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Place-Based Learning As An Effective Methodology For Developing Self-Efficacy Skills In Students With Learning Disabilities

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PLACE-BASED LEARNING AS AN EFFECTIVE METHODOLOGY FOR DEVELOPING

SELF-EFFICACY SKILLS IN STUDENTS WITH LEARNING DISABILITIES

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PLACE-BASED LEARNING AS AN EFFECTIVE METHODOLOGY FOR DEVELOPING
SELF-EFFICACY SKILLS IN STUDENTS WITH LEARNING DISABILITIES

ABSTRACT

Research shows that place-based learning is a proven methodology in supporting students in achievement of their academic and social needs. There are inconsistencies related to documenting its success with learning disabled students, especially in the area of self-efficacy. This study attempted to fill this gap in the literature by exploring the perception of educators regarding self-efficacy of students with learning disabilities who have experienced environmental science place-based programs. Elementary educators were recruited from a broad pool of participants via social media. One hundred seventy surveys were received from educators in the six New England states. Five participants provided in-depth information via semi-structured interviews. Across all areas of self-efficacy participants responded more favorably in the categories of Agree or Strongly Agree except for work completion. In all areas of academics participants responded more favorably except Math. Results indicated that educators' perceptions about the effectiveness of place-based learning on self-efficacy skills in students with learning disabilities were affirmed. Recommendations include: training for teachers in increasing their knowledge of how to utilize place-based practices with standards-based curriculum and instruction, training for teachers in inclusion of self-efficacy skills in their instruction, more focused study of other specialized populations (for example, gifted students with learning disabilities) to understand the effect of utilizing place-based programs to develop

self-efficacy, and further research of others' perceptions (parents and students) in

development of self-efficacy skills in students with learning disabilities.

University of New England

Doctor of Education
Educational Leadership

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Table of Contents

TABLES

CHAPTER ONE

INTRODUCTION

Initiated in the 1990s, the Standards & Accountability Movement involved the nation's governors and corporate leaders in developing educational standards to address the lack of preparedness of high school graduates. The Common Core State Standards (CCSS) are a set of unified expectations or standards for mathematics and English language arts. As such they require that students move through activities at certain grade levels to demonstrate mastery of skills. All students are exposed to the same methods and materials, assessments are given at the same time, and individual exploration and collaboration are minimal (Wiggins & McTighe, 2005). The result is often that school leaders offer a one-size-fits-all curriculum that does not allow for individual student development. This hyper-focus on achievement of standards has caused educators to accelerate student learning by ignoring developmental milestones through implementation of vigorous curriculum (Louv, 2008). Not only are the academic outcomes of children jeopardized but also their social and emotional well-being (Sobel, 2001). This trend is leading educators to look for more inclusive teaching models that not only provide the highest academic standards but also are developmentally appropriate.

Research has shown that constructivist-teaching models, which are based on student interests and needs, increase student achievement (Sobel, 2006). In June 2011, the U.S. Department of Education released their report, *Impact in Place: A Progress Report on the Department of Education's Place-Based Strategy,* recommending that there be improved integration of environmental education programs into education reform initiatives due to the ability of these programs to significantly improve many areas of the curriculum at once. In an attempt to raise standards, ultimately "the weight of the world is being put upon the shoulders of

8 and 9 year olds" (Louv, 2008, p. 36). This recommendation prompted the development of place-based programs that focus on personalization of learning and developing self-efficacy (Sobel, 2006). When knowledge is gained through experimentation of real-world activities/ scenarios, students work in collaborative groups that replicate how they will need to work in the grown-up workforce (Sobel, 2006).

Place-based learning (PBL) is a well-known philosophy that is based on constructivist teaching models (Sobel, 2008). Also known as *pedagogy of place*, place-based learning is a theoretical framework that focuses on the interconnectedness of school, community, and the environment (Sobel, 2006). As defined by Sobel (2006) place-based education is:

>The process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens. Community vitality and environmental quality are improved through the engagement of local citizens, community organizations, and environmental resources in the life of the school. (p. 7)

Based on the teachings of Dewey (1882-1953), place-based learning has the ultimate goal of creating better citizens. This means they not only will have well-developed learning skills, but they will also be able to use these skills to create a better world. Within the place-based learning model, each student is an individual who works at their own pace, and learning is focused on individual interests and talents. Exploration, collaboration, and play have a major

role in developing a sense of self and individual abilities. Academics are seen as tools for the acquisition of knowledge, not the end result.

Much of today's movement towards place-based learning is grounded in New England (Sobel, 2006). Antioch University located in New Hampshire (NH) offers extensive programs of study through its Center for Place-based Education. The NH Department of Education has spent several decades in development and implementation of competency-based educational practices, which are closely aligned to place-based practices. A close neighbor, Vermont has also done much work in implementation of place-based practices by incorporating place-based curriculum into the state's educational standards ensuring global proficiency for its graduates (Power & Green, 2014). Curriculum and instruction development have focused on practices such as problem-based learning, service-learning, and environmental education (Smith, 2013).

Much of the research on place-based learning has centered on study of academic progress within practices involving problem-based learning, service-learning, and environmental education (Smith, 2013). These studies also tend to focus on the impact that place-based learning has in regular education environments. Although there is much observation of the benefits of place-based education in the engagement of children with learning disabilities due to the hands-on nature of related environmental education activities, inconsistencies exist to documentation of success for this population of students.

Many students with learning disabilities are labeled as unmotivated and/or lazy as they hesitate to expend much effort to learn. Often they will not even begin tasks that they have already failed at, believing that no amount of hard work will result in their success. This is often because they have low self-efficacy; that is, they do not believe they possess the knowledge or skills to be successful (Job & Klassen, 2012).

Although in general educators are sensitive to meeting the needs of learning disabled students, there is limited knowledge or understanding of how to develop self-efficacy in students (Klassen, 2010). Various studies have shown the importance of self-efficacy (Burstenirer & Bryan 2008; Carter & Lay, 2008, as cited in Klassen, 2010, p. 25). Self-efficacy is "the belief in ones capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 2004, p. 2). Student perceptions of self-efficacy are important as they influence the types of activities, task persistence, amount of effort expended, and degree of success (Klassen, 2010). In order to enhance the perspective of students and educators it is important to identify key factors to increase these skills—problem solving, self-advocacy, and leadership—were identified as areas requiring more direct instruction (Powers, 2004).

Self-efficacy can be developed through a series of mastery experiences based on challenging and realistic goals, in conjunction with environments that provide social modeling and support (Bandura, 2004). In review of the impact of environmental education, Stanford University and the North American Association for Environmental Education (2011) found evidence of positive academic performance, enhanced critical thinking skills, and personal life-building skills for students. Many studies examined the impact of place-based programs on the skills of learning disabled students, finding that symptoms (inattention and hyperactivity) were often reduced allowing increased concentration and participation (Job & Klassen, 2012; Klassen, 2010; Taylor & Kuo, 2011).

Statement of the Problem

Students with learning disabilities are held to the same high standards of assessment in achievement of Common Core Standards as their non-disabled peers. This expectation has a great impact on the methodology used in their instruction as they work towards decreasing their

deficits and increasing their assets. Therefore, place-based learning can address these deficits, especially related to the area of self-efficacy (Job & Klassen, 2010). Different views and perceptions of teachers and students towards self-efficacy can cause a discrepancy between the ways teachers provide interventions (Klassen, 2010). The questions related to effectiveness of place-based methodology need to be answered to ensure that students with learning disabilities have the tools they need to meet the standards set before them and to have a bright, successful future (Klassen, 2010).

Although many studies (Jennings, Swindler, & Koliba, 2005; Power & Green, 2014; Smith & Sobel, 2010) regarding the success of the application of place-based learning methodology in regular education exist, there is an inconsistency in documenting its success for students with learning disabilities. Power and Green (2014) recommended further qualitative study of the impact of place-based education on students with learning disabilities. Two themes were consistently identified: (a) the importance of community-based learning for students with learning disabilities and (b) the impact of place-based education on the motivation of students towards learning and engagement. Of particular importance is the study of students with learning disabilities during adolescence, a critical time for social and emotional development (Powers & Green, 2014). This is due to the fact that place-based education is based on personalized learning that promotes student agency (Demarest, 2015).

In examining the limited research related to the success of place-based learning methodology for students with learning disabilities, research has focused primarily on student motivation or self-efficacy (Bandura, 2006, p. 51). Motivation or the "process where goal directed behavior is instigated and sustained" (Bandura, 2006, p. 51) is often the focus of teacher concerns for students who struggle in school. Self-efficacy is based on Bandura's (1995) work in

social cognitive theory. Although motivation plays a role in determining how people view success and themselves, it is influenced by self-efficacy (Bandura, 2006). Academic success is dependent upon how much learners believe in their own capabilities; therefore, self-efficacy is a major building block, especially for students with disabilities who are already at a disadvantage (Taylor & Kuo, 2011). As there is not a lot of hard data about the effectiveness of place-based learning in building student self-efficacy, specifically for students with learning disabilities, further study is warranted.

Purpose of Study

The purpose of this qualitative, multiple case study was to explore teacher perceptions regarding the self-efficacy of students with learning disabilities who have experienced environmental place-based teaching practices in K-8 elementary/middle schools. Through the use of interviews and surveys this study describes the effects of place-based environmental science programs on student self-efficacy.

Research Questions

By studying the impact of place-based science projects in 3-8 elementary/middle schools, this research focused on the following question:

- What are the educators' perceptions about the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities?

