the data that was collected during this time the researcher was gradually able to see answers emerge from the data to the research questions posed in chapter one. These answers were explored and displayed in chapter five and provided for a lengthy look into what the principals in this study are implementing and promoting in their roles as green school leaders.

Key Dimensions of Green School Leadership

In displaying this information the researcher decided to develop a single profile as a way to present the material in an organized way. As Begley (2008b) suggests the creation of a profile begins,

with the establishment of a goal statement followed by a series of decisions about which categories of professional action are more relevant to the achievement of the desired state described in the profile goal statement (p.17).

The goal statement for this profile of leadership is articulated in chapter one as the purpose of this study and the relevant categories of professional action are conveyed as the research questions that were used to guide this study. With these key dimensions in mind the researcher was able to assemble the data and display a single profile of green school leadership. The key dimensions that are described throughout this chapter are summarized in table 6.1, below:

Categories Appropriate For Green School Leadership	<ul style="list-style-type: none"> ● Roles and Responsibilities ● Leadership Styles ● Values ● Actions ● Motivations ● Challenges
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Table 6-1 Key Dimensions of Green School Leadership

Roles and Responsibilities

In thinking about the roles and responsibilities in question, it would appear that there are six roles that were highlighted by a green school leader who is leading in an ideal environmental

fashion. In the case of this study, a green school leader should be inspirational, motivational and a role model for environmental education. Beyond this the individual should be supportive of creativity and actions that advocate for environmental causes. As a leader this individual should initiate collaboration to ensure that everyone in the school community is aware of the environmental mission and takes part in the practice. Green school leaders 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, and finally, because environmental issues can be an ongoing process the leader should be a student of ecological issues to ensure that they can continue to lead in a way that is appropriate for proper development of the movement.

Roles and Responsibilities	Characteristics Toward Ideal Green School Leadership Practice
Inspirational/Motivational/Role Model	<ul style="list-style-type: none"> • Inspires the school community toward environmental advocacy. • Motivates others to take environmental action. • Models environmentally conscious decision making in the school and community. • Empowers teachers to participate in the environmental cause and recognizes outstanding achievement in this area.
Supporter	<ul style="list-style-type: none"> • Supports teachers' ideas in involving environmental issues into the school culture.
Collaborator	<ul style="list-style-type: none"> • Collaborates with staff, students, and community members in building environmental issues into the school building.
Leaders as Learners	<ul style="list-style-type: none"> • Engages in personal professional development by taking on the role of a student in order to better understand environmental education.
Instructional Leader	<ul style="list-style-type: none"> • Promotes and implements models for high-quality environmental education instruction.
Manager/Planner	<ul style="list-style-type: none"> • Manages administrative tasks in order to help the environmental focus be central to the school experience.

Table 6-2 Roles and Responsibilities of Green School Leaders

Leadership Styles for Green Schools

Leadership styles were also discussed in the conversations with green school leaders. In these conversations the four leadership styles that were highlighted were instructional, participative, transformational and environmental. 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 on their own. Beyond participative, the principals discussed the overwhelming need to be a transformational leader. In doing this they spoke about the importance of collaboration and letting everyone's voices be heard, but also being inspirational and using the collaborative process to promote individual action.

Finally a green school principal should be an environmental leader. It is not enough that a principal promotes environmental actions because it is the district's decision. The leaders should be aware of environmental issues and ways in which to promote action in their school. While the other three leadership styles, discussed here 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. While the three other leadership styles offer a medium with which to base educational actions on, environmental leadership is the basis to examine ecological actions. It is the coming together of these two subjects that creates a green school leader.

Leadership Styles for Green Schools	Characteristics Toward Ideal Green School Leadership Practice
Instructional Leadership	<ul style="list-style-type: none"> Assists, models and implements high-quality environmental education.
Participative Leadership	<ul style="list-style-type: none"> Includes all stakeholders in school-wide decisions.
Transformational Leadership	<ul style="list-style-type: none"> Inspires action through collaboration with the school community and buy-in to the green mission.
Environmental Leadership	<ul style="list-style-type: none"> Is knowledgeable of environmental issues, and is qualified to inspire appropriate actions for these concerns. Promotes action toward environmental consciousness and collaboration for the benefit of ecological practice.

