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SERVICE LEARNING AND STUDENT LEADERSHIP THROUGH
ENVIRONMENTALLY IMMERSIVE WRITING

by

Seth Edward Cohen

Dissertation

Submitted to the Faculty of the

Graduate School of Rowan University

In partial fulfillment of the requirements

for the degree of

Doctor of Education

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Educational Leadership

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ABSTRACT

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SERVICE LEARNING AND STUDENT LEADERSHIP THROUGH
ENVIRONMENTALLY IMMERSIVE WRITING
2010/11
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Educational Leadership

This study examined the impact of environmentally immersive service learning on a focused cluster of the NJASK, self-perception of leadership, attitude toward the environment, and student ability to define and articulate the benefits of service learning. The study compared the 2008-2009 New Jersey Assessment of Skills and Knowledge 7 (NJASK 7) and the 2009-2010 New Jersey Assessment of Skills and Knowledge 8 (NJASK 8) cluster area score of the explanatory task. The difference in the mean score on the explanatory task was analyzed by comparing the state, the Allamuchy Township School District, and the district factor group, representing other communities with relatively similar socioeconomic status. The second section contains a self-analysis of attitudes and perception of participant leadership skills prior to participation in the study, and again after participation in the study using the Student Leadership Practices Inventory (LPI). There are five subscales that are discussed including: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. The third section analyzes the results from Children's Attitudes Towards the Environment Scale (CATES), which measures environmental attitudes of children. The fourth section includes data gathered from structured interviews discussing student ability

to define and articulate the benefits of service learning after participating in environmentally immersive service learning.

The research indicated a significant increase in attitude toward the environment, and the increase in the cluster area score of explanatory writing demonstrates the need for further research. Self-perception of leadership was not statistically significant, and the ability to define and articulate the benefits of service learning highlighted areas of focus for future research projects.

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TABLE OF CONTENTS

	Page
Acknowledgements.....	ii
List of Tables	v
CHAPTER	
I. INTRODUCTION	1
Context.....	1
Conceptual Framework.....	3
Significance of Study.....	6
Research Questions.....	9
Specialized Vocabulary	10
Limitations	11
Organization of the Study	12
II. LITERATURE REVIEW.....	14
Service Learning.....	14
Service Learning in the Federal, State and International Policy.....	22
Student Leadership.....	29
Environmental Education.....	31
Conclusion	34
III. METHODOLOGY	38
Context of the Study	38
Research Procedures	39
Limitations	43
IV. FINDINGS.....	45
Context of the Study	45
Academic Performance.....	46
Leadership.....	47
Environmental Attitudes	53
Service Defined.....	55
V. CONCLUSIONS AND IMPLICATIONS.....	57
Research.....	57
Academic Achievement.....	58
Student Self-Perception of Leadership	58
Attitude Towards the Environment.....	59
Service Defined.....	60

Impact on Policy and Practice.....	60
Impact on Leadership.....	62
Reflective Practice	63
Change Process	64
Moral Purpose.....	65
Core Values.....	66
References.....	68
Appendices	
A. Student Leadership Practices Inventory.....	74
B. Children’s Attitudes Toward the Environment Scale	81
C. Researcher Developed Interview Protocol.....	86

LIST OF TABLES

Table	Page
1. Comparison of NJASK Cluster Score Explanatory Task.....	47
2. Descriptive Statistics for Model the Way.....	48
3. Paired Samples Test for Model the Way.....	48
4. Descriptive Statistics for Inspire a Shared Vision.....	49
5. Paired Samples Test for Inspire a Shared Vision	49
6. Descriptive Statistics for Challenging the Process.....	50
7. Paired Samples Test for Challenging the Process	50
8. Descriptive Statistics for Enabling Others to Act	50
9. Paired Samples Test for Enabling Others to Act	51
10. Descriptive Statistics for Encourage the Heart	51
11. Paired Samples Test for Encourage the Heart	51
12. Descriptive Statistics for Children’s Attitudes Towards the Environment Scale	54
13. Paired Samples Test for Children’s Attitudes Towards the Environment Scale	.54

CHAPTER I

INTRODUCTION

Context

The Allamuchy Township School District is located in Allamuchy, New Jersey. Allamuchy is located in Warren County along the Pequest River. The Musconetcong River forms the Township's southeastern border. Most of Allamuchy's 21 square miles are still forests and farms. The largest development is the Panther Valley community, a 1,200-home development of single-family homes, condominiums, and townhouses. The Allamuchy Township School District is an "I" district as indicated by the district factor group assigned by the New Jersey Department of Education (NJDOE, 2008). There is a mixture of residents from the Panther Valley community, the Village of Allamuchy, and from the surrounding countryside. In the countryside there are generations of farmers and large single-family homes (Allamuchy Township, 2010).

The Allamuchy Township School District, until April 2010, was a preschool through eighth grade district, consisting of one building with approximately 425 students. The current building is the culmination of five additions. The original schoolhouse was built in 1910, which included five classrooms and a common area. The next addition was completed in 1969, followed by construction projects in 1979, 1989, and 1996. In January 2006 the residents of Allamuchy approved a 10.4 million dollar referendum that resulted in the renovation and addition of an existing property located in the township.

In September 2005 the Allamuchy Township Board of Education assembled a key communicators committee. The group was comprised of a diverse group of interested and active community members. The committee was charged with the responsibility of

making a recommendation to the board regarding the projected enrollment increase based upon scheduled residential construction. The committee researched and discussed three options. The first option was to add another addition to the existing school, the second option was to build a new school, and third option was to renovate an existing property. After thorough research and intense discussion, the committee decided to recommend option three, to renovate an existing property.

The Rutherford family built a home in Allamuchy in 1903. It was a 23 room mansion that they used as a summer residence until 1954, at which time they donated the property to the Divine Sisters of Charity. The sisters used the property, and added a three-story building adjacent to the mansion. In 2004 the sisters moved back to Staten Island and the property remained vacant for two years. The sisters had an agreement to sell the property to a developer who planned to create several age-restricted clusters of homes surrounding the large lake on the property. Prior to the final signing of the real estate transaction, the Highlands Act was passed and rendered the property directly in the most protected area of the Highlands. The project was stalled and a bitter lawsuit evolved. Coincidentally, at the time the key communicators group was researching alternatives, the property came back on the market, and the board, along with the state, partnered to purchase the 22-acre property. The board kept the building and ten acres, and the state added the remaining 12 acres to the Allamuchy Mountain State Park.

It was a win-win situation for all involved. Change had come to Allamuchy. The district was changing from a one-room schoolhouse into a two building school district. Now that the traditional kindergarten through eighth grade district evolved, it became important to deliberately develop activities to ensure that all students remain involved on both campuses.

Conceptual Framework

Service learning, leadership, and environmental stewardship are important components of the Allamuchy Township School District, and serve as the theoretical framework of this research project. This practitioner research project involved eighth grade students in a service learning activity designed to increase leadership experience, heighten composition skills, and provide an environmentally immersive experience.

Eighth grade students enrolled in the Allamuchy Township School District served as guides and facilitators of environmentally immersive activities. The target population was fourth grade students from surrounding school districts. There was a focus on writing prompts, in the form of language arts field journals, developed to align with the fourth grade New Jersey Assessment of Skills and Knowledge 4 (NJASK 4) statewide assessment. In addition to serving as ambassadors, the eighth grade students assisted the fourth grade students in completing the language arts field guide and associated writing prompt. The eighth grade students completed a student leadership practices inventory to measure attitudes and perception towards their personal leadership skills prior to participation in the study, and again after participation in the study. The eighth graders also completed the Children's Attitudes Towards the Environment Scale (CATES) prior to participation in the study, and again after participation in the study. The CATES is a scale to measure environmental attitudes of children. Eighth grade student writing scores as evidenced by the cluster area of explanatory writing on the NJASK was analyzed prior to participation in the project from the spring 2009 administration, and after the spring 2010 administration post project participation.

The study contains three major components: student leadership, service learning, and environmental education. The Allamuchy Township Board of Education does not have a formal service learning policy, it is however, a concept supported by President Barack Obama. During a speech at the Points of Life conference on October 16, 2009 President Obama remarked:

In the end, service binds us to each other and to our communities and our country in a way that nothing else can. That's how we become more fully American.

That's what it means to be American. It's always been the case in this country that notion that we invest ourselves, our time, our energy, our vision, our purpose into the very fabric of this nation. That's the essence of our liberty that we give back, freely (B. Obama, 2009, para. 38)

Not only does President Obama support the benefits of service, current educational research ties increased academic performance to involvement in service learning. Cahill-Tannenbaum and Welty-Brown (2006) compared data on the academic and social performance of students who participated in an afterschool program as compared to students who participated in the same afterschool program with an embedded service learning component. Cahill-Tannenbaum and Welty-Brown (2006) found that:

The statistically significant difference in the average grade points of the students in the service-learning group suggests that the service-learning component, which emphasized the importance of academic achievement and student responsibility, influenced academic performance. (p.120)

Service learning fosters respect for the greater good, and helps to instill a feeling of moral purpose. Leaders must have a moral purpose, particularly in education. Fullan (2001) describes moral purpose as, “acting with the intention of making a positive difference in the lives of employees, customers, and society as a whole” (p. 3). A school is a home away from home for students. Unfortunately, for some students, the time they spend in school may be the safest, and most secure time of their day. Understanding the reality, moral purpose becomes even more critical. Sergiovanni (2001) provides suggestions for helping schools to become moral communities. He recommends:

Replacing communication with conversation. Conversation may not be able to move mountains, but it can get teachers, citizens, state officials, and other stakeholders to think differently, join together in a union of mutual responsibility, and to make good decisions for children. (p. 35)

The service learning project supported the school in becoming a moral community. The eighth grade students were immersed in an activity that empowered them to work with younger students, serving both as environmental ambassadors and as role models. Our eighth grade students modeled the importance of education, environmental awareness, and leadership.

The opportunity for the eighth grade students to be involved with an embedded experiential leadership exercise allowed for the students to become involved in conversation with teachers. The reflective dialogue between student leaders and teachers continued to develop a greater sense of community and student affiliation. Davies and Easterby-Smith (1984), Kelleher, Finestone, and Lowry (1986), Lindsay, Holmes, and McCall (1987), McCall, Lombardo, and Morrison (1998), (as cited by Yukl, 2006, p.

394) stated that, “much of the skill essential for effective leadership is learned from experience rather than formal training programs” (p. 394). Our students had the opportunity to truly participate in a leadership experience.