Conceptual Framework

This study was guided primarily by theories of constructivism, social cognition, and situated learning theory. Constructivism emphasizes the importance of connecting learning to previous knowledge and experience and also espouses authentic problem-solving in real situations (Demarest, 2015). Social cognitive theory focuses on the belief that an individual's

acquisition of knowledge is dependent on the observation of others within social situations and experiences (Bandura, 2004). In order to learn from our environment, one must develop skills in "regulation of motivational, affect and social components of intellectual functioning, as well as, cognitive abilities" (Bandura, 2004, p. 145). It is through the "observation of behaviors, attitudes, and emotional reactions" (p. 146) that we learn how to act ourselves. Bandura emphasized that among the four parts of the learning process, the most important is the learner's belief in his own ability to learn, known as self-efficacy (Bandura, 2004). Because PBL prioritizes student engagement, it creates an environment where self-reflection and understanding are part of the process (Demarest, 2015).

Place-based learning uses the local community and environment as a basis for teaching concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Firmly rooted in constructivist theory, place-based learning emphasizes the belief that children learn best when they are able to construct their own understanding by investigation and applying direct classroom instruction, thus increasing their self-efficacy (Sobel, 2006). By building upon their belief in their abilities, they develop the skills necessary to become life-long learners and better citizens (Sobel, 2008).

Assumptions, Limitations, Scope

In this study, the assumptions about the impact of place-based learning on the self-efficacy of students with learning disabilities are based upon the belief that students construct meaning by being active participants in their learning. It is via these experiences in their familiar environments that they develop not only the academic skills necessary but also the social and emotional skills to meet the challenges they face as they progress (Power & Green, 2014). In

order to attain a focused understanding of the role of social skills of these students, it is further assumed that perceptions of the adults in students' lives also contribute to their success.

Findings of the study are limited to 3rd-8th grade elementary/middle school programs in New England. As such, generalizations of findings may have limited applicability to other similar environments. Participation in interviews and surveys was voluntary, informed consent was obtained prior to data collection, and coding of information was done so that confidentiality was preserved. One of the greatest limitations to this study is the availability of primary source documents representing the practice of place-based methodology in relation to students with disabilities.

Significance

The rationale for this study was based on the researcher's observations as a Special Educator and the state of New Hampshire's initiative to examine competency-based educational practices. Place-based methodology is one of the practices that focuses on student ability to demonstrate competencies (academic and social/emotional) in a variety of environments (Sobel, 2008). A major factor for this study was the limited research related to the success of place-based methodology for students with learning disabilities. Therefore, the focus of this study was primarily on examining how place-based learning impacts the self-efficacy skills of students with learning disabilities. As performance and motivation have an equal role in determining how people view themselves and their ability to be successful, students who lack skills in self-efficacy are at a disadvantage (Bandura, 2004). Students with learning disabilities experience increased delays if not provided with mastery experiences that boost their self-efficacy skills (Job & Klassen 2012). The results of this study contribute to the limited body of evidence that already exists and inform the teaching practices of teachers.

Definitions

According to Bloomberg and Volpe (2012), this section is devoted to "definitions and terminology used in the study that do not have common meaning or those terms that have the possibility of being misunderstood" (p. 66). The following definitions are given to aid in the discussion of place-based education and student self-efficacy.

Authentic Learning is learning that takes place as a result of applying knowledge and skills in the context of real-life situations (Wiggins & McTighe, 2005).

Blooms Taxonomy is a framework for categorizing educational goals on a continuum from simple to complex and concrete to abstract (Wiggins & McTighe, 2005).

Common Core State Standards are a set of high-quality academic standards in mathematics and English language arts/literacy (Tomlinson & McTighe, 2006).

Constructivist Theory is a theory of education based upon the belief that children learn best when they are able to construct their own understanding by investigation and exploration (Creswell, 2009).

Environmental Education is a form of experiential learning that takes place by immersing students into their natural environment (Louv, 2008).

Integrated Curriculum is a curriculum that connects a variety of areas of study by unifying concepts (Tomlinson & McTighe, 2006).

Learning Disabilities are neurological disorders that impact a person's ability to learn, requiring them to have specialized instruction. These include: dysgraphia, dyslexia, dyscalculia, autism and attention deficit disorder (Learning Disability Association of America, 2012).

Project-based Learning is a dynamic classroom approach in which students actively explore real-world problems and challenges (Sobel, 2008).

Self-efficacy is "the belief in ones capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 2004, p. 2).

Service Learning combines service to the community with student learning in order to improve both the student and the community (Kaye, 2004).

Social Cognitive Theory is a theory that is focused on an individual's acquisition of knowledge as being dependent upon their observation of others within social contexts and experiences (Bandura, 2004).

Conclusion

Place-based learning has been shown to be an effective methodology in building self-efficacy skills in students. There is, however, an inconsistency in documenting its success for students with learning disabilities, suggesting further study is necessary. The purpose of this study was to explore selected teacher perceptions regarding the self-efficacy of students with learning disabilities who have experienced place-based teaching practices.

Chapter Two provides the literature review of topics that are related to constructivist theory, place-based learning, and self-efficacy. Chapter Three identifies the research design and methodology of the study. Results of the research including data collection and analysis are included in Chapter Four. Findings, recommendations, and conclusions are discussed in Chapter Five.

CHAPTER TWO

LITERATURE REVIEW

This literature review is organized in three major themes: Place-based Learning, Constructivist Theory, and Social Cognitive Theory. The review of the literature focused on the perspective of the educators who have researched and utilized place-based practices in their schools and communities. To understand the evolution of experiential methodology the researcher examined a variety of resources (books, articles, websites, etc.) published within the last 15 years. Resources were vetted based on topic of inquiry and relation to place-based learning. This literature review (a) defines place-based learning; (b) introduces the current research on place-based learning as a proven methodology in developing self-efficacy; (c) discusses the current research on how students with learning disabilities learn using place-based learning methodology; and (d) identifies the need for more research and documentation of utilizing place-based learning in developing self-efficacy skills in students with learning disabilities.

Place-based Learning

Place-based learning is a relatively new term appearing only recently in educational literature; however, progressive educators have promoted the concept for more than 100 years, most recently from the fertile environmental education and community development realm (Power & Green, 2014). A fundamentally different approach from traditional educational models, place-based learning utilizes the best practices from environmental education, conservation, and service learning (Power & Green, 2014). To many it is synonymous with environmental education (Louv, 2008).

Seen as a transformative philosophy of education, place-based education began as an educational philosophy developed initially by The Orion Society, a Massachusetts-based nonprofit organization. Place-based learning uses the local community and environment as a basis for teaching concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. The basic principles of PBL are:

> (a) learning takes place on-site (the school yard, in local community); (b) it is inherently experimental, including participatory action or service learning; (c) curriculum is multigenerational and multicultural interacting with community resources; (d) it focuses on local themes, systems, and content; (e) learning is personally relevant to the learner; (f) learning experiences contribute to the community's vitality and environmental quality and support the community role in fostering global environmental quality; (g) learning is supported by strong and varied partnerships with local organizations/ agencies/ businesses/government; (h) learning is interdisciplinary; (i) learning experiences are tailored to the local audience; (j) learning is grounded in and supports the development of a love for one's place; and (k) local learning serves as the foundation for understanding and participating appropriately in regional and global issues. (Smith & Sobel, 2010)

Environmental Education

Place-based learning is related to other models that use local environments as a basis of learning (Sobel, 2006). These include environmental education, outdoor education, service learning, and project-based learning. According to the Place-based Education Collaborative (2012), the local environment is defined as any natural, economic, social, political, or cultural setting. The relationship between place-based learning and these other forms is important because each concept has been developed somewhat separately by educators who have produced

curriculum materials and instructional practices that could be useful within the other concept areas (Sobel, 2006).

Smith (2002), in an article in *Phi Delta Kappa* titled "Place-based Education: Learning to Be Where We Are"*,* identified six thematic patterns: cultural studies, nature studies, real-world problem solving, internships, entrepreneurial opportunities, and induction into community process. These components are intertwined, and PBL teaches them in this manner rather than unraveling them and teaching them as separated entities, as has been done in traditional education for years (Smith, 2002). This integrated, multidisciplinary approach is central (Smith, 2001, p. 586). Place-based learning integrates and uses elements of each of these. Topics of inquiry are generated based upon cultural or natural studies (e.g. ethnic diversity of a community, pollution of waterways). Once chosen, students conduct research to define problems and then investigate the issues related to them. Working with community members and utilizing the resources of the local community, students work towards the solution of the problem(s) (Smith, 2002).

Orr (2004), a well-known environmentalist, addressed the problem of education, which "alienates us from nature and over emphasizes career before children know who they are" (p. 223)*.* He proposed that this approach creates a "crisis of mind, perception and values" (p. 237). He promoted teaching for a sustainable future, which means focusing locally on the existing environment that we live in. Orr suggested that by focusing on the attainment of higher degrees of education we are not teaching our children about what matters most to their survival, which is being stewards of the planet (Orr, 2004).

The award-winning author, Richard Louv, has written many books on the topic of education in the natural environment. His belief is that nature stimulates creativity. We all

possess innate creativity that may be suppressed if we do not have access to natural elements (Louv, 2008, p. 86). He described the process, known as the *loose-parts* theory, as open-ended where "the degree of inventiveness and creativity and the possibility of discovery are directly proportional to the number and kind of variables in it" (p. 87). By using the natural elements in play, such as water, trees, bushes, sand, etc., imagination is enhanced, and knowledge of the natural world is developed (Louv, 2008, p. 91).