Table 6-3 Leadership styles demonstrated by Green School Leaders

Values of Green School Leadership

Green school leaders describe a number of values that they hold, and eventually discuss how these values motivate their practice. First and foremost the principals described the desire to consider the students and their needs. This was discussed in detail, and the principals felt that beyond their own needs or those of the staff, the students and their learning should always come first.

The principals also communicated their genuine respect for teachers and the work that they do. This value motivates the principals to use the words and experiences of the teachers in their own decision making and in understanding what is best for the school. Collaboration between the staff and administrators was brought up numerous times during the principals' interviews. They felt it was an important component of their practice and helped them to make the most out of this opportunity.

The principals also talked about the importance of caring for and respecting both the family and community connection to the school. 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 being

done there. Furthermore, involving the community allows for networking opportunities which opens doors for continuing projects and the opportunity for children to act as stewards of the environment.

Finally, seemingly most obvious, each of the principals discussed the need 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 it. In reflecting on their own relationship with the environment and then communicating how this experience shapes their practice helps one to think creatively and deeper about their practice.

Values of Green School Leadership	Characteristics Toward Ideal Green School Leadership Practice
Student-Centered	<ul style="list-style-type: none"> • Believes that all of the decisions made in the school should be in the students' best interests.
Teachers/Collaboration	<ul style="list-style-type: none"> • Empowers teachers to take action while supporting and respecting their role as an educator. • Seeks the advice and opinions of staff members, students and the community in order to promote collaboration.
Family/Communities	<ul style="list-style-type: none"> • Respects the students' families and sees their influence on the school as important and necessary. • Involves the community with the initiatives of the school in order to promote ownership of the building and its mission.
Ownership/Stewardship	<ul style="list-style-type: none"> • Promotes activities that allow the school and community to take ownership of the green school project. • Sees everyone in the school community as stewards for the environment.
Environment	<ul style="list-style-type: none"> • Keeps environmental issues as the central theme for the school's mission.

Table 6-4 Values of Green School Leaders

The Characteristic Actions of Green School Leaders

The values that are communicated above inspire action on the green school leaders' part. Three specific actions were highlighted as important for a principal in this environment. Much like the environmental values discussed above, a green school leader should be responsible and eager to educate themselves on environmental education and issues. As discussed 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 to do this, and if a leader is not knowledgeable about ecological issues, they can collaborate and put people in positions in order to move the curriculum in this direction. Curriculum building and shaping is one of the most influential ways a principal can involve the school community with this undertaking.

Finally the principals talked about the need to promote powerful professional development that is line with the environmental mission. Kristen summed this idea up in her follow up interview,

I look at new experiences for our teachers, that are related to the environment so that they are immersed in the subject and so that it's experiential. If we are going to make this authentic we cannot be doing the same things every year. I mean we can go to the same place, and we will have different experiences, but there is a lot of thought that goes into creating structures that allows for learning to happen. So anyway, it is these experiences with the staff that help us to build the culture and build the vocabulary and our growing understanding of what environmental education is.

As Kristen highlights, 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 assignment.

Characteristic Actions of Green School Leaders	Characteristics Toward Ideal Green School Leadership Practice
Self-Educating	<ul style="list-style-type: none"> • Remaining up to date with environmental education initiatives, and self-educating on how to incorporate these into the school.
Collaboration	<ul style="list-style-type: none"> • Continually collaborating with internal and external parties in order to shape the curriculum toward ecological advocacy.
Implementing Professional Development	<ul style="list-style-type: none"> • Implementing worthwhile and appropriate professional development activities that inspire, educate and build support for environmental action.

Table 6-5 Actions of Green School Leaders

Motivations of Green School Leaders

The green school leaders in this study highlighted three key motivating factors for them, when deciding on whether or not to get involved with the Green School Movement. The first of these motivations is the internal need of the administrator to be challenged. 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 motivation enough to take part.

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 early on, it 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 personally and professionally.

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, the others said that just the idea of making a difference with a large population was reason enough to get involved with the movement.