Significance of the Study

The current educational landscape in New Jersey contains an element of high stakes standardized testing as evidenced by the annual administration of the New Jersey Assessment of Skills and Knowledge (NJASK). According to the New Jersey Department of Education website (NJDOE, 2006):

The Elementary School Proficiency Assessment (ESPA) was administered at grade 4 from 1997 through 2002 to provide an early indication of student progress toward achieving the knowledge and skills identified in the Core Curriculum Content Standards (CCCS). In spring 2003, the department replaced the ESPA with the New Jersey Assessment of Skills and Knowledge (NJ ASK), a comprehensive, multi-grade assessment program. Along with other indicators of student progress, the results of the elementary-level assessments are intended to be used to identify students who need additional instructional support in order to reach the CCCS. (NJDOE, 2006, para. 1)

Assessment is a key component of the No Child Left Behind Act (NCLB). The NJDOE website news section indicates that the NCLB Act changes the federal government's role in K-12 education by focusing on school success as measured by student achievement. During the spring 2009 NJASK test administration, the percentage of correct answers that a student needed to obtain to be considered proficient increased. The NJDOE (2009) issued a press release on their website to address the topic:

Commissioner Davy said that establishing higher expectations for student achievement in the early grades will increase the likelihood of student success in middle school, high school and beyond. By focusing on student learning in the elementary grades, we increase our ability to identify students in need of instructional support early in their academic careers, before they are in danger of not graduating. (para. 4)

The higher expectations significantly decreased the number of students achieving the label of proficient. To highlight the impact of the recent change, I will focus on the statewide third grade NJASK3 results from 2008 as compared to 2009. During the 2008 language arts literacy (LAL) test administration, 86% of third graders in New Jersey were proficient or advanced proficient. During the 2009 LAL test administration, 63% of third graders were proficient or advanced proficient. The higher expectations yielded a 23% drop in the total number of students labeled as proficient or advanced proficient. The above comparison is indeed two separate groups of students. In order to develop a broader view of the data I will compare the 2008 LAL grade 3 results with the 2009 LAL grade 4 results as the sample population contains most of the same participants. As stated above, in the 2008 LAL grade 3, 86% of the students were labeled as proficient or above proficient. During the spring 2009 LAL grade 4 administration, 64% of the students were labeled as proficient or advanced proficient. The higher expectations yielded a 22% drop in the total number of students labeled as proficient or advanced proficient in the same sample population.

Assessment is a topic, at minimum, that enters the educational dialogue in New Jersey each spring, and in some districts assessment drives the curriculum. According to Gallagher (2003):

In the 2000 report from the NSSE (National Society for the Study of Education), educators suggest that the achievement testing movement as a whole has been a disappointment, having never fulfilled its potential to improve schools in the ways envisioned by its forefathers. (p. 96)

In an effort to prepare children for assessment without compromising quality educational experiences, and to formally integrate service learning, this research project was developed. Given the position of both the federal government and the NJDOE, New Jersey school districts are not in a position to ignore assessment, and in fact, they must find an appropriate method to integrate assessment preparation into the daily activities of the children. The scope of the study involved the development of quality educational experiences that focus on service learning, leadership, and environmentally immersive academic activities.

The following description is a practical overview of the student experience as it relates to the practitioner research project. The visiting fourth grade students arrived at the Mountain Villa School and were greeted by the eighth grade Allamuchy Township School students. Next the students separated into three groups, gathered their field journals, and embarked on their environmentally immersive writing activity. Each group contained a member of the faculty, fourth grade students, and eighth grade students.

The students arrived at a predetermined hiking location, and began to complete their field journals. The eighth grade students in each group provided directions for

proper completion. The students were required to fill out the “senses web” page, documenting all that they feel, see, hear, taste, and smell. Next they focused on an object, or area, and sketched what they observed. Upon completion of the sketching page, the students returned back to the school for the final component of the activity. An eighth grade student read the poem entitled “Nature Is”. After listening to the poem, the fourth graders composed a response to a writing prompt in their field journals. The writing prompt was a replica of a writing task commonly found on the NJASK. After allowing time for the students to compose, the eighth grade students conferred with the fourth graders, utilizing the Holistic Scoring Rubric supplied by the NJDOE.

Research Questions

Through participation in environmentally immersive service learning, the following questions were answered:

1. Does environmentally immersive service learning, with a focus on explanatory student writing, impact academic performance as documented on the New Jersey Assessment of Skills and Knowledge 8 (NJASK 8) school mean explanatory writing task cluster score?
2. Are student attitudes and perception towards their personal leadership skills impacted by participation in service learning activities as documented by an analysis of a pre and post student leadership practices inventory?
3. Are student attitudes toward the environment impacted by participation in environmentally immersive service learning as evidenced by an analysis of a pre and post attitudes towards the environment scale?

4. As a result of their participation in the project, are students able to identify and articulate the benefits of service learning?

The research questions were developed to measure the impact of environmentally immersive service learning on a focused cluster of the NJASK, self-perception of leadership, attitude toward the environment, and student ability to articulate the benefits of service learning. Additionally, the data gathered from the study will be used to frame the discussion of service learning as a component of the Allamuchy Township Board of Education policy. The research questions were chosen to provide a framework for scholarly research specific to service learning and the Allamuchy Township School District. The focal areas of academic achievement, leadership, environmental attitudes, and the ability to define and articulate the benefits of service learning are important benchmark research sectors.

Specialized Vocabulary

The following are defined for the purpose of this project:

1. Children's Attitudes Towards the Environment Scale (CATES). The CATES is a scale to measure environmental attitudes of children (Malkus & Musser, 1994).
2. Environmental Education: To aid citizens in becoming environmentally knowledgeable and, above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or maintaining a dynamic equilibrium between quality of life and quality of the environment (Hungerford, Peyton, & Wilke, 1980).

3. Environmentally Immersive: Educational experiences where children are outdoors, participating in educational activities that incorporate some aspect of the environment.
4. District Factor Group (DFG): The DFG represent an approximate measure of a community's relative socioeconomic status (SES) (New Jersey Department of Education, 2004).
5. High Stakes Testing Assessments: Tests used to determine adequate yearly progress: New Jersey Assessment of Skills and Knowledge (NJASK).
6. Proficient: A score achieved by a student at or above the cut score, which demarks a solid understanding of the content measured by an individual section of any State assessment (New Jersey Department of Education, 2005).
7. Service Learning: Students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities. Service is integrated into academic curriculum, and there is time for faculty and students to reflect on the off-campus experience (O'Byrne, 2006).
8. Student Leadership Practices Inventory (LPI): A scale used to measure attitudes and perception towards personal leadership skills (Kouzes & Pozner, 2007).

Limitations

Inherent in the design of this project are limitations that need to be identified. The study is small scale and based upon a specific service project, and did not include a control group. Additionally, there are limitations associated with analyzing the NJASK

cluster area score of explanatory writing. One limitation is the lack of control regarding the pre existing writing interventions that may have transpired between the NJASK7 and the beginning of the research project. An additional limitation is evident in the short-term duration of the project. While the students spent class time preparing for the environmental tours, the elapsed time from the first tour to the final tour was one month. One final limitation regarding the NJASK is found in the *2009 NJASK Grades 3-8 Technical Report*. The New Jersey Department of Education (2010) states that:

Beginning in 2009, only one reader was used to score the LAL writing tasks. In previous years, two readers scored the LAL writing tasks; however, a single reader scored the constructed response items in LAL, mathematics and science. Thus, the only change in 2009 is the use of a single reader for the writing tasks.
(p. 53)

While the New Jersey Department of Education incorporated validity packets to ensure that the raters were scoring accurately, the fact that only one rater reads the writing task is a notable limitation.

Organization of the Study

Chapter II discusses the relevant literature associated with service learning, student leadership, and environmental education. Service learning is discussed at the state, national, and international level. Following service learning, is a discussion of current research on student leadership from diverse perspectives. The final review of related literature addresses environmental education, through the exploration of critical elements and documented examples. Chapter III presents the methodology and research practices associated with the research project. Specific details are presented regarding the

survey instruments and the applicable data analysis procedures that were employed. Chapter IV details the findings of the research with connections to relevant literature. Implications regarding the theoretical framework of the project are identified as well as field of study insights. Chapter V discusses the implications of the project with attention to future research, policy, and personal professional practice. Included in Chapter V is a discussion of the change process and personal leadership impact through the lens of reflection.

CHAPTER II

LITERATURE REVIEW

In developing a comprehensive research base to assist in a participant research project designed to create middle school environmental ambassadors, three areas emerge as relevant to a review of related research. They include: service learning, leadership, and environmental education. The review of related research will define service learning through multiple lenses and in several educational contexts. The impact of service learning as it relates to academic performance will frame a review of the current status of service learning in the policy environment. Following service learning, student leadership and identifying leadership development will be discussed. The final component of related literature addresses the role of and critical elements associated with environmental education.

Service Learning

Much of the research on service learning is presented from an action research standpoint, specific to the school or institution where the research was conducted. Service learning is an aspect of modern education that is often discussed and praised, yet it remains as enrichment to the curriculum rather than a core content. Dr. Kathy O'Byrne, Director of the UCLA Center for Community Learning, defines service learning as a method whereby:

Students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities. Service is integrated into academic curriculum, and there is time for faculty and students to reflect on the off-campus experience. Opportunities are included to promote civic

responsibility or to gain leadership skills that can be used upon graduation to make a difference in one's community. (O'Byrne, 2006, p. 47)

Jo Ann Bludau, the Superintendent of the Sweet Home Independent School District in Texas, describes service learning as:

Projects that are mutually beneficial and all participants in the projects gain from the experience. Most importantly students learn the knowledge and skills taught in their grade level appropriate curriculum while performing a service for their community that is based upon need that is determined by all participants. (Bludau, 2006, p. 24)

The Sweet Home Independent School District implemented a service learning project and in seven years the school moved from an acceptable rating to an exemplary accountability rating. An important component of their success was the professional development for the staff. To overcome the obstacles of scheduling, community volunteers were organized to supervise students for 30 minutes while the students read books for upcoming assessments. During that time the teachers received professional development. Bludau (2006) cited the inclusion of the community volunteers as way of bringing parents and community members to the learning process. Bludau continued to discuss the merits of service learning by highlighting the connections to learning for a higher purpose, and engagement of students in civic activities.

Purpose is a theme that is found in literature both in leadership and service. In discussing service, Robert Coles (1993) states that, "all service is directly or indirectly ethical activity, a reply to a moral call within, one that answers a moral need in the world" (p. 75). Similarly, Fullan (2001) defines moral purpose as, "acting with the

intention of making a positive difference in the lives of employees, customers, and society as a whole” (p. 3).

In *Growing to Greatness: The State of Service Learning Projects*, a national study of state service learning in kindergarten through twelfth grade, a clear picture emerged demonstrating how young people contribute to society. In 2004 there were 23,000 U.S. public schools that facilitated 4.5 million students in service learning, highlighting the solid base of implementation in the United States. The authors documented the benefits of service learning by surveying eight out of ten principals in schools that offer service learning. The results indicate that service learning had a positive impact on academic achievement, teacher satisfaction, school climate, school engagement, and the community’s view of youth as a resource (Kielsmeier, Scales, Roehlkepartain, & Neal 2004a). According to a 2002 report from the National Commission on Service-Learning, research shows that when service learning is explicitly connected to curriculum, and teachers help students to understand and draw meaning from their service experiences, young people make gains on achievement tests, complete their homework more often, and increase their grade point averages (Fiske, 2002).