One of the major areas that Louv's work has influenced is research regarding children with Attention Deficit Hyperactive Disorder (ADHD). He was the first to use the term *Nature Deficit Disorder*. Nature Deficit Disorder is a phenomenon identified by the alienation from nature resulting in biological, cognitive, and spiritual consequences that adversely affect development in children and adults (Louv, 2008, p. 10). Research on the impact of natural experiences is a growing field of interest (Louv, 2008).

Much of the research and application of place-based learning has been done by Dr. David Sobel of Antioch University in Keene, NH (Louv, 2008). In his book, *Beyond Ecophobia: Reclaiming the Heart in Nature Education (*1998), he defined the term ecophobia as a "fear of ecological problems and the natural world" (p. 26). It was his belief that by disconnecting children from their environment, we are creating a generation of children who are suffering from an over exposure to technology and the problems of the adult world. He contended that the result of this could be seen in the news reports of the past several decades in terms of increasing violence in schools. The isolation and alienation felt by students has ultimately resulted in creating schools where the threat of being involved in school shootings has increased (Sobel, 2006, p. 16).

Central to Sobel's proposal is that education needs to reconnect students with their natural world through experiences in their local environments rather than by using curricular materials (posters, etc.). Our environment and its ecology are fundamental, free resources that are easily harnessed in the pursuit of learning (Sobel, 2006). Through these opportunities with modeling by responsible adults, children will demonstrate an increased ability to identify and work collaboratively in solving social and environmental issues. In his work, *Children's Special Places: Exploring the Roles of Forts, Dens, and Bush Houses in Middle Childhood*, Sobel (2001) outlined the importance of the connection to nature in the development of maturity and self-identity in adolescents. Through exploring and constructing various private spaces, children develop and control environments independent of adult control. It is in these experiences that they develop the social and emotional skills in the small social context of their created environments (Sobel, 2001, p. 51).

Sobel (2008) proposed that any time is a good time to begin one's connection to the natural world, but identified ages 4-7 as crucial in terms of public education. He also warned about the results of exposing children too soon to the problems of the world, specifically depression (Sobel, 2008, p. 25). Sobel revealed how the design principles are based on seven play themes observed around the world: going on adventures, descending into fantasies, shaping small worlds, developing friendships with animals, following paths and figuring out shortcuts, making forts and special places, and playing hunting and gathering games (Sobel, 2008, p. 26). Lessons developed based on these themes emphasize problem-solving and social skill development (Tomilson & McTighe, 2006, p. 129). The ultimate goal of education should be to focus on the creation of socially responsible citizens (Sobel, 1998). By doing so we not only take care of the planet, but we also create critical thinkers (Sobel, 2008).

Conflicting Views of Place-based Learning

Some critics feel that the goal of education is to prepare students to work and function in a highly technological and consumer-oriented society. Many also feel that place-based education is just another new fad (Jennings et al., 2005). As place-based learning is project-based, there are concerns that it will take more time to execute, time that could be better spent on learning basic facts (Smith & Sobel, 2010). Project-based curriculum also has some skeptics feeling that it lacks the rigor to meet Common Core State Standards (Power & Green, 2014). Another concern is that many teachers may not feel comfortable in outdoor class settings and interacting with resources in the community (Powers, 2004). School funding often fluctuates from year to year, depending on the projects that are being done, which is another cause for concern (Smith & Sobel, 2010).

Perhaps the greatest concern is the limited research in documenting the effectiveness in increasing student outcomes based upon valid, reliable, and readily useable measures of deeper learning and interpersonal and intrapersonal competencies (Gruenewald & Smith, 2008). There are also concerns regarding how design principles are being implemented in conjunction with other instructional methods (Gruenewald & Smith, 2008).

Place-based learning is becoming increasingly popular as the demands of Common Core State Standards impact the ability of today's teachers to ensure that students are successful (Tomlinson & Mc Tighe, 2006). Place-based learning is an approach that can optimize supports for students by allowing students to make choices based upon their capabilities (Taylor & Kuo, 2011). This is especially true for special education teachers who have to adapt and modify curriculum to make it accessible to their students with disabilities (Taylor & Kuo, 2011). Again the evidence in relation to special needs students is promising but not proven, as more rigorous evidence is needed to confirm that place-based practices are a better approach to preparing

students for college and career than traditional teacher directed methods (Gruenewald & Smith, 2008).

Place-based Learning and Students with Learning Disabilities

In terms of achievement, students with learning disabilities who are participating in place-based learning often show more enthusiasm for learning because it is more relevant to their daily life, their home, and community. Research has shown that they often demonstrate higher test scores on standardized measures of academic achievement and exhibit improved behavior in class and greater pride and ownership in their accomplishments (Job & Klassen, 2012). Many also benefit from an increase in self-esteem, conflict resolution skills, and problem solving. PBL has been shown to improve higher-level thinking skills as units of study are designed using Blooms Taxonomy. Deeper learning is the focus where students gain knowledge, skills, and beliefs, including mastery of core academic content, critical thinking, and problem solving skills, collaboration, effective communication, and self-directed learning (Power & Green, 2014). Due to the multi-model nature of PBL, students are required to use all their senses and faculties to perform a variety of tasks. Most importantly for educators, it is not clear how place-based learning benefits students with disabilities (Gruenewald & Smith, 2008).

For students with learning disabilities PBL is effective in creating classrooms based on safety and risk-taking (Leslie, 2005). Based upon principals of inquiry and experimentation, activities require continuous evaluation of process and product. Failure is reframed as challenges to be overcome. Instruction is student-driven as they are given the opportunity choose problems they are interested in, and their interest is the starting point of discovery. Student voice and choice are central, which allows individual freedom and responsibility. As students usually have deficits in some academic areas, PBL allows them to utilize strengths in other areas such as art

and leadership (Leslie, 2005, p. 30). Through group problem solving, students of all academic and social abilities reflect upon strengths and weaknesses to set individual goals of achievement. Continuous reflection helps students recognize their growth over time (p. 51).

Increasing student achievement as it emphasizes hands-on, real-world learning experience using place-based practices helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates heightened commitment to serving as active, contributing citizens (Sobel, 2006, p. 44).

Place-based Learning and Social/Emotional Learning

Social/emotional learning is a major component of the place-based learning environment. Understanding how communication, collaboration, and regulation impact our ability to learn is key in designing environments that support students' needs. Many children with learning disabilities have deficits in social/emotional learning, which impacts their ability to communicate, regulate behavior, and work cooperatively with others (Powers, 2004). Emotional difficulties have been found to be due to the alienation children feel from their environment. Research has shown that programs that involve having children outside (such as Outward Bound) have been successful in increasing their social/emotional skills (Louv, 2008). Verrett (1989) saw positive characteristics such as resilience of learners when educating youth at risk, increasing their self-esteem, creating positive attitudes towards learning, and reducing dropout rates (Taylor & Kuo, 2011).

Observations by teachers and support staff indicate that students with learning disabilities thrive due to the physical nature of activities, often becoming leaders (Powers, 2004). Benefits of place-based learning have been identified in engaging students with a variety of learning disabilities, especially those with Attention Deficit Hyperactive Disorder. This is particularly

important as these students have the greatest difficulties in the social/emotional realm (Taylor &

Kuo, 2011).

Place-based Learning and Common Core State Standards (CCSS)

For years, many educators felt that the academic progress of our nation's students had

been stagnant, and that we had lost ground to our international peers (Wiggins & McTighe,

2005). Particularly in subjects such as math, college remediation rates have been high (Gardner,

2011). An uneven patchwork of academic standards that varied from state to state and did not

agree on what students should know and be able to do at each grade level was seen to be the

cause (Wiggins & McTighe, 2005).

Recognizing the value and need for consistent learning goals across states, a coordinated

state-led effort to develop the Common Core State Standards was begun. Designed through

collaboration among teachers, school chiefs, administrators, and other experts, the standards

were created to provide a clear and consistent framework for educators (Wiggins & McTighe,

2005).

The Common Core State Standards are a set of high-quality academic standards in

mathematics and English language arts/literacy that were developed by the National Governors

Association and the Council of Chief State School Officers. Forty-three states, the District of

Columbia, four territories, and the Department of Defense Education Activity have voluntarily

adopted and moved forward with the Common Core (Wiggins & McTighe, 2005).

The Common Core is informed by the highest, most effective standards from states

across the United States and countries around the world (Wiggins & McTighe, 2005). The

standards define the knowledge and skills students should gain throughout their K-12 education

in order to graduate high school prepared to succeed in entry-level careers, introductory

academic college courses, and workforce training programs (Wiggins & McTighe, 2005). The

standards are (a) research- and evidence-based, (b) clear/understandable/consistent, (c) aligned

with college and career expectations, (d) based on rigorous content and application of knowledge

through higher-order thinking skills, (e) built upon the strengths and lessons of current state

standards, and (f) informed by other top performing countries in order to prepare all students for

success in our global economy and society (Wiggins & McTighe, 2005, p. 178).

The result of the current body of research on place-based learning is demonstrating that it

is a successful model for meeting common core standards. In their work, *Understanding by*

Design, Wiggins and McTighe (2005) discussed the importance of using a backward approach

that is contrary to what most of us have experienced in our own school careers. In looking at

curriculum and instruction for a place-based model, Wiggins and McTighe contended that

educators first ask essential questions related to desired results, acceptable evidence, and the

planning of learning experiences and instruction (Wiggins & McTighe, 2005, p. 9). After that

they are able to create a plan of action in determining how they will discover the answers. Place-

based learning accomplishes this approach because of its ability to "broaden the acquisition of

organized knowledge, the development of intellectual skill and the enlarged understanding of

ideas and values" (Wiggins & McTighe, 2005, p. 179).