Motivations of Green School Leaders	Characteristics Toward Ideal Green School Leadership Practice
Need to feel challenged	<ul style="list-style-type: none"> • Internally motivated to take on challenges and succeed in building a green school.
Risk-taking	<ul style="list-style-type: none"> • Take risks that many individuals would not necessarily take part in.
Environmental issues	<ul style="list-style-type: none"> • Making a difference in the environment both personally, and on a larger level by educating others about environmental issues and the importance of advocating for it.

Table 6-6 Motivations of Green School Leaders

Special Challenges of Green School Leadership

The final characteristic that should be discussed for a green school leader are potential 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 the school. The principals admit that the architects who are certified to build green buildings understand the needs of the school community and therefore try to help to minimize the distraction this might cause. In saying this, the principals agreed that the challenge of building a green building can be an annoyance while the process is going on.

A green school principal should also expect to be challenged by what the school can afford when working within the Green School Movement. 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 the school might be more expensive than that of a traditional school 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 teachers who are not familiar with the green ideals, and therefore are not qualified to teach in this environment. While many teachers are certified and qualified as educators, they may not necessarily have the science background, that the principals felt was necessary in the green school environment. 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.

Special Challenges of Green School Leadership	Characteristics Toward Ideal Green School Leadership Practice
Construction	<ul style="list-style-type: none"> • The constructing and building project being a distraction from the educational process.
Money	<ul style="list-style-type: none"> • Not being fully supported, financially to move forward with environmental initiatives.
Hiring Qualified People	<ul style="list-style-type: none"> • Having access to teachers who are both highly-qualified as educators, as well as understand environmental issues and advocacy.

Table 6-7 Challenges of Green School Leadership

Synthesis: Three Key Themes

Three major ideas came up during the synthesis of the information provided for this study that should be included in the final discussion, but are not necessarily pertinent to the specific profile of a green school principal. Examination of these themes sheds light on the Green School Movement in general and helps promote a deeper understanding of who these administrators are and their role in the Green Movement.

Early Adopters

The first theme that should be discussed is in line with Rogers (1976) idea that innovation is driven by “innovators” and “early adopters” (Rogers, 1976, p.292). Rogers’s model is based on the idea that certain individuals adapt more easily to new ideas and change than others. The two types of people that are more willing to do this, as stated, are the innovators, who are

individuals who are initiating and pulling for change and also early adopters who are leaders that have opinions toward change, are likely to try out new ideas, but are careful in fully dedicating themselves to the change until it is proven to result in positive outcomes.

Risk-Taking

With this in mind the researcher saw that the leaders who were personally invested were more likely to take risks and promote change. They were more likely to become involved in the process, think creatively with how to involve the school with the green initiatives and seek the benefits of this practice. The principals who were not as invested prior to the Green Movement beginning took the role as early adopters. They saw the benefit of the practice but were careful with how they implemented it in the school to ensure that the status quo was not disturbed until the initiatives had proved to be beneficial.

Personal Transformation

The third theme that presented itself throughout this study was the evolving process that occurred as the principals spent time in their green school. Because this is a new process, the researcher noted that even within the length of this study, and in her interactions with the principals, she saw that as time went on and as the participants spent more time interacting with the environmental initiatives, they became obviously more confident in their roles as green school principals, and spoke with more ease about the benefits of this practice. The researcher was not sure if the principals saw it for themselves, but it was evident that, in this specific study, the principals in this environment were changing and evolving as they became more familiar with the environmental principles and with time spent working with the Green School Movement.

With these two ideas in mind, the researcher also noticed a trend in the roles in which the principals viewed themselves, which was related to how long the leaders were in their green school leader position. Each of the principals that the researcher spoke to was in the same position. With the exception of Diane, the principals had all been in their principal position for

less than five years. Kaitlin and Kristen had the least amount of experience in their administrative roles and still saw themselves as teachers, and were hesitant to be considered administrators, at the beginning of this project. Despite having the same title, younger principals still see themselves as teachers for environmental education, whereas principals who have been part of the process longer appear to be more confident and refer to themselves as experts in the field.

Implications for Research and Future Projects

Through this process the researcher identified a number of implications for a researcher who is interested in getting involved with green school research. In thinking about if someone were to implement a project similar to this one, the researcher reflected on what she might change, if given the chance, and then also how this study might be different because of these changes. Beyond the suggestions provided by the researcher, she also identified additional projects that she became aware of throughout this process, and if given the opportunity, would be interested in exploring in the future.