Bohnenberger and Terry (2003) discuss service learning as it relates to gifted students and classify service learning on a continuum of three levels. The first degree of involvement is community service, which includes volunteering in the community and increased local awareness. The second degree of involvement grows to include awareness, exploration, and engagement in the community. At this stage, the students engage in experiential education on an authentic level. The third stage is community action. At this level there is reciprocity between the student and the community,

resulting in a positive impact for both the student and the community (Bohnenberger & Terry, 2003).

In addition to levels of service learning, research also documents categories of service learning. Berger-Kaye (2004) identifies direct service, indirect service, advocacy, and research as the four main types of service learning. All service learning endeavors should contain essential elements that include integrated learning, meeting genuine needs, youth voice and choice, collaborative efforts, reciprocity, and civic responsibility (Berger-Kaye, 2004).

The Maryland State Department of Education articulated seven components for effective service learning programs. The first is meeting a recognized need in the community. The projects should not be designed to fulfill an academic requirement; a true community need should be achieved. The second component is that the project should be achieving curricular objectives through service learning. There should be a direct link to the curriculum, both on the local and state level. The third component is reflection. Just as effective teachers are reflective practitioners, service learning activities should challenge the children to reflect upon their experiences. The fourth element that service learning activities should possess is a focus on student responsibility. The activities should be purposefully structured to allow for student decision making. The fifth avenue relates to establishing community partnerships. The projects should involve the community in some manner. The sixth component is planning ahead for service learning. The experiences should be purposeful and deliberate rather than convenient and easy. The final piece of effective service learning should equip students with knowledge

and skills needed for service as the students should be prepared and armed for success (Maryland Student Service Alliance, 2004).

Service learning reaches beyond the classroom walls, and is used in a variety of non-academic arenas. One example is the Young Heroes program which engages one thousand middle school students per year across the country. Theresa Sullivan, a doctoral student at the Harvard Graduate School of Education, discusses the development of real-world problem solving in middle school students engaged in the Young Heroes program. The study focuses on strategies suggested by the students for changing the things that they wish were different in their school and communities. The most common strategies were self-transforming strategies, where young people change their own behavior to directly impact an issue (Sullivan, 2008).

Northern Michigan University is an example of a community-based student leadership program that benefits both the students and the community. Bonsall, Harris, and Marczak (2002) documented the Student Leader Fellowship Program at Northern Michigan University. The program is “dedicated to developing competent, ethical, and community-centered leaders (Bonsall et al., 2002, p. 85). The Student Leader Fellowship Program is a two-year program, with each participant receiving a mentor in the first year. The mentors are members of the community that participate in specific training prior to implementation. The authors indicate a direct connection between the mentor’s place in the community and the success of the program. The design of the program evolves from classroom concept to real world application. Each participant begins with a fall retreat, a leadership course, several workshops, and guest lecturers during the first year. The second year of the program involves a community service internship. The internship is

conducted with an approved program with the intern serving in a leadership capacity (Bonsall et al., 2002).

Data are collected from the participants in the Student Leader Fellowship Program in both a pre and post internship survey.

One question asks students to assess the extent of their future commitment to volunteering in “this or another community.” Before they start the Student Leader Fellowship Program experience the average number of student fellows who answer, “to a great extent” is 43 percent. Upon completion of the program, this number has risen to an average of 80 percent. (Bonsall et al., 2002, p. 93)

In a study conducted by Cleary and Simons (2006) the researchers designed and implemented a project to evaluate the influence of service learning on the personal, social, and academic outcomes of the participants. The researchers used a dominant-less-dominant quantitative-qualitative explanatory methods design, which yielded information about the learning processes that occur while students are engaged in service learning. Cleary and Simon (2006) found that, “the majority of the students describe understanding the course content and acquiring self-knowledge and social competencies through social-emotional learning” (p. 317). Additionally the authors state that, “social-emotional learning contributes to service learning and, at the same time, service learning provides students with an opportunity to demonstrate values and skills derived from social-emotional learning such as respect and responsibility” (p. 317).

The implementation of service learning can serve multiple purposes in complex organizations. In addition to social-emotional learning growth, service learning can support children and families during times of transition. The implications of such a

powerful concept are discussed on a primary level by Duda and Minick (2006). Graduate students, along with a group of parents whose children were entering kindergarten in the following year, worked collaboratively to produce a product that would help to ease transition. “Recognizing the fact that the transition from pre-school to kindergarten can often be a stressful experience for parents and children alike, the team brainstormed ideas regarding how they could best ease parents’ anxieties about the transition process” (p.144). The resulting product was a brochure designed with information of high importance as determined by a needs assessment. In addition to developing a useable product, Duda and Minick (2006) found that, “students engaging in service learning have the opportunity to provide a valuable contribution to members of the community while simultaneously obtaining critically important professional skills, such as collaboration and communication” (p. 117).

Service learning can be integrated into a variety of educational landscapes. Cahill-Tannenbaum and Welty-Brown (2006) discuss a tandem approach that includes after school programs and service learning. The authors compared data on the academic and social performance of students who participated in an afterschool program as compared to students who participated in the same afterschool program with an embedded service learning component. Cahill-Tannenbaum and Welty-Brown (2006) examined two essential questions that included: Did the academic performance of students who participated in the service learning group appear to differ significantly from that of the students who participated in the non service learning group? Did the social performance of students who participated in the service learning group appear to differ significantly from that of the students who participated in the non service learning group (p. 113)?

The sample size of the study included 149 students, 51 in the service learning and 98 students in the non service learning group. Cahill-Tannenbaum and Welty-Brown (2006) document that, “the study suggests that embedding a service learning component into an after-school program may be a way to leverage the benefits of the two pedagogies” (p. 120). This is a liberal interpretation of service learning as high quality service learning includes assessment and grading. The researchers document several specific notable differences highlighted in the study. There was a discrepancy in the suspension rates of the students. Based upon data analysis, “students who participated in the service learning group were less likely to be suspended than students in the non service learning group after having participated in the program” (p. 119). “The statistically significant difference in the average grade points of the students in the service learning group suggests that the service learning component, which emphasized the importance of academic achievement and student responsibility, influenced academic performance” (p. 120).

Additional research highlights the correlation between service learning and academic performance. McCarthy (2008) conducted a three-year study involving two groups of fourth graders. The service learning was interdisciplinary, involving science, reading, language arts, and mathematics. The population size was 634 students. In Hudson, Massachusetts, students are required by policy to participate in service learning. The unique component of this study lies in the measurement of student assessment results based upon inclusion in separate service learning opportunities. The Forest School participated in Signature Service learning. Signature Service learning involves an intense duration and curriculum integration. The other two schools in the study participated in a

lesser level of service learning. McCarthy (2008) implemented significant controls during the research that included, “student characteristics such as gender; income (measured by receipt of free and reduced lunch); limited English proficiency and Special Education status” (p. 5). Additionally, teacher educational level was also controlled during the study. The results suggest that the high quality service learning offered at the Forest School are indeed leading to the observed enhanced outcomes on standardized testing, but they do not prove it. McCarthy (2008) discusses the potential impact of prior academic preparation as a possible influence.

Service Learning in the Federal, State, and International Policy Environment

Both the federal and state legislatures have discussed the viability, importance, and implementation of service learning. An overview of state policies on service learning will provide a perspective on the scope of the impact on education. Following the state policy discussion, a review of the current federal status of service learning policies will provide an overview of national sentiment and direction. The impact on education as it relates to New Jersey and the current status of legislation will be discussed. An international sample of service learning practices will conclude related research on service learning in the policy environment.

Arkansas, Connecticut, Delaware, Iowa, Minnesota, Oklahoma, Rhode Island, and Wisconsin permit community service or service learning activities to be applied toward high school graduation requirements. Arkansas, California, Georgia, Idaho, Illinois, Louisiana, Montana, and Utah have policies regarding rules, regulations, and the creation or purpose of programs related to service learning. California, Connecticut, Florida, Indiana, Michigan, Missouri, North Carolina, South Carolina, Tennessee, Texas,

and the District of Columbia encourage the use of service learning as a mechanism for increasing student achievement and engagement. Idaho, Maine, Michigan, Minnesota, New Jersey, New Mexico, and Vermont include service learning in the state's education standards. Massachusetts, Minnesota, Mississippi, New Jersey, New Mexico, and Vermont have policies regarding the authorization of funding appropriations and the creation of service learning activities and programs. Twenty states have no mention of service learning in any state policy ("State and School," 2008).

On the federal level the Edward M. Kennedy Serve America legislation was designed to increase the number of service/volunteer opportunities supported by the federal government. The House and Senate in the 111th Congress approved the act. President Barak Obama signed the bill into law on April 21, 2009 (Scott, 2009). The Edward M. Kennedy Serve America Act (2009) increased opportunities for Americans of all ages to serve by establishing the Summer of Service program for students in grades 6 through 12, and a semester of service for high school students. The number of positions in the Americorps will rise from the current 75,000 to 250,000 by 2017. A new program for individuals 55 and older provides a one thousand dollar transferable scholarship for those adults who surpass 350 hours of service. Additionally, September 11 will be marked as a national day of service (Scott, 2009).

The Edward M. Kennedy Serve America Act (2009) includes provisions to strengthen the non-profit sector and to support innovation. Funds are allocated towards innovative projects to address significant challenges, and to develop a disaster relief response corps. The final component of the Act is an increased management component designed to streamline grants, reporting procedures, and evaluations (Scott, 2009).

Not only is service learning a topic of national issue, our state legislators have paid considerable attention to the concept of service learning since 2004. On May 13, 2004, Senate Bill 1598 (2004) was introduced to the senate and referred to the senate education committee. Senate Bill 1598 (2004) called for mandatory community service as a graduation requirement for New Jersey high school students. On October 14, 2004 the bill was reported from the senate committee as a substitute with significant changes for a second reading. Most notable was the change from mandatory community service for all high school seniors, to the development of a community service pilot program consisting of only 30 schools.

The associated stakeholders were able to persuade the legislators to consider action on the topic of a community service enrichment program. There was a significant change from service as a graduation requirement, to service as a pilot project. As the discussion evolved a definition of acceptable community service activities was developed followed by a clarified selection criteria that specified the number of schools that would be selected for the program. Thirty schools were selected, and high school juniors were the defined age group for participation. A minimum of 15 hours per year was the requirement for participation.

On October 25, 2004 the senate passed the bill with a 35-0 roll call vote. That same day the bill was received in the assembly and referred to the assembly education committee. On December 9, 2004 the bill was reported out of assembly committee for a second reading. On June 20, 2005 the bill was substituted for Assembly Bill 3480 (2005), and was passed by the assembly 79-0. On September 9, 2005 P. L. 2005, c. 220 (2005) was approved.