Dr. Nicole Ardoin from Stanford University Graduate School of Education and Woods

Institute for the Environment evaluated 119 peer reviewed studies related to the impact of

environmental education for K-12 students. Studies indicated increased academic skills,

enhanced critical thinking skills, as well as personal skills such as self-efficacy (Taylor & Kuo,

2011).

Common Core Standards, PBL and Students with Learning Disabilities

The Individuals with Disabilities Education Act (2004) ensures that students on Individual Educational Plans (IEPs) have access to the same rigorous expectations as those students without disabilities. Principles of universal design are to be utilized to foster student engagement by presenting information in multiple ways and allowing for diverse avenues of action and expression.

Universal design is defined as:

A scientifically valid framework for guiding educational practice that (a) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and (b) reduces the barriers in instruction, provides appropriate accommodations, supports and challenges and maintains instructional accommodations. (Wiggins & McTighe, 2005, p. 97)

The supports given should retain the rigor and high expectations of Common Core standards while ensuring students receive access to multiple means of learning and opportunities to demonstrate knowledge (Wiggins & McTighe, 2005).

According to the National Center for Educational Statistics, over recent years there has been an increase in the number of students identified with emotional and behavioral disabilities. This is especially true for those identified with learning disabilities, especially ADHD. A 2003 survey published in the *Journal of Psychiatric Services* found the rate of American children prescribed antidepressants doubled in five years. The greatest increase has been seen in preschool children at 66%. In many instances, it is felt that the symptoms of ADHD are aggravated by lack of exposure to nature (Louv, 2008, p. 109).

Louv and others believed that this situation has been caused in part by *biophilia*. Biophilia is a term hypothesized by Harvard University Scientist, Edward O. Wilson. Wilson (1986) described biophilia as "the urge to affiliate with other forms of life" (p. 139). Wilson believed that children can have adverse reactions to experiencing a lack of contact with the natural world. Various studies, including one at Cornell University in 2003, found that green spaces foster social interaction and promote social support (Louv, 2008). They also found that another benefit to nature is that it offers nurturing solitude. The exercise and spiritual nature of the outdoors helps students to rejuvenate both their bodies and minds (Louv, 2008, p. 49).

A well-known theory related to this research is attention-restorative theory, which was developed at the University of Michigan by Stephen and Rachel Kaplan (Louv, 2008). Their work is built upon that of William James who described two kinds of attention: directed attention and undirected attention. The Kaplans followed Outward Bound participants for nine years. They discovered that after having exercised participants reported having a sense of peace and an ability to think more clearly (Louv, 2008, p. 103). Louv (2008) reported that various studies by the U. S. Department of Education Institutes of Health and in Europe have also reported these results leading to nature therapy being labeled as another type of treatment for a variety of emotional and behavioral disorders (p. 109).

Gardner (2011) would contend that children, who have a bodily-kinesthetic intelligence, are active by nature therefore need movement to support their intellectual abilities (p. 18). Those who are strong in this area tend to have excellent hand-eye coordination and dexterity. Place-based learning inherently combines these as students are required to collect, dig, sort, etc. through the discovery of their environment to reach common goals (Louv, 2008, p. 219).

Place-based Learning School Reform Models

In 2012, the Obama administration recognized that place does matter in supporting and developing communities. Through the Promising Neighborhoods Program, strategies for improved outcomes for children and families were examined to investigate how resources could be utilized in an integrated manner (Gruenewald & Smith, 2008). The ultimate goal of the program was to align the community and its resources for social, economic, and educational outcomes. The US Department of Education's role in the program was to focus on the community as the major influencer in children's education. By partnering with community-based organizations, common metrics of success were created along the cradle-to-career continuum ensuring support throughout a child's development. Key elements of the program were to engage the community through asset mapping and needs assessment, build core capacities within organizations and communities, and focus on clear results based on shared data that would maintain programs over time (Gruenewald & Smith, 2008). Target communities, receiving initial grant monies, reflected a variety of socio-economic groups and environments. Ultimately these models serve as an example for other communities across the country.

Place-based Learning in the Standards-based Reform Era

Jennings et al. (2005) examined the relationship between place-based learning and standards-based curriculum and assessment. Many opponents to standards feel that they require a de-contextualized curriculum that is so extensive it offers minimal opportunities for learning related to the local environment (Jennings et al., p. 45). By examining the state standards of the state of Vermont, Jennings et al. found a complementary relationship between place-based learning models and the standards. In fact, in their 2005 teacher survey they found that place-based practices were compatible with standards-based curriculum and instruction (p. 49).

Included within the Vermont Framework of Standards, curricular areas were identified that were a natural fit for place-based curriculum. Many areas of social studies and science (especially environmental science) already focused on the local environment but did not indicate place-based curriculum as a practice. By being included in the frameworks, place-based curriculum has been legitimized as an important classroom best practice (Jennings, Swindler, & Koliba, 2005, p. 54).

Place-based Learning in Development of Self-efficacy

Based on principals of social cognitive theory, PBL practices focus on the belief that an individual's acquisition of knowledge is dependent on observation of others within social situations and experiences. Through the process, students acquire and apply knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (Bandura, 2004). To gain skills within the context of these social situations and experiences, students must be able to reflect upon their own strengths and weaknesses (Sobel, 2006).

Individuals must develop skills in "regulation of motivational, affect and social components of intellectual functioning, as well as, cognitive abilities" to learn from the environment (Bandura, 2004, p. 145). Social cognitive theory recognizes four processes of goal realization: self-observation, self-evaluation, self-reaction, and self-efficacy (Bandura 2004). Bandura emphasized that among the four parts of the process, the most important is the learner's belief in his own ability to learn, known as self-efficacy (Bandura, 2004). Individuals who perceive themselves as capable tend to attempt and be successful in executing tasks or activities. Self-efficacy studies in education have suggested that the role of self-efficacy in goal setting,

persistence, and academic success is highly related to subsequent school performance (Bandura, 2004). Research results have indicated that perceptions of academic efficacy are more predictive of success than traditional measures of self-concept (Bandura, 2004). Often lacking in students with learning disabilities, these perceptions are essential to address for students to achieve their potential (Bandura, 2004).

Bandura's theory also focused on learning in naturalistic settings (Bandura, 2004). The formal and informal settings of our daily lives are filled with opportunities for learning through social venues. When instructor-managed with students at the center of the learning process, the environment is a rich resource for observation (Gibson, 2004, p. 198). In determining the appropriate models for the learning process, the first step is to examine live, symbolic behaviors chosen to create the best learning environment (Gibson, 2004, p. 199). Live models include instructor, peers, guest speakers, family members, etc. Symbolic models are those that can be viewed more than once by students, for example, mass media resources (television, movies, internet, and computer-based training programs, etc.). Behaviors include physical, social, and emotional opportunities that are desired to create the most enriching experiences for students. During the process of learning, the instructor's role is that of facilitator. Through the use of clearly defined and stated rules within the learning environment, students are made aware of expectations and can actively work towards their goals. Along the way, students are supported in developing and practicing the use of learning tools to help them self-reflect and self-regulate, which will create a sense of accomplishment and self-efficacy (Gibson, 2004, p. 200).

This process clearly aligns with the expectations and outcomes of place-based learning (Sobel, 2006, p. 72). Sobel identified two guiding principles: (a) Engagement of students in real-world projects in the local environment and community creates a climate of positive student

responsibility and mutual respect; and (b) It is through an active partnership between adults and students that maximizes ownership in learning and outcomes.

Although many studies have been conducted regarding the success in terms of application in regular education (PEEC, 2012), there still exists an inconsistency in documenting the success of place-based learning for students with learning disabilities in developing self-efficacy skills. Social-Emotional Learning Standards focus on five areas: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Self-management is the ability to control impulses, manage stress, set goals, and organize thinking and tasks. Social Awareness is the ability to understand others, and be kind and empathic. Relationship skills are the ability to communicate, engage with others, have healthy relationships, and resolve conflicts. Responsible decision making is the ability to solve identified problems, receive feedback, self-reflect and correct, and utilize ethical and safety standards. Self-awareness specifically addresses focus on a student's ability to demonstrate self-efficacy (Klassen, 2010). There is inconsistent research dedicated to the success of place-based learning on student self-efficacy, especially for those students with learning disabilities.

Theoretical Framework

Two major educational theories related to both place-based learning and self-efficacy are constructivist theory and social cognitive theory. In order to construct meaning from the environment, constructivist theory emphasizes the importance of investigation and exploration. At the heart of place-based learning is participation within the environment to learn from the experiences found there. Also connected to the constructivist theory is self-efficacy where a person's understanding of his/her own abilities within the environment helps to construct a person's beliefs about his/her abilities in other settings. Social cognitive theory relates to both

place-based learning and self-efficacy as it focuses on the influence of observing others and assimilating knowledge gained into an individual's belief system.

Constructivist Theory

Several well-known theorists have espoused the theory of constructivist education including Dewey (1899), Piaget (1936), Montessori (1909), and Gardner (1983). Constructivist theory is based upon the belief that children learn best when they are able to construct their own understanding by investigation and exploration (Creswell, 2009).

Place-based learning is built upon constructivist theory and the work of John Dewey (1899). The basis of constructivism is that knowledge is gained by active participation. Rather than passively receiving information, students are part of the process in gaining meaning and understanding (Smith, 2002). Dewey revolutionized the concept of education with his understanding of the importance of learning by doing. In his book, *School and Society* (1899), he advocated an experiential approach to student learning in the local environment. "Experience has its geographical aspect, its artistic and its literary, its scientific and historical sides. All studies arise from aspects of the one earth and the one life lived upon it" (Dewey as cited in Smith, 2002, p. 91).