The first implication that should be addressed is the sample size and lack of diversity in the sample. In looking across the cases it became apparent that out of the five principals investigated, four of them were women, and one of the principals was a man. In this same conversation, all of the principals were Caucasian, leaving the topic of diversity out of the conversation all together. In reflecting on how this study could be changed it would be interesting to compare how the experiences of green school principals differ based on background and cultural experiences.

In addition to background, as this study was taking place the Green School Movement exploded in the number of principals it affected. While it is impossible to talk to every green school leader the number of principals that the researcher could have access to has grown throughout the past year, and speaking with a greater population would ultimately help to validate the ideas of the five participants in this study.

Secondly, as this study was taking place, many of the principals were in the very early stages of building the green practice into their schools. It was apparent, even in follow-up interviews that as time moved along their understandings and comfort in their new roles increased. It is the belief of this researcher that over time, the green school leader would change based on their own interests and beliefs, and ultimately following up with these individuals would lead to a broader understanding of the green school leaders' role.

In addition to the suggestions made above, the researcher also identified some practical changes that could have been implemented throughout this study, and in reflecting on the experience would provide for insight to a researcher in the field. Of these two suggestions, the researcher felt that it would be helpful to provide one implication that was related to the methodology employed, and also, an implication for a researcher interested in this topic, and the actual way with which this methodology was implemented.

Throughout this process the researcher felt that applying tenets of the case study methodology was appropriate for individuals interested in investigating green school leaders. While the researcher still agrees that this methodology is correct, she feels that a future researcher could go further with the way that this is implemented. In order to fully apply a case study methodology it would be helpful to look at a variety of people in a single school in order to gain a broader view of the leadership practices that the principals are implementing. While the point of this study was to hear how the specific principals have been affected by the Green Movement and what has motivated them to take on this role, information concerning the leader's values and motivations could not have been collected from outside parties. In saying this, speaking to staff members, students, parents and community members about the principal's actions would help to shed light on what is actually happening in the green school.

Finally and in the most practical ways, the researcher, in her experience felt that the timing for data collection was an obstacle in getting this study completed. Because of the

researcher's timeframe, and because of the ten-month school year the researcher found that beginning to collect data at the end of March became problematic, as the administrators became increasingly busy with the end of the school year.

While the researcher made contact with the participants in late March, she quickly found that spring break and the Easter holiday were difficult for administrators to schedule around. By the time the holidays were over, the school year was winding down and naturally principals became busy and unable to meet more than one time, if they were able to do that. Additionally, the researcher found, that despite most principals holding twelve month contracts, they remained busy throughout the summer, and were able to make contact again at the end of September. While there is not much the researcher could have done to avoid this, she did feel that by expecting it and understanding the need to be flexible became important in finishing this project.

As mentioned above, in working through this project it became clear, that beyond the immediate research topic at hand, there were a number of other areas worthy of investigation. Personal interest notwithstanding the researcher felt that these other studies would add to the body of literature on the Green School Movement by shedding additional light on what this Movement is about. Moreover, it was exciting to be part of this process, because the literature and research on the Green School Movement is still relatively small when compared to educational leadership literature in general. With this said, the researcher identified five studies that she felt would be interesting to investigate.

The first study that the researcher discovered was the specific influence that the U.S. Green Building Council's (USGBC), Leadership in Energy and Environmental Design (LEED) certification has had on school administrators. While this study looks at leadership in green schools, the researcher chose not to discriminate based on whether or not the schools had achieved a LEED certification. In speaking with the principals who took part in this study, and specifically the leaders who worked in a LEED certified school, it became clear that they had

differing ideas about what the certification is, what it means to them as administrators and the significance of it in the school.

In thinking about the Green School Movement and how significantly the LEED certification has increased in popularity in the past year, the researcher now believes that it would be interesting to speak to administrators, not necessarily just principals, but also superintendents, building managers, financial managers and other administrators. In doing so, it would be exciting to see what their feelings are on the significance of the LEED certification, in order to examine the ways it has been incorporated throughout the school, as well as if it has made a difference in the leader's administrative styles.

Additionally this research could also include teachers, students, parents and community members. Collecting data from everyone in the school community would provide for a better idea of what the Green School Movement is about, as well as its staying power in the educational arena.