During the 2004-2005 session of the senate, P. L. 2005, c. 220 (2005) was adopted. The government accepted a solution to the goal of creating opportunities for students to mature into responsible citizens with strong social and moral values. Over the course of the next four years, from 2005-2009, the program was implemented. Imbedded in the initial program was a formal evaluation after four years of implementation. In January 2009 the commissioner of education issued a report to the legislature that included recommendations regarding the continuation of a community service program. The commissioner's report indicated that an additional pilot program should be developed that included the recommendations developed from the initial phase. As the bill currently stands, another four years of a pilot program, including the suggested changes, will mark the evolution of service learning in New Jersey.

While New Jersey adopted an 8-year pilot program, Maryland moved rapidly to embed service learning in the public school culture. In 1992 the Maryland State Board of Education adopted a graduation rule requiring students to complete 75 hours of service including preparation, action, and reflection components, or to complete a locally designed program approved by the state superintendent of schools. Since Maryland's class of 1997 first met the requirement, approximately 55,000 students have participated each year, contributing nearly four million hours of service annually to their communities (Maryland Student Service Alliance, 2004).

International service learning examples provide a contrast and enrichment to current United States examples. In *Growing to Greatness 2008: The State of Service Learning Project*, Maria Nieves Tapia (2008) provides a historical and summative review of service learning in Latin America. Included are examples of mandatory service

learning, the role of non-governmental organizations, and incentive based programs. An example of mandatory service is found in the Dominican Republic. According to Tapia (2008), “the Dominican Republic launched an extensive national forestry campaign to combat deforestation, requiring middle school students to complete 60 hours of forest-related service in order to graduate” (p. 72). Non-governmental organizations also play a significant role in the deployment of service learning activities. Examples are given from Brazil, Uruguay, Bolivia, Peru, and Ecuador. The concept of connected service learning is highlighted through the discussion of the Ibero-American Service Learning Network. Special attention is given to the role of legitimization through incorporation in educational institutions (Tapia, 2008).

Tapia (2008) documents the service requirement in Nicaragua as it was included into the National Literacy Campaign. Student social service also became established as a requirement for secondary school graduation in El Salvador, Colombia, Panama, and Venezuela (Tapia, 2008).

In Argentina, the government employs a national policy for an incentive program to encourage service learning rather than a mandate. Participating schools are labeled as Presidential Awards for Service Learning Schools, similar in fashion to the positive reinforcement as implemented by President Bush in 2003 (Tapia, 2008).

The concept of service learning continues to be a focus of President Barack Obama, and his wife, Michelle Obama. During a speech at the Florida Campus Compact Awards Gala in October 2009, the First Lady remarked:

Service is forever because ultimately we know that so many of the best solutions to the most difficult problems in our communities don't come from boardrooms,

or courtrooms, or Congress, or the White House for that matter. Some of the best solutions come directly from the communities themselves. (M. Obama, 2009, para. 27)

President Obama echoed those remarks while signing the Edward M. Kennedy Serve America act on April 21, 2009:

A week from tomorrow marks the 100th day of my administration. In those next eight days, I ask every American to make an enduring commitment to serving your community and your country in whatever way you can. Visit whitehouse.gov to share your stories of service and success. And together, we will measure our progress not just in the number of hours served or volunteers mobilized, but in the impact our efforts have on the life of this nation. (B. Obama, 2009, para. 27)

Addressing environmental issues and challenges is a logical application of service learning. Newman, Bruyere, and Beh (2007) conducted a study focused on service learning and natural resource leadership. The study sample included 26 students in an upper division protected-area management course at Colorado State University in Fort Collins. The authors focused on two research questions for the study. The first question involved identifying leadership skills needed in protected-area management. The second question focused on service learning as a vehicle for nurturing leadership characteristics (Newman et al., 2007).

The authors utilized a combination of data collection methods that included: open-ended small group discussion, characteristic ranking, semi structured interviews, and open-ended survey questions. The data collected regarding leadership characteristics is of particular relevance. Newman et al. (2007) found:

A good leader is part listener and part leader-by-example; is knowledgeable, honest, responsible, and resourceful; and trusts and empowers others. Further, students understand that many leadership characteristics go hand-in-hand. To be knowledgeable, a leader must be resourceful. To be empowering to others, the leader must trust others, and so on. (p. 65)

In another service learning study, Seitsinger (2005) examined the service learning practices of 2,164 teachers in 261 middle schools. The results of the study include a connection between teachers that implemented service learning practices and the use of standards based education as compared to peers who did not regularly implement service learning. Seitsinger (2005) states, “that finding supports the position argued by Waterman (1997), Baherman et al. (1998), and others that service learning is aligned and complementary with reform-recommended instructional practices for meaningful teaching and learning” (p. 27).

While most of the current research on service learning is presented in a positive and reflective manner, Kapustka (2002) highlights several potential pitfalls for service learning gathered over a 5-month study. The recommendations include providing assistance in developing a strong connection between the service the students provide and the academic curriculum they are expected to master. Schools must be assisted in identifying a variety of service sites that have a genuine need that can be met by a school’s population of students. Teachers need worthwhile professional development and time to collaborate with their colleagues as they strive to understand and implement both the theory and practice of quality service learning. Support for service learning programs in schools must be ongoing, not just limited to the adoption and implementation phases (Kapustka 2002).

Student Leadership

Institutions that facilitate service learning should identify and plan to build student leadership development opportunities. David Grande M.D. and Sindhu Srinivas, M.D. (2001) propose several key leadership skills and methods for integrating leadership and social responsibility into the curriculum. Some of the leadership skills include: strategic planning, team building, developing coalitions, media advocacy, public speaking, writing and presenting, political strategies, and fund raising (Grande & Srinivas, 2001).

Grande and Srinivas (2001) further discuss methodologies for the integration of leadership skills into the curriculum and institution. One example is faculty organized experiential learning. Grande and Srinivas indicate that, “certain schools have put forth significant effort to develop interdisciplinary experiential opportunities for students” (p. 201). Another example of integration is identified as a student organized initiative and project. Grande and Srinivas (2001) define it as a project where, “students themselves are responsible for planning a majority of the community outreach and leadership efforts in health professional educational institutions” (p. 201).

Kouzes and Posner (2006) define leadership as a “relationship between those who aspire to lead and those who choose to follow” (p. 5). With specific regard to student leadership they identified five practices of exemplary student leadership. The first practice is modeling the way and leading by example. The second practice is inspiring a shared vision between members of the organization. The third practice involves challenging the process. As student leaders are engaged in activities they should embrace challenges, looking to enhance organizational capacity. The fourth component is enabling others to act by building trust and sharing power. The final practice of exemplary student

leadership is encouraging the heart by showing appreciation and celebrating success (Kouzes & Posner, 2006, pp. 5-8). Not only is the identification of leadership competencies important, leadership development must be addressed as well.

Leadership development is a long term, comprehensive commitment that institutions must adopt as a core belief. Connaughton, Lawrence, and Ruben (2003) state:

It is unrealistic to expect that enhanced leadership capabilities can be developed in a 2-hour or even week-long leadership workshop. Rather, leadership competencies are best developed over time through a program that fosters personalized learning in the integration of theory and practice and that conceives of leadership development as a recursive and reflective process. (p. 46)

Supporting the concept of building leadership competencies over time, Davies and Easterby-Smith (1984) state that, “much of the skill essential for effective leadership is learned from experience rather than formal training programs” (as cited in Yukl, 2006, p. 394).

Current research on leadership development indicates a strong connection between planning and experience. Yukl (2006) aptly remarked:

Training and development are more effective when they are coordinated with each other, supported by a strong learning culture, and integrated with other human resource activities such as career counseling, staffing decisions, performance appraisal, and succession planning. It is essential to integrate these different elements to create and sustain favorable conditions for leadership development. (p. 414)

Environmental Education

The final topic for a review of related literature is environmental education.

Havlick and Hourdequin (2005) discuss three elements they deem as critical in developing ecologically literate, motivated, and engaged citizens. The first element is contextualized knowledge. Havlick and Hourdequin define contextualized knowledge to mean:

The concepts and skills learned in the classroom should not remain at such a high level of abstraction that they cannot be utilized in everyday thinking about what to believe and what to do; rather, they should link up with life outside the university walls. (p. 386)

Furthermore the authors provide a suggestion to aid in the contextualizing of information by taking students outside of the classroom. “Theoretical knowledge can be reinforced and made practical by experiences that allow students to explore and confirm what they read or hear in lectures” (Havlick & Hourdequin, 2005, p. 386).

The second element is multi-modal learning, utilizing field experiences.

According to Havlick and Hourdequin (2005):

Another feature of field experiences is that they engage students in diverse ways: physically, intellectually, and emotionally. They encourage multiple modes of learning, which, in addition to accommodating a diversity of learning styles, help develop knowledge that is multidimensional and vivid, richer than the usual words from a text. (p. 387)

Field experiences allow for students to interact with their environment. The physical and kinesthetic experiences help students make connections that transcend classroom walls.

The third element needed to develop ecologically literate, motivated, and engaged citizens is the importance of connecting knowledge and responsibility. Havlick and Hourdequin (2005) describe the importance of connecting knowledge and responsibility, “multimodal learning and contextualized knowledge both support this third educational goal. By connecting knowledge to real world issues and by engaging students more fully and deeply in the learning process, these first two elements help connect knowing and doing” (p. 388).

In addition to the three critical elements needed to develop ecologically literate, motivated, and engaged citizens, Havlick and Hourdequin (2005) discuss in greater detail the benefits of outdoor education. The authors utilize a variety of examples from the field supporting outdoor environmental education. From a pedagogical standpoint, Havlick and Hourdequin (2005) state:

Particularly when trying to convey complex or abstract concepts about environmental processes, ethics or management, the move outdoors to direct experience seems to awaken in many students an ability to find more direct meaning and to see themselves as part of the world they are learning about, rather than as just passive observers of it. (p. 389)

Building upon the instructional benefits, Havlick and Hourdequin (2005) highlight the benefits of content transfer by indicating:

The strongest learning will take place when students can recognize concepts as they appear in a variety of field-based situations, while also linking in the other direction from specific practices to concepts and methods mastered on campus. Ideally the two kinds of instruction can be mutually supportive. (p. 391)

Environmental education experiences often include residential components that support multi-modal field experiences. Smith-Sebasto and Walker (2005) discuss their findings associated with student perceptions of a residential environmental education program at the New Jersey School of Conservation. A three-item instrument was administered to 2,779 students from 31 schools. A minute paper/muddiest point technique was used to discover which sessions of the program were most meaningful, most confusing, and most interesting to the students. Based upon the findings a grounded theory for residential environmental education is presented (Smith-Sebasto & Walker 2005).

The implementation of a grounded theory approach allowed the researchers to analyze the data and categorize the responses into five main sections. They included: recreational, safety, scientific, social, and trip. The first question required the students to document their perception of the most meaningful session of the residential experience. Safety emerged as the most frequent response. According to Smith-Sebasto and Walker (2005):

Environmental education studies highlight that fears in a natural setting are very real for students, and this affects their educational experience (Bixler, Carlisle, Hammitt, and Floyd, 1994; Simmons, 1994; Wals, 1994). Many students are not familiar with being in the forest and feel they need to protect themselves from the elements and animals. (p. 35)

Question two focused on what the students found as the most unclear or confusing experience. Interestingly, the participants found that the safety sessions proved to be the most confusing. The researchers indicated that the participants felt most confused about

the orienteering activity, which is listed under the safety category.