Often referred to as the Mother of Special Education, Maria Montessori also made the connection between child development and natural surroundings. As a physician and educator she recognized the importance of developmental milestones in learning. This is especially crucial for children with disabilities who have deficits and need to use other areas of strength to compensate for weaknesses or deficits (Louv, 2008, p. 71). Her methods, which are still in use today, are highly child-centered (Louv, 2008, p. 73).

Another well-known educational theorist, Piaget, also stressed the importance of educators' emphasis on students' intrinsic motivation toward learning. He believed that the intrinsic motivation to learn comes from within the child and not from teacher-developed activities. "The child must be active to learn" (Piaget, as cited in Van Matre, 1990, p. 78).

More recently, Howard Gardner (2011) proposed his model of learning theory in his work *Frames of Mind: The Theory of Multiple Intelligences*. Gardner identified eight types of intelligence to account for "a broader range of human potential in children and adults" (p. 10). He argued that the traditional notion of intelligence based on IQ tests is far too limited. Gardner used research from neurophysiology to identify parts of the brain that correlate to each identified intelligence. The latest of these intelligences identified is the eighth intelligence, *naturalist intelligence*. Naturalist intelligence or *nature smart* was developed to document those who have an ability to relate to the surrounding environment in all its complexities (Gardner, 2011).

Social Cognitive Theory

Social cognitive theory focuses on the belief that an individual's acquisition of knowledge is dependent upon their observation of others within social situations and experiences (Bandura, 2004). In order to learn from our environment, one must develop skills in "regulation of motivational, affect and social components of intellectual functioning, as well as, cognitive abilities" (Bandura, 2004, p. 145). It is through the "observation of behaviors, attitudes and emotional reactions" (p. 146) that we learn how to act ourselves. Bandura emphasized that among the four parts of the learning process (attention, retention, motor production, and motivation) the most important is the learner's belief in his own ability to learn known as self-efficacy (Bandura, 2004, p. 150).

At the center of social cognitive theory is learning in the natural environment. Ripe with opportunities for learning, the environment around students provides the social context that they are already familiar with and comfortable in (Bandura, 2004). With students at the center of the learning process, they are able to orchestrate their own learning (Bandura, 2004, p. 147). Social cognitive theory directs educators to implement intervention programs with the goal of raising competence and confidence of students through the mastery of learning in a variety of environments (Bandura, 2004, p. 149).

Conclusion

According to the Department of Education (as cited in Power & Green, 2014) traditional classroom models no longer are appropriate or effective in increasing achievement for students. Focus on common core standards has led educators to seek alternative practices that support more constructivist teaching models, educating the whole child (Sobel, 2008, p. 25). Place-based learning was found to be one of these models. The Harvard Graduate School of Education for the Rural Trust (2005) provided case studies of schools and communities throughout rural America that had been successful in "grounding students' education in learning that centers in PBL" (Sobel, 2008, p. 38).

These and other studies (PEEC, 2012) document that place-based learning is a successful methodology in regular education settings. However, there is limited research in documenting the success of place-based learning for students with disabilities. Research has shown that in terms of achievement, students with learning disabilities who participate in place-based learning often demonstrate higher test scores (Job & Klassen, 2012). However, Gruenewald and Smith (2008) identified concerns in documenting the effectiveness in increasing student outcomes

based on valid, reliable, and readily useable measures of deeper learning and interpersonal and intrapersonal competencies.

In examining interpersonal and intrapersonal competencies, Bandura (2004) identified four processes that must be present in order to develop skills in "regulation of motivational, affect and social components of intellectual functioning, as well as, cognitive abilities" (p. 145): self-observation, self-evaluation, self-reaction, and self-efficacy (Bandura, 2004). Self-efficacy or the belief in one's abilities is key in goal setting, persistence, and academic success. Essential in the achievement of potential, these perceptions are often lacking in students with learning disabilities.

CHAPTER THREE

METHODOLOGY

The purpose of this qualitative multiple case study was to explore educator (teacher, specialist, and paraprofessional) perceptions regarding the self-efficacy of students with learning disabilities who have experienced environmental place-based teaching practices in elementary schools (grades 3-8). Qualitative research, as discussed in Bloomberg and Volpe (2012), is "a broad approach to the study of social phenomena and is based essentially on a constructivist and/or critical perspective" (Denzin & Lincoln, 2008, as cited in Bloomberg & Volpe, 2012, p. 30). Occurring in the natural setting, this type of research focuses on the holistic social world (Bloomberg & Volpe, 2012, p. 30).

Through the use of surveys and interviews for data collection this study describes the educators' perceptions of the effects of place-based environmental science programs on student self-efficacy to answer the following research question:

- What are educators' perceptions about the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities?

Much of the current research related to PBL was done using qualitative research methodology (Smith & Sobel, 2010, p. 53). In considering the variety of qualitative research designs, multiple case study was chosen to determine educator opinion and help identify important beliefs and attitudes of educators who implement and evaluate programs in schools (Creswell, 2009, p. 375).

In studying place-based learning models it is necessary to examine current attitudes, beliefs, and opinions of practitioners as ultimately these influence their practices. A cross-sectional survey design using a web-based questionnaire and one-on-one telephone interviews

was chosen. Survey data was collected at one point in time from educators representing multiple place-based learning programs. Key characteristics of survey research design are: a) sampling was selected from a specific population, b) collection of data via questionnaires and/or interviews, and c) design instruments for data collection (Creswell, 2009, p. 380). Another important reason for choosing a survey research design is that generalization is not the goal but rather the transferability of findings (Bloomberg & Volpe, 2012, p. 31). This is very important in place-based learning, as each location or place of learning is unique in its resources (natural, organizational, etc.), students, staff, and structure (Sobel, 2006, p. 23).

Setting

Currently there are two major organizations in New England that focus on implementation and evaluation of place-based initiatives. The first is the Place-based Education Evaluation Collaborative, an organization whose aim "is to strengthen and deepen the practice and evaluation of place-based education initiatives" through community partnerships (PEEC, 2012). The second is the CO-SEED Project through Antioch New England Institute whose partners include non-profit organizations in Massachusetts, New Hampshire, and Vermont. Therefore, New England was chosen as the primary setting of the research study.

Participants/Sample

Although students are the primary stakeholders in place-based learning, social-cognitive theory also provides evidence that our experiences are influenced by the beliefs and support of others (Gibson, 2004). For children, these other stakeholders are their parents, teachers, and other adults in the educational setting and greater community. The perceptions of each of these groups influence the experience of the group as a whole. Ultimately it is these perceptions that influence the students' perceptions about themselves.

Participants in this case study were elementary educators (grades 3-8 classroom teachers, specialists and paraprofessionals) who have engaged with students identified with learning disabilities in environmental place-based projects in New England. Participants were recruited from a broad pool of potential participants using social media sites (LinkedIn, Edutopia, etc.) in order to include multiple perspectives on the impact of place-based learning on student self-efficacy skills. However, even though invitation specifically stated the study was examining place-based learning in New England, due to social media recruitment the scope of the study could be broader than anticipated. Participants were chosen in order to include the different perspectives on the impact of place-based learning on student self-efficacy skills. The participants included 97 classroom teachers, 54 special education teachers, and 19 paraprofessionals. Of these 7 classroom teachers, 5 special education teachers, and 4 paraprofessionals completed an additional open-ended survey question. Students and parents, also stakeholders, were not chosen to participate in the study.

The participants were chosen according to guidelines outlined by Merriam (2009) in *Qualitative Research: A Guide to Design and Implementation.* Purposeful sampling, the most common form, is based upon the assumption that the researcher is focused on "discovery, understanding, and the most that can be learned" (Merriam, 2009, p. 77). Therefore, the sample selected must be one where the greatest level of understanding can be attained. In the selection of educators with shared experience in environmental place-based investigations this study examined both the individual and collective perspectives.

Purposeful sampling provided a study population that fit the criteria for selection for this case study and included the educators who have experience in implementation of environmental place-based units for students identified with learning disabilities. This sampling is considered a

unique purposeful sample because the performance of the students with learning disabilities is atypical (Merriam, 2009) from that of their same-age peers and the educators' experiences and perspectives would be unique to their student populations.

Informed consent was obtained from educators as part of the on-line survey. The informed consent form (Appendix C) included a description of the survey, data collection, and the option for voluntary follow-up interview. Consent information was presented on the front page of the survey with a box to click if participants wished to proceed. If participants wanted to participate in a follow-up interview, they were directed to another page where they were able to enter their contact information. This contact information page reiterated that by providing contact information, the participant understood their answers were no longer anonymous, but would be kept confidential.

Participant Rights

All participants were advised that participation was voluntary and that all data will be kept confidential. Consent forms (Appendix C) were collected prior to participation and confidentiality was preserved during analysis by redacting any identifiable information. In the consent form the purpose of the research, why it was being conducted, what the participants would be asked to do, the risk of participation, the benefits, the cost, how participant privacy would be protected, and who to contact with questions were all disclosed. Disclosure regarding the sharing of this research was explained and discussed to clarify any participant concerns. Participants were also notified that they could withdraw from the study at any time.

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Data

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The data collected in this case study is qualitative. The majority of information relies heavily on direct quotations, reflections about their experiences, opinions, and feelings obtained

through surveys (Appendix A) and interviews (Appendix B) (Merriam, 2009). The survey data reflects the measurement of educator perceptions based on a 5-point Likert scale with 1 representing strong disagreement, 2 disagreement, 3 undecided, 4 agreement, and 5 strong agreement. Survey data analysis consisted of summarizing results using percentages.