Secondly, throughout the past year, the researcher also noticed, that while many of the people involved in her study were optimistic about how the Green School Movement might influence education, some people also communicated concerns that this might be a passing phase, or wondered if the Green School Movement had the staying power to significantly affect education. Seeking an answer to these questions would require the researcher to look at policies, both state, federal, and at the local level, to decide if the administrators and communities who are working with these schools support the practices and are willing to advocate for them.

As noted in this study, the researcher noticed that the level with which the environmental focus was making its way into the school was related to the principals desire to incorporate it. In saying this, the researcher felt that it would be interesting to look at and evaluate if, over time, with direct interaction with the environmental concentration, if administrators develop an internal motivating impulse to act as an environmental advocate.

Throughout this study, it came to the researcher's attention that the administrators who had prolonged interactions with environmental issues were more likely to advocate for them, and find ways to incorporate these concerns into the school. As this information became clear, the researcher thought that an additional study to look at what affects an individual's desire to take part in environmental actions would be interesting. She felt that she would be interested to see if, as the administrators spent more time in this environment if the transition toward environmentalism was due to a push from the superintendent or if it came from an internal motivating force.

Finally, because this study looked at schooling from an ideological standpoint, the researcher felt that it would be interesting to identify a sample of specialty schools and then look at principals in these unique environments. This research would be implemented with a similar methodology as this one, but could compare the practices of principals from religious schools, schools that provide educational services for at-risk students, and also green schools.

By implementing this study, the researcher would be able to identify, not only what factors influence these leaders, but also if the principals who are working for a specific cause share leadership qualities or if these characteristics are unique to the population and cause. The outcomes of this kind of study could provide insight and literature available to those interested in both social responsibility and educational leadership, as well as literature on unique schooling opportunities highlighted in the study.

Implications for Practice

Due to the practical nature of this study, and the methodology that was employed, it was predictable that several suggestions would emerge for administrators who were participating in the Green School Movement. While talking to the principals in this study, two of them clearly stated the difficulties they had in implementing the Green Movement in their school. With this in mind and through observations of all of the principals the researcher developed two suggestions for practitioners who are getting involved with the movement. Both suggestions relate to ways in

which the principals can educate themselves both formally and informally on environmental issues which will ultimately assist them in promoting green practices in their school.

The first implication for practice that the researcher noted was suggesting that principals who are getting involved with the Green Movement educate themselves on environmental issues. While it is understood that an administrator's job does not allow for a great deal of extra time for personal educational initiatives, and this endeavor might be taxing to a new principal, there are a number of ways to go about educating one's self.

The researcher noted that an administrator should be their own advocate for learning. As brought up by Diane during her interview, she chooses to educate herself by enrolling in a graduate program and by participating in organizations outside of her school that are related to her ecological interests. While this may be too time consuming for another administrator, there is also the option of self-educating by reading books, subscribing to magazines, and journaling.

Secondly the researcher would also suggest creating a peer-group or network of other green school leaders who are going through this same process. In this study alone, the researcher learned so much about the Green Movement by simply having conversations with green school principals. While a formal training program on environmental initiatives would be ideal, simply communicating and collaborating with other green school leaders might be more realistic and appropriate for an administrator in this environment, especially considering the ease with which people use e-mail and online networking tools.

This idea came to the researcher in her first interview with Laura as she discussed how two of her teachers were connecting through a Friends School network and talking over e-mail in order to share ideas about green initiatives. The teachers had set up this network, and the ideas that were being exchanged online were then brought back to Laura's school and when appropriate, were implemented. This network was not only helpful to the teachers, but it was also informative to Laura who could initiate the ideas with the staff and the students.

As stated earlier this idea could be implemented with administrators as well as teachers. While teachers have a broad understanding of the curriculum in their specific classroom, information sharing between administrators would be worthwhile for educating the administrators by bringing new ideas into the school. It would be suggested that the network of administrators should be a mix of green school leaders from a variety of experience and skill levels. This would ensure that the information that is passed between administrators is a mix of what has worked and ideas that have not been so successful. It is with this network that ideas and initiatives can be shared and ultimately explored.