The third question required the students to document an area that they wanted to study in greater detail. Based upon the results of the three survey questions, the most common answer was safety. Smith-Sebasto and Walker (2005) provide a non-research based explanation for the frequency, “as U.S. students become more sedentary, urbanized, or enamored of technology, they also become less familiar with non-human-dominated areas. It is not surprising that students may feel anxious at residential environmental education centers” (p. 41).

Conclusion

In the development of an environmentally immersive service learning project with a focus on student leadership and academic achievement, the review of related literature assisted in developing the theoretical and conceptual framework of the activity. The research informed the project and provided guidance in the implementation of the activity. Specific components from the research on service learning, leadership, and environmental education were integrated into the design of the project.

Dr. Kathy O’Byrne (2006) includes the opportunity to gain leadership skills in her definition of service learning. The service learning project was developed to provide leadership experiences for each eighth grader in the Allamuchy Township School District. Dr. O’Byrne and the Maryland Department of Education include faculty and student reflection when discussing service learning. There was a reflection component to the project that challenged the students to discuss their experiences in the form of a written response. Berger-Kaye (2004) comments that service learning should meet a genuine need. Given the updated scoring protocols on the NAJSK, additional practice of

literacy skills was a genuine need for the Allamuchy Township School District. Another genuine need was to provide outdoor educational experiences for children and to model environmental stewardship and appreciation.

The current research on leadership development highlights the need to include reflection, and to develop leadership competencies over time. Aligning with the work of Connaughton et al. (2003), the students were exposed to leadership development opportunities over several weeks and with multiple schools. The project was designed to help the students learn from experience rather than a formal training experience. Kouzes and Posner (2006) identified five leadership practices of exemplary student leadership which include leading by example, inspiring a shared vision, challenging the process, enabling others to act, and celebrating successes. In the formation of the service learning activity each practice was purposefully included. The Allamuchy Township School students led a group through the woods and helped to model effective writing. They provided a vision for their groups and through reflection they included suggestions for future project modifications. After each tour, the staff members praised the eighth graders and arranged for a selected group to discuss their experiences on a local radio station.

As most of the project was conducted in the Allamuchy Mountain State Park, and the grounds of the Allamuchy Township School District, the research on effective environmental education programs provided guidance and information. Havlick and Hourdequin (2005) identify the inclusion of multi-modal learning utilizing field experiences as a critical element of developing ecologically literate, motivated, and engaged citizens. The project required the eighth grade environmental ambassadors to engage with the visiting students in a shared physical hiking experience, and

intellectually through a combined writing effort. Safety, while engaged in environmental education, appears in the research as an important variable when designing outdoor experiences. Smith-Sebasto and Walker (2005) highlight that fear is a real concern for students, in accordance with the research student safety was an important variable in the design of the project. Each group included multiple adults with communication devices directly linked to the building health professional.

While the research on service learning suggests an influence on academic, social, and personal outcomes of participants, the lack of progress in formalizing service learning in the New Jersey Legislature is concerning. If service learning is to be a recursive and reflective activity, attention must be paid to the examples of mandatory, or policy based service learning. International models and domestic examples from the Maryland Department of Education demonstrate the effectiveness and increase in participation when service learning is embedded in education policy.

The review of related literature provides insight and direction on service learning, leadership, and environmental education. While there is a significant body of research on service learning, there is room for continued studies on the impact of service learning focused on leadership and achievement in an environmentally immersive setting. Chapter III presents the methodology and research practices associated with the research project. Specific details are presented regarding the survey instruments and the applicable data analysis procedures that were employed. Chapter IV details the findings of the research with connections to relevant literature. Implications regarding the theoretical framework of the project are identified as well as field of study insights. Chapter V discusses the implications of the project with attention to future research, policy, and personal

professional practice. Included in Chapter V is a discussion of the change process and personal leadership impact through the lens of reflection.

CHAPTER III

METHODOLOGY

Context of the Study

During the 2008-2009 school year, the project participants were in seventh grade. In anticipation of formally incorporating service learning into the Allamuchy Township School District, a survey was designed and distributed to gather information on teacher, student, and parent reaction to the goal and importance of implementing service learning. For the purposes of this project, I will discuss the results of student responses to a question that asked the respondents to indicate their level of interest regarding several types of service learning activities. When the student responses were filtered from the rest of the respondents, 88.9% indicated that they were somewhat or strongly interested in the environment as a category of service learning. Building upon student interest and need, as evidenced by the decreased number of students achieving the label of proficient on the NJASK, the conceptual framework of the project was distilled from the theoretical framework.

This participant research project involved eighth grade students in a service learning project designed to increase leadership experience, heighten composition skills, and provide an environmentally immersive experience. Eighth grade students enrolled in the Allamuchy Township School District served as guides and facilitators of environmentally immersive activities. The target population was fourth grade students from surrounding school districts. There was a focus on writing prompts, in the form of language arts field journals, developed to align with the fourth grade New Jersey Assessment of Skills and Knowledge 4 (NJASK 4) statewide assessment. In addition to

servicing as ambassadors, the eighth grade students assisted the fourth grade students in completing the language arts field guide and associated writing prompt. There were four field experiences, involving the population of 25 Allamuchy Township School eighth graders, three separate fourth grade groups, and one third grade group.

Research Procedures

The population for this action research project was 25, the entire eighth grade class enrolled in the Allamuchy Township School District. There were six male students and 19 female students. Twenty-one students were Caucasian, three students were Asians and one was African-American.

I employed a practitioner research approach to this project. Bogden and Biklen (2007) explain practitioner research as, “the investigator is often a practitioner (a teacher, an administrator, or educational specialist) or someone close to the practice who wants to use the qualitative approach to do what he or she does better” (p. 221). Additionally, the purpose of practitioner research is to promote individual or group change through education (Bogden & Biklen, 2007). An analysis of the 2009 NJASK7 school mean cluster area score for explanatory writing, demonstrating student performance prior to the project, as compared to the 2010 NJASK8 school mean cluster score of explanatory writing, demonstrating student performance after participation in the project, provided data for analysis.

Serving in the role of facilitators and leaders, the eighth grade students were required to possess significant understanding of writing content and understanding, usage, sentence construction, and mechanics. Descriptive statistics were used to compare the means of the two NJASK samples. The variables were the year of NJASK

administration and the school mean cluster area score of explanatory writing on the NJASK. Additionally, I analyzed the district factor group “I” and the state mean scores on the 2009 NJASK7 and the 2010 NJASK8 cluster area score of explanatory writing to include additional perspective.

The eighth grade students completed a Student Leadership Practices Inventory (LPI) to measure attitudes and perception towards their personal leadership skills prior to participation in the study, and again after participation in the study using the student LPI. The LPI is a 30-item instrument that measures five subscales that include: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. There are six survey items for each subscale (see Appendix A).

The participants were asked to rank their current self-perceived level of engagement in each of the leadership subscales listed above using a five point Likert-type scale. The points on the scale are: 1 = Rarely or Seldom; 2 = Once in a While; 3 = Sometimes; 4 = Often; 5 = Very Frequently or Almost Always. With respect to reliability, the Student LPI, according to Kouzes and Pozner (2007):

has generally shown strong reliability. Early studies reported internal reliability scores (Cronbach alpha) of $\alpha = .68$ for Model, $\alpha = .79$ for Inspire, $\alpha = .66$, $\alpha = .70$ for Enable, and $\alpha = .80$ for encourage, and these are relatively consistent with more recent findings. In addition test-retest reliability of the student LPI, over a ten-week period, has been demonstrated as statistically significant, with correlations exceeding $r = .51$. (p. 9)

A paired-samples t test was used to compare the population mean of the two student LPI administration samples. The variables were the pre and post administration status and the population mean for each of the five leadership practices subscales.

In addition to the LPI, the eighth graders completed the Children's Attitudes Towards the Environment Scale (CATES). The CATES is a scale to measure environmental attitudes of children. The scale items reflect children's knowledge of environmental issues. The scale includes eight belief statements, nine affective statements, and eight behavior statements. The items address animal rights and protection, recycling, and conservation (see Appendix B). The scale, as stated by Malkus and Musser, (1994) "has good test-retest reliability. Using the scale for pretest and posttest studies would provide assurance that any noted changes in attitudes were not simply the result of measurement error" (p. 26).

The scale follows Likert scale procedures and was constructed to allow for summing across items to create one score. As stated by Malkus and Musser (1994):

Children are told to choose which of the two groups of children (the group described on the left side of the word *but* or the group described on the right side of the word *but*) they are like. Once they have made this decision, children are instructed to put a check mark in the small box if they are only a little like the children described in the statement. Each item is scored from 1 to 4. With 4 representing the most pro-environmental response. (p. 25)

A paired-samples t test was used to compare the population mean of the two CATES scores. The variables were the pre and post administration instrument status and the population mean for CATES score.

Research is critical to leadership and education, as researchers, our products must be reliable. Triangulation helps to support the validity of a study. Bogdan and Biklen (2007) state that, “many sources of data were better in a study than a single source because multiple sources lead to a fuller understanding of the phenomenon you were studying” (p. 155). To contribute to the data from the descriptive statistics, data were harvested during several interview sessions. Bogdan and Biklen (2007) comment that, “the interview is used to gather descriptive data in the subjects’ own words so that the researcher can develop insights on how subjects interpret some piece of the world” (p. 103). An interview protocol was developed for the eighth grade student participants (Appendix C), and a snowball sample was utilized to select interviewees. According to Kumar (2008), snowball sampling is “the process of selecting a sample using networks” (p. 179). I selected two students from the population for an interview and they in turn identified other members of the group to become part of the sample until the size of six participants was reached.

The semi-structured interviews focused on participant reflection of the research project with questions designed to address leadership, academic performance, environmental attitudes, and service learning. The interview data were transcribed and went through the process of content analysis to identify main themes. Kumar (2005) suggests, “examining verbatim responses and integrating them with the text” (p. 223). Interview transcripts were included throughout the results to provide additional content and perspective. In an effort to reduce the potential of bias by triangulating the data, a conscious effort was made to inhibit subjectivity. The students also completed an open

ended reflective writing sample to add to the quantitative data gathered from the NJASK, LPI, and the CATES.

The tours transpired during April 2010, in advance of the annual administration of the NJASK. The students completed the student LPI and the CATES prior to the implementation of the tours. Open-ended reflective writing pieces were completed after the final tour in late April 2010, and the interview sessions transpired during the summer of 2010.