Classroom teachers, special education teachers, and paraprofessionals completed surveys to identify their perceptions regarding the impact of place-based learning on the development of self-efficacy skills in students. Classroom teachers, special education teachers and paraprofessionals also had the option to be interviewed.

Teachers, Specialists, and Paraprofessionals Surveys

Teachers, specialists, paraprofessionals were asked to fill out a short survey (Appendix A) measuring their perceptions about the projects using a 5-point Likert scale with an open-ended question at the end for more elaboration. The scale was developed using guidelines from Bandura's "*Self-Efficacy Beliefs of Adolescents*" (Bandura, 2006). The format of the survey was explained to all participants as part of the initial introduction to the on-line survey.

Teachers, Specialists, and Paraprofessionals Interviews

Teachers, specialists, and paraprofessionals were given opportunity to participate in a follow-up interview (Appendix B). Interviews were based on Creswell's (2009) template for semi-structured interviews providing consistency and allowing for more in-depth reflection by participants (p. 163). Five interviews were audio recorded by consent of the interviewees (Appendix C).

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Analysis

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As described by Creswell (2009), data analysis is a process where collection, analysis, and interpretation are interrelated and occur simultaneously during the research project (p. 183).

In analyzing the data for this research Creswell's Data Analysis and Representation organizing framework was employed (Creswell, 2009, p. 190). The goal was to make a detailed description of the case and its setting (Creswell, 2009, p. 199).

Data is qualitative. The data from surveys is reported in percentages based on the Likert scale measuring perceptions. Summaries of surveys and interviews were coded, categorized, and analyzed for qualitative information. Similarities, patterns, and examples of individual experiences were used to identify collective responses. Creswell's Template for Coding Case Studies was followed to develop an in-depth portrait of the cases (Creswell, 2009). Case context, description, within-case theme analysis, assertions, and generalizations, similarities, and differences were identified. In examining patterns, correspondence between several categories that could be established is presented in the form of a table (Creswell, 2009).

Potential Limitations

Findings of the study are limited to grades 3-8 elementary schools. As such, generalizations of findings have limited applicability to other similar environments. Participation in interviews and surveys was voluntary, which also limits the size of study's participants.

Ethical Considerations

Criteria for ethical considerations for the study are based upon the work of Guba and Lincoln (1998, as cited in Bloomberg & Volpe, 2012), specifically the credibility, dependability, and transferability of the study. Credibility refers to whether the participants' perceptions are accurately portrayed by the researcher's description (p. 112). Dependability refers to the monitoring of process and procedures that are used in the collection and interpretation of data (p. 113). Transferability refers to the potential correspondence of the results of the research to other settings.

Credibility

  Credibility of research findings took form in several ways suggested by Bloomberg and Volpe (2012). Cross-sectional analysis and triangulation of data form surveys and interviews were used (Bloomberg & Volpe, 2012). Peer debriefing and examination of notes and data by a colleague were also used in examining data.

Dependability

  Dependability of research findings was important to establish the research study as consistent and repeatable. Dependability of research findings was ensured via the coding of surveys and interviews, which provided consistency in the collecting and analyzing of data (Bloomberg & Volpe, 2012). The researcher also used a reflective journal to analyze the scope of the study and address researcher bias.

Transferability

  Generalization of results is not the intended goal of the study. Criteria of trustworthiness may be assessed via richness of description as to communicate a holistic and realistic picture (Bloomberg & Volpe, 2012, p. 113).

CHAPTER FOUR

RESULTS

The researcher collected data to explore and describe educator (teachers, special education teachers, paraprofessionals) perceptions regarding the self-efficacy of students with learning disabilities during environmental science place-based learning programs. Educators were recruited from elementary schools in the six New England states (Massachusetts, New Hampshire, Vermont, Maine, Rhode Island and Connecticut) via social media. Participants took on-line surveys in which they ranked their level of agreement with various statements about students who participated in environmental place-based learning units of study. Survey responses were scored according to a Likert Scale. In addition, open-ended responses were analyzed and coded to identify specific themes. Participants could also participate in semi-structured interviews.

Survey questions were designed using guidelines from Bandura's "Self Efficacy Beliefs of Adolescents" (Bandura, 2006). There was also opportunity to participate in follow-up semi-structured interviews based on Creswell's (2009) template for semi-structured interviews to provide consistency and to allow for more in-depth responses by participants (p. 163). These were used to investigate the following research question: What are educators' perceptions about the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities? This chapter presents the finding of the study and reports the data analyses.

Analysis Method

In analyzing the data, themes were identified based upon survey and interview responses related to self-efficacy skills and academic skills. Survey data analysis consisted of summarizing results using percentages based on the Likert scale measuring perceptions. Summaries of surveys

and interviews were coded, categorized, and analyzed. Similarities, patterns, and examples of individual experiences were used to identify collective responses.

Presentation of Results

One hundred and seventy surveys were received and five semi-structured interviews were conducted. Participants consisted of 97 regular classroom teachers, 54 special education teachers, and 19 paraprofessionals who had experience in teaching students with learning disabilities (grades 3-8) during environmental place-based learning projects. The overall range of teaching experience was 5 to 10 years with an overall average of 5 years. Environmental place-based learning is a form of experiential learning that takes place by immersing students into their natural environment (Louv, 2008). Sixteen of the participants (seven teachers, five special educators, and four paraprofessionals) offered additional information in the open response survey question relating specifically to demographics, their experiences and the types of science projects they had done. These topics included: maple sugaring, collecting data from marshes and estuaries, bird identification and migration, farming, and forestry. Survey questions (Appendix A) were divided into two areas: self-efficacy and academics. Self-efficacy questions focused on skills related to engagement, motivation during the project and transference to other projects, confidence, and connection to community, organization, memory, discussion abilities, finishing work, and concentration. Academic questions related to students being better able to learn content in the areas of science, math, reading, and writing. Survey data reflected measurement of educator perceptions based on a 5-point Likert scale with 1 representing strong disagreement, 2 disagreement, 3 undecided, 4 agreement and 5 strong agreement. Survey data analysis consisted of summarizing results using percentages.

More in-depth data was acquired via sixteen open-ended responses (seven teachers, five specialists, and four paraprofessionals) and five semi-structured interviews (two teachers, one specialist, and two paraprofessionals) (Appendix B). Years of combined teaching experience for this group was 20 years for teachers and specialist, 12 years for paraprofessionals. Teachers and specialists worked together in designing and implementing projects, ensuring accommodations and modifications for student Individual Educational Plans (IEP) were utilized. Paraprofessionals were responsible for direct support of individual students and students in small groups of two to four for academics and behavior needs.

All interviewees worked in collaborative, multi-disciplinary grade level teaching teams, including Unified Arts teachers. The grade levels represented were: 4, 5, 7, and 8. Place-based projects included: Maple Sugaring (grade 4), Marsh & Estuary Study (grade 7 & 8), and Farming & Forestry (grade 5). The length of the projects ranged from 6 to 8 weeks in length.

Interviewees shared information regarding the community partners that are an integral part of place-based learning methodology. Maple Sugaring and Farming & Forestry partners consisted of community members in the towns where students reside. As part of these projects, students solicited support via letters of introduction, inviting citizens to have their trees tapped or land surveyed. The Marsh & Estuary study, also involved local community in the form of town conservation commission and a near-by university, which utilized student data for their own research purposes. These partnerships have developed over 10 to 25 years.

Perceived Impact upon Self-Efficacy Skills

Participants were asked to rate 10 areas of self-efficacy: confidence, engagement, memory, trans-motivation, discussion ability, motivation, connecting to community, organization, concentration, and work completion via survey questionnaire (Appendix A). In

addition interviewees were asked for more descriptive details of students during their

participation in place-based projects related to self-efficacy skills (Appendix B).

Across all areas of self-efficacy participants responded more favorably in the categories

of Agree or Strongly Agree except for work completion where responses were 17% disagreed,

35% were not sure, 42% agreed, and 6% strongly agreed. The areas from greatest to lowest:

percentage of combined positive responses (Agree and Strongly Agree) are shown in Table 1.

Table 1

Percentages of Educator Responses on Perceptions of Student Self-Efficacy

Area	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
Confidence	0%	0%	0%	70% (119)	30% (51)
Engagement	0%	0%	6% (10)	62% (105)	32% (55)
Memory	0%	0%	6% (10)	70% (119)	24% (41)
Trans-motivation	0%	10% (17)	10% (17)	60% (102)	20% (34)
Discussion ability	0%	0%	18% (30)	46% (79)	36% (61)
Motivation	0%	0%	20% (34)	50% (85)	30% (51)
Connecting to community	0%	12% (20)	12% (20)	52% (89)	24% (41)
Organization	0%	6% (10)	30% (51)	52% (89)	12% (20)
Concentration	0%	12% (20)	36% (61)	46% (79)	6% (10)
Work completion	0%	17% (29)	35% (60)	42% (71)	6% (10)

Confidence. All participants (100%) perceived that place-based learning positively

impacted the confidence of students. Many comments from surveys and interviews related this

perception to the fact that students are more able to exhibit strengths due to the hands-on nature

of projects. For example, one interview respondent noted that during Maple Sugaring, a

particular student was able to use drilling tools and teach other students how to use them.

Another paraprofessional interviewee said, "Overall students' attitudes change as they seem

more relaxed, less stressed, have greater endurance." Several other interviewees agreed that these projects provided students opportunity to demonstrate other skills and talents.