Implications for Theory

Though a specific theory was not created during this study, a profile of a green school leader was, and the ideas and time that went into creating this profile were due to the flexibility and energy of five green school principals. Their work not only added to this individual model for study but also provided for implications for theory that could ultimately assist a researcher interested in the body of literature available for green school studies. As the researcher was working through this process, she realized there were two implications for theory that emerged from this research.

The first of these implications for theory was discovered throughout this process and by looking into the differences between social justice theory and social responsibility. The researcher found that while early on social justice appeared to be appropriate for study, it became apparent that social responsibility was more closely related to the subject matter. As the results of this study became clear the researcher noticed that relating this research to the social justice literature was not the best fit because this area of literature spoke about equity for people, whereas the current study focused on advocacy for the environment.

As the researcher was reviewing social justice literature she realized that it became difficult to decipher how exactly social and environmental justice mesh together. It was at this

time that she felt it made more sense to move away from the social justice theory and look more closely at how the school leadership literature supports an individual promoting a socially responsible agenda. An educational leader in this manner feels that it is their obligation to fulfill a responsibility of society in a rapidly changing world. While the researcher hinted at the idea of social responsibility in chapter two of this study, with the final results in hand, she agrees that looking at the Green School Movement from a socially responsible standpoint makes more sense.

The second implication for theory, speaks to how this study can add to the body of literature available on the green school topic. As has been mentioned a number of times throughout this study, the green school topic is still new, and it is unclear how much of an impact it will have or if this is just a passing phase. As Begley (2008a) points out, the relative strength of the purposes of education as influences that drive school curriculum generally depends on two factors; time and context. It is the researcher's fear that over time the emphasis on environmental education will pass and the benefits of this practice will be forgotten. This relates to the second implication for theory because, while the Green Movement may pass, it is timely, which emphasizes the importance to conduct studies and write about the topic now so that the Green School Movement can be documented and added to the larger body of literature on environmental leadership. While there has been a lot written on school leadership and environmental leadership this study and ones like it will provide a theoretical model for green school leadership.

Concluding Comments

Throughout the past year, issues involving environmental concerns have increasingly become part of our daily lives and ways of thinking. It seems like every company and product has "Gone Green." While it may seem that everyone has caught on, schools are no exception. The green phenomenon has exploded in the past year, 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, when in actuality, 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.

Throughout this study a number of factors were examined in order to understand how it is that a green school principal leads. By looking at these factors the researcher was able to shed light on not only what these individuals value and believe, but also what has motivated them to take part in this movement, and how they are currently implementing this practice on a day-to-day basis.

In analyzing this information it became clear that the principals who act as "innovators" and "early adopters," 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 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 they were behind in incorporating this practice in the school, and at a level that is required, in this time when our earth and its resources need it most.

While information on environmental concerns have been around for decades, people in all areas of life are now coming together to talk about what can be done, in order 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 in their local school, and with the education of our country's youngest generation. It is known that it will take time to see exactly how the Green School Movement will turn out, and whether the factors influencing school officials can sustain the ups and downs of school policies. It is the hope of this researcher, that like the green school leaders in this study, we may face obstacles in our day to day lives, but the problems we face as a global community will ultimately motivate us to realize our individual and collective power as change agents capable of responding to the environmental challenges we face.

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Appendix A

Invitation for Participation

Dear (Principal Name):

My name is Carly Ackley and I am a graduate student in Educational Leadership at the Pennsylvania State University. I am in the process of conducting a research study necessary for completion of my PhD degree under the advisement of Dr. Paul T. Begley, Professor of Education at the Pennsylvania State University. I am currently seeking research volunteers to participate in my study. I found your contact information on the United States Green Building Council's database, and felt that you would be appropriate for this study.

The purpose of this study is to describe and understand the leadership styles of green school principals. As part of my study I would like to gain an understanding of your role. In doing so I would be interested in observing what actions you take and the decisions you make on a daily basis. Finally, I would ask to speak with you about your own values, beliefs and how these influence and motivate the work that you do in your school.

Participation in this study will take just a bit of your time. I would ask that you allow me to observe you in your building and in your role for half of a school day. After this experience I would need about an hour of your time on two separate occasions to conduct an interview with you about your experiences.