Limitations

Inherent in the design of this project are limitations that need to be identified. The study is small scale and based upon a specific service project, and did not include a control group. Additionally, there are limitations associated with analyzing the NJASK cluster area score of explanatory writing. One limitation is the lack of control regarding the pre existing writing interventions that may have transpired between the NJASK7 and the beginning of the research project. An additional limitation is evident in the short-term duration of the project. While the students spent class time preparing for the environmental tours, the elapsed time from the first tour to the final tour was one month. One final limitation regarding the NJASK is found in the *2009 NJASK Grades 3-8*

Technical Report. The New Jersey Department of Education (2010) states that:

Beginning in 2009, only one reader was used to score the LAL writing tasks. In previous years, two readers scored the LAL writing tasks; however, a single reader scored the constructed response items in LAL, mathematics and science.

Thus, the only change in 2009 is the use of a single reader for the writing tasks.

(p. 53)

While the New Jersey Department of Education incorporated validity packets to ensure that the raters were scoring accurately, the fact that only one rater reads the writing task is a notable limitation.

Chapter IV details the findings of the research with connections to relevant literature. Implications regarding the theoretical framework of the project are identified as well as field of study insights. Chapter V discusses the implications of the project with attention to future research, policy, and personal professional practice. Included in Chapter V is a discussion of the change process and personal leadership impact through the lens of reflection.

CHAPTER IV

FINDINGS

Context of the Study

The purpose of this study was to address the impact of environmentally immersive service learning on a focused cluster of the NJASK, self-perception of leadership, attitude toward the environment, and student ability to define and articulate the benefits of service learning. The analysis and results of this study are presented in four sections. The first section documents the statistics of the 2008-2009 New Jersey Assessment of Skills and Knowledge 7 (NJASK 7) and the 2009-2010 New Jersey Assessment of Skills and Knowledge 8 (NJASK 8) cluster area score of the explanatory task. The difference in the mean score on the explanatory task was analyzed by comparing the state, the Allamuchy Township School District, and the district factor group, representing other communities with relatively similar socioeconomic status. The second section contains a self-analysis of attitudes and perception of participant leadership skills prior to participation in the study, and again after participation in the study using the student LPI. There are five subscales that are discussed including: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. The third section analyzes the results from Children's Attitudes Towards the Environment Scale (CATES), which measures environmental attitudes of children. The fourth section includes data gathered from structured interviews discussing student ability to define and articulate the benefits of service learning after participating in environmentally immersive service learning. Throughout each section, data from student reflection and interviews are included. The interview data were coded

and went through the process of content analysis to identify main themes. Specific attention was paid to classifying and categorizing. Glense (2006) indicates that, “coding is a progressive process of sorting and defining and defining and sorting those scraps of collected data that are applicable to your research purpose” (p. 152).

Academic Performance

The first research question explored the relationship between environmentally immersive service learning, with a focus on explanatory student writing and academic performance as documented on the NJASK 8 school mean explanatory writing task cluster score. During a structured interview session, participants were asked a question that was directly related to the Spring 2010 NJASK. The specific question was: How did you feel when you were writing during the Spring 2010 NJASK writing prompts? Interviewees’ comments regarding their feelings during the Spring 2010 NJASK writing prompts were divided into two categories that include personal performance on the assessment and reflection on specific prior preparation. All (6 out of 6) students remarked that they felt positive when writing during the Spring 2010 NJASK. They used adjectives such as good, confident, natural, and that they knew a lot of things. Half (3 out of 6) reflected upon prior preparation when identifying how they felt during the test. The responses included commentary on specific strategies such as using proper pre-writing strategies, compositional risks, and inclusion of descriptive vocabulary. A few (2 out of 6) commented on time management during the assessment, and one student identified fear of being placed in remedial classes when asked to describe feelings during the Spring 2010 NJASK. As shown in Table 1 the cluster score of the explanatory task increased from the 2008-2009 NJASK 7 to the 2009-2010 NJASK 8 in all samples. While the state,

DFG, and Allamuchy experienced growth, the largest growth was demonstrated by the Allamuchy Township School District.

Table 1

Comparison of NJASK Cluster Score Explanatory Task

NJASK Cluster Score Explanatory Task			
	2008-2009 NJASK 7	2009-2010 NJASK 8	Difference
Allamuchy	3	3.8	+ .80
State	3.1	3.4	+ .30
DFG I	3.4	3.7	+ .30

Although there was an increase in the cluster score for the explanatory task, it would be inappropriate to assign significance to the increase in score to the service learning activity. One limitation is the lack of control regarding the pre-existing writing interventions that may have transpired between the NJASK7 and the beginning of the research project. An additional limitation is evident in the short-term duration of the project. While the students spent class time preparing for the environmental tours, the elapsed time from the first tour to the final tour was one month.

Leadership

The second research question was developed to investigate if student attitudes and perception towards their personal leadership skills were impacted by participation in service learning activities as documented by an analysis of a pre and post student leadership practices inventory. The eighth grade students completed a Student Leadership Practices Inventory (LPI) to measure attitudes and perception towards their personal leadership skills prior to participation in the study, and again after participation in the study using the student LPI. The LPI is a 30-item instrument that measures five subscales that include: modeling the way, inspiring a shared vision, challenging the process,

enabling others to act, and encouraging the heart. Twenty out of 25 successfully completed both a pre and post LPI. Given attendance, and the computer-based nature of this assessment, five students did not complete pre and post assessments.

A paired-samples t test was calculated for each of the five sub scales comparing the mean pre-participation score and post-participation score. As shown in Table 2, the mean on the pre-participation score for modeling the way was 18.750 ($SD = 3.725$), and the mean on the post-participation was 20.200 ($SD = 4.883$). As demonstrated in Table 3, no significant difference from pre-participation to post-participation was found ($t(19) = -1.273, p > .05$).

Table 2

Descriptive Statistics for Model the Way

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pretest	25	12	25	18.750	3.725
Posttest	25	6	26	20.200	4.883

Table 3

Paired Samples Test for Model the Way

Pair	Pretest	Mean	<i>SD</i>	SEM	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Posttest	-1.4500	5.0936	1.1389	-3.8338	.93388	-1.273	19	.218

A paired-samples t test was calculated on the sub scale of inspiring a shared vision comparing the mean pre-participation score and post-participation score. As shown in Table 4, the mean on the pre-participation score for inspiring a shared vision was 18.800 ($SD = 3.778$), and the mean on the post-participation was 20.150 ($SD = 4.487$).

As demonstrated in Table 5, no significant difference from pre-participation to post-participation was found ($t(19) = -1.029, p > .05$).

Table 4

Descriptive Statistics for Inspire a Shared Vision

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pretest	20	13	25	18.800	3.778
Posttest	20	6	28	20.150	4.487

Table 5

Paired Samples Test for Inspire a Shared Vision

Pair	Pretest	Mean	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Posttest	-1.350	5.869	1.312	-4.096	1.396	-1.029	19	.317

A paired-samples *t* test was calculated on the sub scale of challenging the process comparing the mean pre-participation score and post-participation score. As shown in Table 6, the mean on the pre-participation score for challenging the process was 18.750 ($SD = 3.837$), and the mean on the post-participation was 20.000 ($SD = 4.460$). As demonstrated in Table 7, no significant difference from pre-participation to post-participation was found ($t(19) = -.996, p > .05$).

Table 6

Descriptive Statistics for Challenging the Process

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pretest	20	13	26	18.750	3.837
Posttest	20	7	27	20.000	4.460

Table 7

Paired Samples Test for Challenging the Process

Pair	Pretest	Mean	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Posttest								
		-1.250	5.784	1.293	-3.957	.1457	-.966	19	.346

A paired-samples *t* test was calculated on the sub scale of enabling others to act comparing the mean pre-participation score and post-participation score. As shown in Table 8, the mean on the pre-participation score for enabling others was 21.400 (*SD* = 3.992), and the mean on the post-participation was 21.450 (*SD* = 3.993). As demonstrated in Table 9, no significant difference from pre-participation to post-participation was found ($t(19) = -.035, p > .05$).

Table 8

Descriptive Statistics for Enabling Others to Act

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pretest	20	12	27	21.400	3.992
Posttest	20	13	28	21.450	3.993

Table 9

Paired Samples Test for Enabling Others to Act

Pair	Pretest	Mean	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Posttest								
		-.050	6.345	1.141	-3.019	2.919	-.035	19	.972

A paired-samples *t* test was calculated on the sub scale of encouraging the heart comparing the mean pre-participation score and post-participation score. As shown in Table 10, the mean on the pre-participation score for encouraging the heart was 22.400 (*SD* = 4.488), and the mean on the post-participation was 23.250 (*SD* = 4.799). As demonstrated in Table 11, no significant difference from pre-participation to post-participation was found ($t(19) = -.513, p > .05$).

Table 10

Descriptive Statistics for Encourage the Heart

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pretest	25	9	28	22.400	4.488
Posttest	25	10	29	23.250	4.799

Table 11

Paired Samples Test for Encourage the Heart

Pair	Pretest	Mean	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Posttest								
		-.850	7.407	1.656	-4.316	2.616	-.513	19	.614

In addition to the quantitative data gathered from the Student LPI, qualitative interview data add to the comprehensive analysis of leadership as it relates to service learning. During a structured interview session, participants were asked a question that was directly related to the leadership. The specific question was: How was the service learning project related to leadership in your experience? Interviewees' comments regarding leadership identified one common leadership theme: the writing component of the service learning project. Most (4 out of 6) identified helping the children to write as a leadership example. Specific examples included helping the younger students to fix things when they did it wrong, and balancing the level of help to ensure that they would be able to write on their own. Additional individual student commentary identified guiding children, although no specific process was identified. One student indicated that the younger children wanted to be like the older children when they grew up, giving power to the older students to help the younger students.

The results do not suggest any significant relationship between self-perception of leadership and participation in an environmentally immersive service learning activity. This may be due in part to the lack of student input in the design of the writing activity. Given the complexities of leadership development, perhaps the service activity should be extended for a longer duration with additional focus on reflection. The research states that leadership development is a long term, comprehensive commitment that institutions must adopt as a core belief. Connaughton et al. (2003) stated:

It is unrealistic to expect that enhanced leadership capabilities can be developed in a 2-hour or even week-long leadership workshop. Rather, leadership competencies are best developed over time through a program that fosters

personalized learning in the integration of theory and practice and that conceives of leadership development as a recursive and reflective process. (p. 46)

Environmental Attitudes

The third research question investigated the relationship between student attitudes toward the environment and participation in environmentally immersive service learning activity as evidenced by an analysis of pre and post attitudes towards the environment scale. During a structured interview session, participants were asked to comment regarding environmental responsibility. The specific request was: I would like you to tell me about environmental responsibility and specifically your feelings towards our school property. Two themes emerged from the responses that included importance and cleanliness. Most (4 out of 6) commented that environmental responsibility is important. Three of the 4 respondents made reference to importance as it relates to the aspects beyond the Allamuchy Township School District. Regarding the school property, most (4 out of 6) identified cleanliness and a need to keep litter off the grounds when discussing environmental responsibility.

As shown in Table 12, the mean on the pre-participation score for the CATES was 63.840 ($SD = 10.011$), and the mean on the post-participation was 71.520 ($SD = 11.993$). As demonstrated in Table 13, a significant increase from pre-participation to post-participation was found ($t(24) = -2.262, p < .01$).