Engagement. Student engagement was also perceived positively (94%). Engagement relies on students being able to connect with the material. When this connection between the school environment and the real-world environment is made, the purpose of learning is more transparent and meaningful to students (Sobel, 2006). According to one teacher interviewed, students demonstrated a high level of engagement, as they were eager to continue to work beyond the given time limit and in cold temperatures (32 degrees) during a Farming & Forestry project. She reported, "Students were more engaged and less distracted in the outdoor setting compared to classroom lessons."

Often this engagement encourages and provides students opportunities to take a leading role within the group. One paraprofessional who supported students in both Maple Sugaring and Marsh & Estuary studies expressed how these projects gave students the opportunity to become leaders. "Through the modeling nature of place-based learning, students are taught by other students how to perform specific tasks. They see that we all have strengths and weaknesses, some are better than others".

Memory. Ninety-four percent of survey respondents agreed or strongly agreed that students demonstrated an increase in memory skills. Modeling by others and being able to be in a mentoring role with peers was seen as supporting students in their ability to remember material. One paraprofessional interviewed noted, "Examples were presented by teachers and available for continuous use, real time teaching in the moment in multi-modal methods helped to preview and review process and procedures." Responding to the question of how place-based learning affected student memory, one science teacher interviewed reported that students were:

learning vocabulary and concepts in the field. They didn't just read about the flora and fauna of the marsh on a worksheet. They had to find them, collect samples, and identify them themselves. They then had to share this information with other groups, compare results, and generate reports to be shared with the town conservation commission.

Improved memory was also evident in a grade 3 classroom where students took snow measurements which were reported via morning announcements. "Students with attention issues have milder symptoms and can remember steps better," according to a special educator who was interviewed.

Motivation and trans-motivation. Motivation is often measured during specific activities, but Bandura (2004) also looked at the lasting impact of motivation from one event to another. Therefore, in this study participants were asked to rate perceptions of motivation during place-based projects and in subsequent projects (trans-motivation). Participants felt that a positive impact on student motivation was seen (80%), and that it transferred to subsequent projects (80%). A paraprofessional interviewed said it best:

> Students started to view challenges in a positive way. Previously some of my students would doubt themselves before they even began. After participating in the project, students believed and said, 'I can do this!' They were so excited about the next project.

Discussion abilities. Discussion abilities were perceived to be improved by 80% of the survey participants as students gained in-depth knowledge regarding the topic of study, as well as communication skills. Gibson (2004) discussed these opportunities for learning through social venues. Students are supported in developing and practicing the use of learning tools to help them self-reflect and self-regulate which creates a sense of accomplishment and self-efficacy (p. 200). In response to the interview question regarding student social skill abilities, one

paraprofessional commented, "Through lessons on group interaction/communication, students learn to communicate in their groups and then generalize these skills to presenting their final products." One classroom teacher interviewed noted that the program promotes discussion because it "allows students to make connections across disciplines, creating an opportunity for greater depth and complexity." A paraprofessional responded to the open-ended question on the survey saying, "Students can talk you through the town park that they have researched and mapped in their hometown."

Connecting to community. Many place-based projects occur within the context of the greater community. Two guiding principles identified by Sobel (2006) focus on the engagement of students in real-world projects in the local environment that creates a climate of student responsibility and respect and student ownership being maximized through the active partnership between adults and students (p. 72). Bandura's (2004) theory of self-efficacy also focuses on learning in naturalistic settings. According to 76% of survey participants, perceptions of connecting to community were positive as partnerships were developed and fostered. A teacher interviewed found that students wanted to reach out to townspeople they worked with on their Maple Sugaring project noting, "They refer to our community partners as family and want them to be included in our class events." A co-teaching specialist in that same program reported, "Our community partners look forward to sugaring with students year after year."

Observations of stronger bonds within the projects were also perceived as more positive. During various projects, one paraprofessional felt that these projects gave her students more interaction with class peers. She noted that often students are allowed to form their own groups, so they are always working with friends. When teachers arrange groups intentionally to include

all learning styles, students work with a greater variety of classmates. She felt that there were increases in their communication, social, and problem solving abilities.

Organization. Organization of materials during place-based learning activities was positively perceived by 64% of the educators surveyed. Educators found students realized that the materials they had related to their projects were important to the outcome. In an interview, one teacher explained when her students designed a reading area related to their bird migration project, they realized that blueprints, materials lists, timelines, job lists, and budgets were essential to completing the project on time. If lost those would have to be recreated which took time and could also impact the budget. The teacher explained, "Positive educational experience sets them up for success. Students have ownership of the project that results in pride in their work. I have to support them less in taking care of their things."

Concentration. Concentration is the ability to maintain attention in focusing in on what one is doing. Just over half of the educators surveyed (52%) perceived that students were more able to concentrate on their assignments during place-based projects. Comments from interviewed participants of the study also related to improved self-regulation and therefore improved concentration. "My students are responsible for all aspects of our gardening project. They till the soil, collect the compost, work it in the soil, etc. It is hard work, and they love every minute of it," reported one teacher. The same sentiment was echoed by a special educator, "They know their jobs, what is required, and sometimes notice things that I miss. Like the day I misread the inventory chart."

Work completion. Perceptions of students' ability to finish work (52%) noted a need for a higher level of adult support. One teacher interviewed reported,

Students with learning disabilities still experienced the same level of difficulties in the academic areas, especially in math and reading. When place-based learning happens outside, initially students can be more distracted by the environment and less likely to get the job done in a timely manner. Students with more severe symptoms of hyperactivity need similar supports as in the classroom.

In other cases however, interviewees indicated working in the outdoor environment was actually perceived to support the needs of students with learning disabilities. When asked if students needed more or less redirection, or support with task initiation and follow through, one paraprofessional noted, "Learning outdoors allows students to get movement and social interaction they crave. Therefore, students are not seen as disruptive but having positive traits and are encouraged more frequently."

Perceived Impact on Academic Skills

Research has shown that students with learning disabilities who participated in place-based learning demonstrated higher test scores on standardized measures of academic achievement (Job & Klassen, 2012). Survey questions in this study asked educators to rate student academic abilities after participating in environmental place-based projects. Across all areas of academics except Math, participants responded favorably in the categories of Agree or Strongly Agree; for Math, responses were 82% Not sure and Disagree. The areas from greatest to lowest percentage of combined positive responses (Agree and Strongly Agree) for academic skills are shown in Table 2.

Table 2

Percentages of Educator Responses on Perceptions of Student Academic Achievement

Area	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
Writing	0%	5% (9)	30% (51)	47% (80)	18% (30)
Science	0%	6% (10)	30% (51)	44% (75)	20% (34)
Reading	0%	6% (10)	42% (71)	36% (61)	16% (28)
Math	0%	6% (10)	76% (130)	6% (10)	12% (20)

Writing. Whether creating lists of needed materials, publishing a brochure, or reflecting on their ability to work co-operatively in a group; writing is a consistent area of the curriculum in place-based projects according to survey participants. A majority of educators (65%) participating in the survey perceived that student participation in place-based projects demonstrated improved writing skill. Areas mentioned were the use of content-specific vocabulary, sequencing of ideas, giving support for claims, and use of graphic organizers. Also mentioned was the personal connection to what they were writing. One paraprofessional interviewed stated, "Whether writing about their personal experience or the data they collected, students were writing about what they experienced and observed." It was also felt that, as their writing would be shared with others, students had an audience and purpose to their work.

Science. Sixty-four percent of participants perceived improved ability in scientific understanding of students. They indicated that most place-based projects involve science, as much of teacher education and materials are related to this area of the curriculum. "The very nature of science as an inquiry-based subject is more interesting to students. This increases when students are able to do and create labs that test hypotheses," reported one science teacher. The teacher explained that the connection between lessons and outcomes is very clear, and the opportunity to test and re-test procedures helps students to see a topic from many views. "Models

for labs and reports do not change, the vocabulary is consistent therefore students get consistent preview and review. This predictability is very helpful to students with learning disabilities, especially those with memory and attention problems," according to a special educator interviewed.

Reading. Fifty-two percent of participants also perceived that reading ability was improved. Most of what is done in school involves reading. Another consideration is the type of materials read during place-based projects, which tend to be information and research based. This was seen to be both interesting to students and more manageable. "Magazine articles for example are shorter, more focused, and have pictures, charts, and graphs that facilitate understanding," according to one reading specialist in the study. One teacher surveyed felt that by children working together in place-based project groups, they were spending more time reading each other's work which supported vocabulary development and reading fluency.

Math. Math was the only academic area where educators either perceived no improvement or were not sure if improvement was made (82%). The rationale given by interviewed participants was that across grade levels math is viewed and treated as an isolated subject. According to one teacher interviewed,

> Even though it is essential to scientific studies, at the elementary grade levels it is not the focus until later on when students are doing specific lab experiments. It is harder to identify improvement in academics unless you are specifically evaluating it.

Agreement was given by a special educator, "Not every unit involves areas of mathematics but does involve reading, writing, and science, as many are science focused." It was also reported that opportunities for further practice of specific skills was not afforded students once the project was completed. An example of this was given by a teacher upon reflection of a

gardening unit, where students measured and plotted planting a vegetable garden once in grade 3. The same students did not participate in the unit in grade 4.

Themes Identified

Summaries of surveys and interviews were coded, categorized, and analyzed. Similarities, patterns, and examples of individual experiences were used to identify collective responses. Two major themes emerged in examining open responses and interview results, increase in student sense of self and increase in sense of community. Participants unanimously agreed (100%) that student confidence was positively impacted by participation in place-based learning activities. Open-response and interview participants also commented that they perceived an increase in student sense of self and an increase in student sense of community. "Pride" was one word that was used consistently in discussing how students felt about themselves. Pride in their own skills and capabilities, pride in their group and class skill and capabilities. Educators spoke of student willingness and ability to take responsibility and to fill a given role in projects.