I would very much appreciate your participation in this study. If you would be willing to participate, please send me an email (cra151@psu.edu) that includes how you would like me to contact you. Finally, I will contact you to arrange for a time and location for our initial meeting.

I appreciate your time in considering this matter and if you have any questions, please do not hesitate to contact me at the above e-mail address.

Sincerely,
Carly Ackley

Appendix B

Signed Informed Consent

Informed Consent Form for Social Science Research: The Pennsylvania State University

Title of Project: Leadership in Green Schools: School Principals as Agents of Social Responsibility

Principal Investigator: Carly Ackley, Graduate Student
200 Rackley Building
University Park, PA 16802
(865) 850-9244; cra151@psu.edu

Advisor: Dr. Paul T. Begley, Professor of Education
207 D Rackley Building
University Park, PA 16802
(814) 863-1838; ptb3@psu.edu

1. **Purpose of the Study:** The purpose of this research study is to explore how educational administrators lead in the green school environment. Through this study I hope to better understand not only the actions and decisions that are made but also what the leaders' value and believe in their professional roles.
2. **Procedures to be followed:** You will be asked to allow for a tour of your school with the researcher and also to sit down and answer a series of approximately 15 questions, in a first interview and then five additional questions in a follow-up interview.
3. **Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort, but the interview can be ended at any time if this should be the case.
4. **Benefits:** By participating in this study you have the opportunity to add to the body of knowledge and literature available on the green school topic. Also you may be able to learn more about yourself and your role in the Green School Movement.

The information that you and the other participants provide will assist in a greater understanding of the Green School Movement, and what leadership is like in this movement. While the Green Movement is growing in our country, the hope is that this study expands the information available and can be generalized to those working specifically in green schools.

5. **Duration:** It will take half of an hour to an hour to complete the tour, approximately one hour to complete the first interview, and fifteen minutes to complete the follow-up interview.
6. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured at my apartment at 616 W. College Avenue in a password protected folder on my computer. The following may review and copy records related to this research: The Office of Human Research Protections in the U.S. Department of Health and Human Services, Penn State University's Social Science Institutional Review Board, and

Penn State University's Office for Research Protections. Your responses will remain confidential. That is, your name or other identifiable information will not be linked to your responses. Data will be reported in summary form only, or if individual quotes are used, a masked name, or pseudonym will replace your real name. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.

7. **Right to Ask Questions:** Please contact Carly Ackley at (865) 850-9244 with questions, complaints or concerns about this research. You can also call this number if you feel this study has harmed you. Questions about your rights as a research participant may be directed to Penn State University's Office for Research Protections at (814) 865-1775. You may also call this number if you cannot reach the research team or wish to talk to someone else.
8. **Voluntary Participation:** Your decision to take part in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this consent form for your records.

Participant Signature	Date
Person Obtaining Consent	Date

Appendix C

Interview Schedule

Introductory Questions

- How long have you been at this school?
- How long have you been an administrator at this school?
- What were your educational experiences prior to taking the position here?
- What was your reasoning or motivation for accepting this particular position?
- How does this experience compare to your previous positions?

Green School Questions

- How familiar are you with the green school initiatives?
- When did the greening process begin?
- What was your role in that?
- In considering taking this position did you think about how you might implement the environment into this position?
- Do feel as though you have been able to incorporate the environment into all of your positions? Why or why not?
- What do you see now as your specific role in this process?
- In your experience, are there responsibilities that come with being a principal in a green school?
- Are there meetings that you take part in because of your involvement with a green school? Do those meetings transition into your work at this specific school?
- On a daily basis are there things you do, because this is a green school?
- Do you feel as though your decision making process is different because of your school?
- Is the environment built into the curriculum in any way, if so how?
- Do you have any plans for future projects? If so, what are they?

School Leadership/Social Responsibility

- Can you explain your personal leadership style?
- What do you feel has influenced your individual leadership style?
- What influences you on a daily basis and your work with this school?

- What are your beliefs or values about your green school?
- Have these beliefs or values changed since taking this position?
- What were the motivating factors for working in a green school?
- Do you feel as though your personal leadership style aligns especially well with this school?
- Are there challenges that you have found come with working in a green school?
- Is there anything you would like to add about anything that you are doing or that we have talked about today?

Follow-Up Interview Questions

Review personal questions answered in the first interview.