Table 12

Descriptive Statistics for Children's Attitudes Towards the Environment Scale

Test	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Pre	25	45	82	63.840	10.011
Post	25	50	91	71.520	11.993

Table 13

Paired Samples Test for Children's Attitudes Towards the Environment Scale

Pair	Pre–	Mean	<i>SD</i>	<i>SEM</i>	Lower	Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
1	Post								
		-7.680	13.123	2.624	-13.097	-2.262	-2.926	24	.007

The significant increase in the participant attitudes towards the environment aligns with the current literature and prior research on environmental education and field based learning. Smith-Sebasto and Walker (2005) researched student perceptions of a residential environmental education program at the New Jersey School of Conservation. Based upon the results of the three survey questions, the most common answer was safety. According to Smith-Sebasto and Walker (2005):

Environmental education studies highlight that fears in a natural setting are very real for students, and this affects their educational experience (Bixler, Carlisle, Hammitt, and Floyd, 1994; Simmons, 1994; Walsh, 1994). Many students are not familiar with being in the forest and feel they need to protect themselves from the elements and animals. (p. 35).

Given that the duration of the project was only one month, the students participated in multiple tours in a condensed time frame. The students became familiar with the property and this familiarity may have contributed to their educational experience.

Malkus and Mauser (1994), the creators of the CATES, mention that the “scale would be useful for evaluating environmental education programs as well as exploring the development of pro-environmental attitudes” (p. 22). The significant increase in the participant attitudes towards the environment suggests that perhaps the environmental education component of the service project was effective.

Service Defined

The fourth research question explored student ability to identify and articulate the benefits of service learning after participating in environmentally immersive service learning. When asked to describe their service learning experience most of the students (4 out of 6) indicated that service learning was a fun activity. One student described service learning as a different and newer way to learn. Another student described service learning as interactive and reaching out.

When asked to define service learning, the answers were divided evenly into three categories. Half (3 out of 6) defined through the lens of the specific service learning project and a few (2 out of 6) defined through the lens of an instructional method. One student was not able to define service learning. The students that defined service learning through environmentally immersive writing, made specific reference to the project and defined through their experience. Additionally one student commented that service learning was, “when you explain your environment around and then show what it is all about” (Student interview, July, 2010).

The students that defined service learning as an instructional method, commented that service learning was more than just learning. A theme of benefit emerged during the content analysis. During the interview the students stated, that

It was learning that took another step up. It was a building block to becoming a better student. Service learning was learning but also teaching, it was a more exciting way of educating rather than working from books. Service learning is similar to group work, working together and teaching each other things. (Student interview, July, 2010)

While the student responses were appropriate given their experience, the activity did not adopt a consistent definition of service learning. An analysis of student responses suggests that future projects should include an increased instructional component, and subsequent assessment on the definition of service learning. An example is the definition of service learning articulated by Dr. Kathy O'Byrne:

Students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities. Service is integrated into academic curriculum, and there is time for faculty and students to reflect on the off-campus experience. Opportunities are included to promote civic responsibility or to gain leadership skills that can be used upon graduation to make a difference in one's community. (O'Byrne, 2006 p. 47)

Chapter V discusses the implications of the project with attention to future research, policy, and personal professional practice. Included in Chapter V is a discussion of the change process and personal leadership impact through the lens of reflection.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Research

The purpose of this study was to examine the impact of environmentally immersive service learning on a focused cluster of the NJASK, self-perception of leadership, attitude toward the environment, and student ability to articulate the benefits of service learning. To that end, four research questions were examined:

1. Does environmentally immersive service learning, with a focus on explanatory student writing, impact academic performance as documented on the New Jersey Assessment of Skills and Knowledge 8 (NJASK 8) school mean explanatory writing task cluster score?
2. Are student attitudes and perception towards their personal leadership skills impacted by participation in service learning activities as documented by an analysis of a pre and post student leadership practices inventory?
3. Are student attitudes toward the environment impacted by participation in environmentally immersive service learning as evidenced by an analysis of a pre and post attitudes towards the environment scale?
4. As a result of their participation in the project, are students able to identify and articulate the benefits of service learning?

This chapter provides a discussion for each research question reviewing the study results, followed by a recommendation for future research. The next section addresses the policy implications for service learning as related to the current educational landscape in New Jersey, included are recommendations for policymakers to consider. The final

section addresses the relevant leadership theories that informed my practice and guided the project from inception to reflection.

Academic Achievement

Although there was an increase in the cluster score for the explanatory task from the prior academic year as evidenced by the comparison of the cluster area score of explanatory writing, it would be inappropriate to assign significance to the increase in score to the service learning activity. One limitation is the lack of control regarding the pre-existing writing interventions that may have transpired between the NJASK7 and the beginning of the research project. An additional limitation is evident in the short-term duration of the project. While the students spent class time preparing for the environmental tours, the elapsed time from the first tour to the final tour was one month. However, the results should not be discarded. Future studies could investigate the relationship between focused academic content, such as explanatory writing, and the inclusion of said in a service project. In addition to the NJASK, a locally developed assessment tool might capture the impact of the service intervention on a targeted academic skill.

Student Self-Perception of Leadership

The results do not suggest any significant relationship between self-perception of leadership and participation in an environmentally immersive service learning activity. Consideration should be given to the selection of a service project with regard to the leadership development activity. It would have been inappropriate to allow the student leaders to take the younger students unaccompanied on a hike in the woods without teaching staff members. Perhaps the constant presence of adults impacted student self-

perception of leadership. A recommendation to modify the existing project for future use could positively impact student self-perception of leadership. Instead of assigning staff members to each touring group, staff members could be assigned to specific points on the trail, available to assist as needed. If each student leader was provided with a communication device, and cursory first aid training, the increased independence could impact student self-perception of leadership. The student leaders could also design the writing prompts. This would allow for an increase in leadership and project ownership. Additionally, representatives from the student leadership could serve in the role of trip coordinator. Using a faculty created checklist, and under the supervision of faculty, student leaders could reach out to other districts to secure dates and times of tours.

Attitude Towards the Environment

The significant increase in the participant attitudes towards the environment aligns with the current literature and prior research on environmental education and service learning. As aptly stated by Coles (1993):

For a growing number today, the world itself, this planet we occupy, becomes the biggest country of all, its continued life a source of anxiety, its needs something to be urgently addressed, as I am constantly reminded by students who join organizations meant to protect everyone's environment, the air, the oceans, and natural life the world over. (p. 67)

The research suggests that the design of this specific project positively impacted student attitudes towards the environment. As legislation such as the No Child Left Inside bill evolves, scholarly documented environmentally immersive activities should serve as the

research base for future projects. While testifying before the Interior and Environmental Subcommittee regarding No Child Left Inside, Richard Louv (2007) commented:

The physical benefits are obvious, but other benefits are subtler and no less important. Take the development and cognitive functioning. Factoring out other variables, studies of students in California and nationwide show that schools that use outdoor classrooms and other forms of experimental education produce significant student gains in social studies, science, language arts, and math. One 2005 study by the California Department of Education found that students in outdoor science programs improved their science testing scores by 27 percent. (p. 2)

Service Defined

When asked to define service learning, the answers were divided into three categories. Half (3 out of 6) defined through the lens of the specific service learning project and a few (2 out of 6) defined through the lens of an instructional method. One student was not able to define service learning. While the inability to commonly define service learning does not take away from the benefits of the pedagogy, consideration should be given to an accepted definition when educational institutions initially incorporate service learning. Future initiatives should include an assessment component that requires students to identify an institutionally adopted definition of service learning.

Implications on Policy and Practice

Educators are charged with meeting more than adequate yearly progress, and must provide opportunities for students that contribute to an understanding of their global responsibilities. Examples from other countries and states indicate that service learning is

a viable option with proven positive results. The New Jersey legislature has been discussing the concept of service learning, and now is the time to make the change.

Based upon the model from Maryland, New Jersey could adopt the stance that service learning should be a mandatory component of compulsory education required for graduation. New Jersey could adopt the seven components for effective service learning programs highlighted by the Maryland Department of Education which include: meeting a recognized need in the community, achieve curricular objectives, reflection, student responsibility, community partnerships, planning ahead, and equipping students with knowledge and skills needed for service (Maryland State Department of Education, 2004).

Given the financial challenges that all districts face, service learning is an attractive alternative. There are no expensive tools, machines, or computers needed to implement a program, only the desire to create a better world. The policy instrument needed to facilitate the implementation of service learning is capacity building. According to Fowler (2009), capacity building is “designed to bring about a major permanent change in the functional ability of an individual or an organization” (p. 253). An investment in the professional development the staff will facilitate the effective adoption of service learning. The process is a long-term investment to an existing institution, lacking in immediate results. It is incumbent upon educational leaders to convey the importance of this policy and to provide the supports needed for effective implementation.

Impact on Leadership

Prior to the inception of this study, I spent considerable time studying leadership centered on relevant leadership theories and concepts. Many of those theories and concepts guided the environmentally immersive service learning research project from inception to reflection. Specifically, the concepts of transformational and servant leadership, reflective practice, moral purpose, and identification of core values contributed to the research, and evolved as a result of the project.

I am a practitioner of transformational leadership. According to Burns (2003) transformational leadership, “occurs when one or more persons engage with others in such a way that leaders and followers raise each other to higher levels of motivation and morality” (p. 24). Indeed, transformational leadership is the pinnacle of leadership styles to utilize when a leader is involved in a high functioning organization. While serving in the role of practitioner researcher, there was a feeling that the Allamuchy Township School was transforming into a school where individual strengths combined to develop a new level of teaching and learning.

In addition to transformational leadership, my leadership practice is influenced by the theory of servant leadership. The basic premise of the servant leadership theory is that while in an organization a member of the group begins by choice as a servant to the group and at some point makes a conscious decision to aspire to lead. Servant leadership, according to Robert K. Greenleaf (1995):

Begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead... care is taken by the servant-first to make sure that other people’s highest priority needs are being served. The best

test, and difficult to administer, is: do those served grow as persons, do they grow while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? (p. 22)

As servant leadership resonates with my leadership style, the theoretical underpinnings surfaced during the research project. The eighth graders were serving the younger students from surrounding districts, and serving their school as well. The research suggested that through this service the children significantly increased their positive attitudes towards the environment.

Reflective Practice

I am a proponent of reflective practice, as such I utilize reflective practice, and continuous learning in my leadership role. At the conclusion of each environmental tour I reflected upon the experience to ensure from an administrative standpoint I was providing the required support and guidance. Heifetz (1994) discusses leadership as being both reflective and active. Heifetz (1994) states that, "Leadership is both active and reflective. One has to alternate between participating and observing" (p. 252). One goal of my reflective leadership is to create resonance. Goleman, Boyatzis, and McKee (2002) define resonant leadership as, "being attuned to peoples feelings and moving them in a positive emotional direction" (p. 20). Given the encompassing nature of the project, I strove to create resonance within my school to validate the time that the children were not in the traditional classroom. Additionally, I made a conscious effort to espouse the benefits of service learning in an effort to increase support and demonstrate the positive attributes of service.