- What do you think is the significance of the Green School Movement?
- How do you think the decision to pursue a green school has affected your own personal vision as a principal?
- Everyone that I spoke with mentioned that they use an inclusive model for decision making. For decisions that cannot be decided by the staff or by students, how do you make those decisions? What is important for you to consider?
- We spoke a lot about your role in the greening of the school, but what do you see as your current role, in maintaining the environmental emphasis in the school?

Appendix D

Sample of Coding Strategy

Open-Coding	Axial Coding	Selective Coding <i>If Necessary</i>
Roles	Motivational Inspirational Planner Learner/Student Role Model Initiator Collaborator Manager Supporter	
Responsibility	Tie to Instruction Hiring the right people School related-Meetings Environmental Planning Environmental Responsibilities Non-tangible Family/Community Collaborating/Networking	Instructional Leadership Managerial Leadership Environmental Leadership Building into School Culture.
Leadership Style	Instructional Reasoning Student Centered Collaborative Inspirational Environmental Families/Communities Inclusive Decision Making Authority Relationships	Transformational Leadership Instructional Managerial Participatory
Previous Experience	Came before Influenced by project Years of Experience Educational Experience Teaching/Prior Experience Administrative Experience Green School Experience Administrative Projects	
Values	High-Quality Education Collaboration Environmental Supporting Children	Children Student Centered

	Appearance Community/Family Autonomy Ownership Stewardship Supporting Teachers	Respect for teaching Environmental Issues Ownership of Actions
Beliefs	Supporting Children Families School Culture Supporting Teachers Role Model Environmental	
Actions	Reading/Classes/Participation Establishing School Culture Environmental Curriculum Student Projects Faculty Actions Family/Community	Self-Educating Build into the Curriculum/School Culture Professional Development
Motivations/Influences	Wow-factor Risk Taking Need to feel challenged Role as a parent Environmental issues Advocacy Build democracy into school	Feel Challenged Taking Risks Environment
Obstacles	Architecture Money Previous Leaders Lack of Faculty Support Hiring Qualified Environmentally-Conscious Faculty	Construction Funding Hiring Qualified staff that support the environmental mission

Carly R. Ackley

Academic Vita

Education

Doctor of Philosophy in Educational Leadership, *The Pennsylvania State University*, 2009
Master of Education in Educational Leadership, *The Pennsylvania State University*, 2007
Bachelor of Science in Early Childhood Education, *University of Tennessee*, 2005

Professional Experience

Project Coordinator, Smeal College of Business, *The Pennsylvania State University*, 2008–
Mentor Coordinator, Learning Edge Academic Program, *The Pennsylvania State University*,
2006-2008
Graduate Assistant, College of Education, *The Pennsylvania State University*, 2006–2008
Research Assistant, Office of Residence Life, *The Pennsylvania State University*, 2005-2006
Assistant Teacher, Early Learning Center, *University of Tennessee*, 2004–2005
Resident Assistant, *University of Tennessee*, 2002-2004

Certifications

Pennsylvania Principal Certification, Completed coursework and Principal Internship, May 2008
Pennsylvania, Instructional 1, Birth-Third grade, January 2007

Academic Presentations

Ackley, C. & Schochor, D. (2008). *The Fundamental Purposes of Education As They Apply to Green Schools*. Paper delivered at the 13th Annual Values and Leadership Conference, Victoria, BC. October.
Ackley, C. & Puri, D. (2007). *Implementing Moral Literacy in the Education of Young Children*. Paper delivered at the 12th Annual Values and Leadership Conference, State College, PA. September.
Ackley, C (2006). *The Administrator's Role in Assisting Teachers in Putting their Values into Practice*. Paper delivered at the 11th Annual Values and Leadership Conference, Victoria, BC. October.

Professional Service & Memberships

Pi Lambda Theta, 2009-
Editor, *The Beacon*, 2007–2008; Reviewer, 2006–2008
Editorial Assistant, *Catalyst for Change*, 2006–2007
Reviewer for VEEA, 2006-2008
Educational Policy Studies Student Association, 2006-2007
Research Associate, Center for the Study of Leadership and Ethics, 2005-
Golden Key Honor Society, 2003-
Phi Eta Sigma Honor Society, 2002-