Change Process

Fullan's understanding of the change process was used as the framework for the environmentally immersive service learning activity. Fullan (2001) discusses five themes that help to compose the change process. He explains that the goal of change is not merely to innovate the most, rather change should increase organizational capacity and improve student learning. While the project was not radical, it was a departure from teacher centered instruction. One of the fundamental tenets of the project was student learning as evidenced by composition skills.

Next, Fullan (2001) cautions, that it is not enough to have the best ideas, leaders must be able to communicate and strive for authentic coherence. In order to gain support for the project, permission was granted from the Allamuchy Township Board of Education, and from the parents of the participating eighth grade students. Full support was granted for the project and associated research. Fullan discusses the phenomenon of the implementation dip as a component of the change process. While implementing change, initial progress indicators may decline resulting from the time and energy needed to foster the change initiative. Given the duration of the project, the implementation dip was not severe, and the content of the project focused on academically assessed skills.

The next theme involves resistance, Fullan (2001) recommends redefining resistance. He comments that, "we are more likely to learn something from people who disagree with us than we are from people who agree" (p. 41). Throughout the project there was minimal resistance, the associated stakeholders believed in the project and

associated pedagogy. Reculturing is the next theme that Fullan (2001) identifies. He describes a particular type of reculturing that:

Activates and deepened moral purpose through collaborative work cultures that respect differences and constantly build and test knowledge against measurable results, a culture within which one realized that sometimes being off balance is a learning moment. (p. 44)

The project demonstrated the benefits of service learning, and highlighted effective teacher administrator collaboration. The final theme that Fullan (2001) links to the change process, is that with change there is never a checklist, there is always complexity. The educational landscape is dynamic, as are the organizations that we lead. The research project was conceptually and logistically complex, yet based on a solid understanding change, we were able to cultivate knowledge, skills, and understanding (Fullan 2001).

Moral Purpose

According to Fullan (2001) leaders must have a moral purpose, particularly in education. Fullan describes moral purpose as, “acting with the intention of making a positive difference in the lives of employees, customers, and society as a whole” (p. 3). Sergiovanni (2001) provides suggestions for helping schools to become moral communities. He recommends:

Replacing communication with conversation. Conversation may not be able to move mountains, but it can get teachers, citizens, state officials, and other stakeholders to think differently, join together in a union of mutual responsibility, and to make good decision for children. (p. 35)

While not explicitly measured during this research project, perhaps future studies could measure the level of conversation between the teaching staff members and the student leaders. The leadership position of the students, created a unique landscape for dialogue between students and faculty that is not readily accessible in the typical classroom.

Core Values

Bolman and Deal (2008) state that, “leaders need to be deeply reflective and dramatically explicit about core values and beliefs” (p. 437). My core values are integrity, fairness, commitment, responsibility, passion, and service. As a leader I feel that integrity is vital to the success of an organization. Integrity keeps the organization afloat during challenging times. I am a fair leader who listens, hears, and understands the complex situations that people face. Fairness is essential to effective and lasting leadership. Leaders are responsible for the success of the organization and for all of the people associated with the organization. Leaders must lead with passion. I approach my life and leadership roles with passion and enthusiasm. The leader influences the tone of the organization, and passion is contagious.

As my leadership experiences grow, and my content knowledge increases from additional coursework, I view the relationship between the leader and the organization through a refined lens. I believe in service, and strive to serve my school and community in the most effective manner possible. I am energized and motivated from the mutually beneficial relationship found in service.

Now that there is local scholarly research regarding service learning, significant follow up and momentum should occur. Using the data that were collected and analyzed,

the project will continue and evolve to include a deliberate increase in leadership opportunities for the students. While the above comments are specific to the environmentally immersive project, there is a larger goal for the Allamuchy Township School District. It is my hope that the Board of Education, in anticipation of legislative action, will seriously consider adopting policy requiring each grade to participate in at least one service learning activity during the academic school year. This research project laid the foundation for integrated service learning in the Allamuchy Township School District.

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Appendix A
Student Leadership Practices Inventory

Student Leadership Practices Inventory

We will use the information from the Student Leadership Practices inventory to better understand how you currently behave as a leader from your own perspective. Please circle the choice that most accurately represents how you feel about the following statements. When you have responded to each of the questions please close the document and your answers will be collected. Your responses will remain confidential and your honest answers are appreciated.

1. I set a personal example of what I expect from other people
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

2. I look ahead and communicate about what I believe will affect us in the future
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

3. I look around for ways to develop and challenge my skills and abilities
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

4. I foster cooperative rather than competitive relationships among people I work with
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

5. I praise people for a job well done
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

6. I spend time and energy making sure that people in our organization adhere to the principles and standards we have agreed upon
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often

5-Very Frequently

7. I describe to others in our organization what we should be capable of accomplishing

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

8. I look for ways that others can try out new ideas and methods

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

9. I actively listen to diverse points of view

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

10. I encourage others as they work on activities and programs in our organization.

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

11. I follow through on the promises and commitments I make in this organization

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

12. I talk with others about sharing a vision of how much better the organization could be in the future

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

13. I keep current on events and activities that might affect our organization

- 1-Rarely or Seldom
- 2-Once in a While
- 3-Sometimes
- 4-Often
- 5-Very Frequently

14. I treat others with dignity and respect
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

15. I give people in our organization support and express appreciation for their contributions
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

16. I find ways to get feedback about how my actions affect other people's performance
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

17. I talk with others about how their own interests can be met by working toward a common goal
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

18. When things do not go as we expected, I ask, "What can we learn from this experience?"
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

19. I support the decisions that other people in our organization make on their own
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

20. I make it a point to publicly recognize people who show commitment to our values
 - 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

21. I build consensus on an agreed-upon set of values for our organization
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
22. I am upbeat and positive when talking about what our organization aspires to accomplish
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
23. I make sure that we set goals and make specific plans for the projects we undertake
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
24. I give others a great deal of freedom and choice in deciding how to do their work
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
25. I find ways for us to celebrate accomplishments
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
26. I talk about the values and principles that guide my actions
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently
27. I speak with conviction about the higher purpose and meaning of what we are doing
- 1-Rarely or Seldom
 - 2-Once in a While
 - 3-Sometimes
 - 4-Often
 - 5-Very Frequently

28. I take initiative in experimenting with the way we can do things in our organization

1-Rarely or Seldom

2-Once in a While

3-Sometimes

4-Often

5-Very Frequently

29. I provide opportunities for others to take on leadership responsibilities

1-Rarely or Seldom

2-Once in a While

3-Sometimes

4-Often

5-Very Frequently

30. I make sure that people in our organization are creatively recognized for their contributions

1-Rarely or Seldom

2-Once in a While

3-Sometimes

4-Often

5-Very Frequently

Thank you for your time in taking this survey. When you have responded to each of the question please close the document and your answers will be collected.

Appendix B

Children's Attitudes Toward the Environment Scale

Subject ID # _____

Your Name: _____ Your Grade: _____

Are you a boy or girl? _____ Your Teacher: _____

How I Feel About the World

The questions in this booklet ask you about your feelings about the world we live in. Each question describes two groups of children. First, you pick which group you are most like. Then, you decide if you are a lot like those children, or just a little like those children.

SAMPLE QUESTION

Some kids like ice cream.

If you like ice cream, you would pick this side.

If you really like ice cream, put an X in the big box on this side.

If you like ice cream a little bit, then put an X in the little box on this side.

Other kids don't like ice cream.

If you don't like ice cream you would pick this side.

If you really don't like ice cream, put an X in the big box on this side.

If you sort of don't like ice cream, then put an X in the little box on this side.

Do you have any questions? If you do, raise your hand so someone can help you!!!

Do not start, until you are told to!!!

1. Some kids like to leave the water running when they brush their teeth.

But

Other kids always turn the water off while brushing their teeth.

2. Some kids use both sides of the paper when they draw or write

But

Other kids like to use only one side of the paper when they draw or write.

3. Some kids think we should throw away things when we're done with them.

But

Other kids think we should recycle things.

4. Some kids think dams on rivers are bad because they hurt plants and animals.

But

Other kids think dams on rivers are good because they prevent floods.

5. Some kids like to bring home plants or bugs they find outside.

But

Other kids like to look at plants and bugs outside but they never bring them home.

6. Some kids don't like to make bird feeders or bird houses.

But

Other kids like to make bird feeders or bird houses.

7. Some kids think outdoor lights should be turned off at night because they use electricity.

But

Other kids think outdoor lights should be left on at night because they keep us safer.

8. Some kids think people are more important than animals.

But

Other kids think people and animals are equally important.

- | | | |
|---|-------------------|--|
| <p>9. Some kids are concerned about the rain forest.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids aren't concerned about the rain forest.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>10. Some kids think we should build more landfills to hold our garbage.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids think we should find other ways to deal with our garbage.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>11. Some kids like camping and visiting national parks.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids don't like to go to national parks.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>12. Some kids don't worry about animals becoming extinct.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids worry about animals becoming extinct.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>13. Some kids throw things away when they are done with them.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids reuse things or give them to other people to use.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>14. Some kids think we should use chemicals and fertilizers in our gardens.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids think we shouldn't use chemicals or fertilizers in our gardens.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>15. Some kids pick up trash and throw it away.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids don't like to pick up smelly trash.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>16. Some kids don't sort their trash.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids sort their trash and recycle it.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |
| <p>17. Some kids like to live where there are lots of plants and animals.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> | <p><u>But</u></p> | <p>Other kids like to live where there are lots of people.</p> <p><input type="checkbox"/> <input type="checkbox"/></p> |

18. Some kids touch or catch wild animals.

19. Some kids don't like being crowded in the car.

20. Some kids are excited about solar energy.

21. Some kids believe people should be able to live wherever they want.

22. Some kids worry about air pollution.

23. Some kids think we should be able to hunt all wild animals.

24. Some kids turn off the lights when they leave a room.

25. Some kids get their parents to drive them places they want to go.

But Other kids never touch or catch animals they find outside.

But Other kids like to carpool even if it is a little crowded.

But Other kids don't care about solar energy.

But Other kids believe that people should be careful not to destroy animals' homes.

But Other kids don't worry about air pollution.

But Other kids think that some animals need protection.

But Other kids leave the lights on.

But Other kids ride their bikes or walk when they can.

Appendix C

Researcher Developed Interview Protocol

Researcher Developed Interview Protocol

1. What are some adjectives that describe your service learning experience with the Allamuchy Township School?
2. Describe your experience in helping a younger student write an explanatory essay.
3. How did you feel when you were writing during the Spring 2010 NJASK writing prompts?
4. How was the service learning project related to leadership in your experience?
5. I would like you to tell me about environmental responsibility and specifically your feelings towards our school property.
6. How do you define service learning and how do you feel about service learning as a piece of your educational experience?
7. Do you have any recommendations for future service learning projects?