Another theme identified was that of community. Seventy-six percent of the educators perceived an increase in student interactions. Students were seen communicating in individual, small group, and large group environments. Educators felt that these interactions were supported in the design of place-based learning focusing on project-based inquiry, where students work individually but also in groups or teams. According to study participants, students can see how their "jobs" are connected to the success of the whole project. There was also an increase reported in students supporting one another during the process. Students were seen sharing skills with others and giving each other encouragement. This sense of community transcended individual projects and had an impact on other activities.

Both of these themes relate not only to key principals of place-based learning but also those of self-efficacy and social cognitive theory. Social cognitive theory focuses on an individual's acquisition of knowledge as being dependent upon their observation of others within social contexts and experiences (Bandura, 2004).

Summary

This study investigated the perceptions of educators regarding the self-efficacy of students with learning disabilities during environmental science place-based learning programs. Data was collected from a total of 170 educators primarily from six New England states using on-line surveys via social media. Participants were given opportunity to elaborate on their responses via an open response question and/or semi-structured interview. Five educators agreed to be interviewed and 16 provided open responses in the surveys. Overall this study indicated that educators' perceptions about the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities were affirmed. All areas of self-efficacy and academics were perceived as improved in place-based projects, with the exception of work-completion and mathematics. Participants reported more positive results on self-efficacy than academics. Place-based learning as a methodology used in the instruction of learning disabled students in this study was seen as being effective. As such it can be seen as having a positive impact on decreasing student deficits and increasing their abilities both in self-efficacy and academic achievement.

Chapter 4 has presented the results of the analysis of survey and interview data. Chapter 5 discusses the researcher's interpretations of findings, implications of the findings, and recommendations for action and further study.

CHAPTER 5

CONCLUSION

Elementary and middle-level educators, primarily from six New England states, were recruited via social media to explore and describe their perceptions regarding the self-efficacy of students with learning disabilities during environmental science place-based learning programs. One hundred seventy educators responded to the online survey, 16 survey open responses were given and five interviews conducted. Overall, educators' perceptions about effectiveness of place-based learning upon academics and self-efficacy was positive, with the exception of work completion and mathematics. This last chapter details the interpretations and conclusions drawn from the findings and provides recommendations for practitioners as well as suggestions for further research in place-based learning as an effective methodology for developing self-efficacy in students with learning disabilities. The research question that guided the study was: What are the educators' perceptions about the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities?

Interpretation

Overall the results of this study indicated that educators' perceptions regarding the effectiveness of place-based learning on the self-efficacy skills of students with learning disabilities were positive. All areas of self-efficacy and academics were perceived as improved in place-based projects with the exceptions of work completion and mathematics. Participants reported that they saw more positive results in areas of self-efficacy than areas of academics. Place-based learning as a methodology used in the instruction of learning disabled students in this study was seen as being effective. As such, place-based learning can be seen as having a positive impact on decreasing student deficits and increasing their abilities both in

self-efficacy and academic achievement. This aligns with Gruenewald and Smith (2008) who also found that the multi-modal nature of place-based learning required students to use all their senses and faculties to perform a variety of tasks, therefore increasing the likelihood of their success.

Although Job and Klaussen (2012) noted higher academic achievement and improved behavior in various studies of students with learning disabilities during place-based learning projects much of the previous research has not always provided educators with a clear sense of how place-based learning benefits students with disabilities (Gruenewald & Smith, 2008). Responses from this study's survey and semi-structured interviews indicated positive perceptions of place-based learning in developing abilities in cognitive, social, and emotional development for students with disabilities.

Social/emotional learning is a major component of the place-based learning environment and the development of self-efficacy skills (Taylor & Kuo, 2011). Communication, collaboration, and regulation impact the ability to learn and are often areas of deficits in students with learning disabilities (Powers, 2004). As emphasized by Bandura (2004), through "observations of behaviors, attitudes and emotional reactions" (p. 146) we learn how to act ourselves. The author highlighted self-efficacy, or the learner's belief in his own ability, as essential in attempting and being successful in execution of tasks.

Responses from this study's survey and semi-structured interviews echoed the literature's support for place-based learning in developing abilities in cognitive, social, and emotional development. Study respondents perceived that place-based learning had a positive impact on developing these skills in their students. All participants (100%) felt that place-based learning positively impacted the confidence of students that translates to competence.

Student engagement (94%), discussion ability (82%), connection to community (72%), and concentration (52%) support this conclusion. Learning in their natural environment, students are provided with the social context they are already familiar with and comfortable in (Bandura, 2004).

Bandura emphasized that attention, retention, and motivation were important in the belief of one's own ability to learn (Bandura, 2004, p. 150). Study participants acknowledged positive results in these areas:

- Attention, identified as concentration in this study, was perceived positively at 52%.

- Retention, identified as memory in this study, was perceived positively at 94%.

- Trans-motivation and motivation (80%) were seen to be positively impacted.

Previous research (Job & Klassen, 2012) supports place-based learning for supporting students with disabilities in attaining higher test scores on standardized academic measures of achievement. While the current study did not look at standardized academic measures, educators' perceptions of academic achievement were investigated. According to responses on survey and interview instruments, educators saw a positive impact in two of the three academic areas. Writing (65%) and Reading (52%) were perceived to have improvement during place-based projects. Mathematics, however, was perceived as being unsure or less improved, with 82%. Interviewed participants hypothesized that this difference was due to math instruction not being fully integrated into projects on a consistent basis. Therefore, students had less practice in using the math skills related to these specific projects.

Overall, this study supports the implementation of place-based learning as a methodology in the development of self-efficacy skills in students with learning disabilities. It was perceived by educators in this study that when implemented, place-based learning

practices provided the opportunity for development of attitudes, knowledge, and skills necessary to increase academic and self-efficacy skills, often lacking in students with learning disabilities. Bandura (2004) found these skills are essential in order to raise competence and confidence.

Implications

Constructivist theory and social cognitive theory are the two major educational theories related to both place-based learning and self-efficacy that formed the framework of this study. In order to construct meaning from our environment, constructivist theory emphasizes the importance of investigation and exploration. Interaction within our environment provides many learning opportunities and is at the heart of place-based learning. Also connected to the constructivist theory is self-efficacy where understanding of a person's own abilities within their environment helps to construct their beliefs about their abilities. Social cognitive theory relates to both place-based learning and self-efficacy as it focuses on the influence of observing others and assimilation of knowledge gained into our own belief system. Bandura (2004) defined self-efficacy as the "belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2).

The findings of this study support the connection between place-based learning and self-efficacy in providing students with learning disabilities the opportunities for academic and social/emotional growth, as perceived by the educators who teach them. Constructivist teaching models, such as place-based learning, have been found to increase student achievement (Sobel, 2006). While studies have centered on the study of academic progress in regular education environments, there is potential based on the limited research of this methodology in regards to students with learning disabilities. Educators reported that positive

gains were observed in self-efficacy and academics, with the exception of work completion and math.

Place-based learning was seen to be useful in persuading community members to be involved in school programs. Individually and as organizations, citizens can contribute to student learning in a positive and meaningful way. Respondents of this study, spoke of community partnerships that ranged from 10 to 25 years, highlighting the strong bond of these relationships. These observations highlighted two guiding principles of place-based learning: (a) engagement of students in real world projects in the local environment and community creates a climate of positive student responsibility and mutual respect, and (b) an active partnership between adults and students maximizes ownership in learning and outcomes (Sobel, 2006, p. 72). Therefore, the role of community members should be viewed as more inclusive to the success of educational programming within communities. Apart from monetary support, these citizens also have skills, talents, and experiences that enhance and enrich their community schools.

Recommendations for Action

Social cognitive theory directs educators to implement intervention programs with the goal of raising competence and confidence of students through the mastery of learning in a variety of environments (Bandura, 2004, p. 149). Place-based methodology is one of the practices that focuses on student ability to demonstrate academic and social/emotional competencies (Taylor & Kuo, 2011). There are many such programs available to educators that are research-based and reflective of best practices that could be considered for implementation. One example of this is "A Forestry in Every Classroom" which is an award winning professional development program for teachers K-12 offered by the National Park

Service. The experiences in this program are designed for students to learn using local woodlands and forests. One educator interviewed shared, "You don't have to live in the country to learn about and experience the wonder of the forest. I have taken students to Boston Common, the Arboretum, and along the Esplanade to utilize the local environment in our research". Therefore, based on the results of this study it is recommended that schools utilize these well-documented programs to increasing student outcomes.

Self-efficacy or the belief in one's abilities is key in goal setting, persistence, and academic success (Bandura, 2004). Essential in the achievement of potential, these perceptions are often lacking in students with learning disabilities (Bandura, 2004). Although in general educators are sensitive to meeting the needs of learning disabled students, there is limited knowledge or understanding of how to develop self-efficacy in students (Klassen, 2010). While educators' perceptions regarding the development of self-efficacy were positive in this study, units of study were not designed to include explicit instruction in specific self-efficacy skills. Jennings et al. (2005) identified inclusion of place-based practices with standards-based curriculum and instruction is in keeping with best practices and supports educators in the development of local programming. Therefore, it is recommended that training be given to teachers to increase their knowledge of how to utilize place-based practices in the development of self-efficacy skills for students, especially those with learning disabilities.

Many children with learning disabilities have deficits in social/emotional learning, which impacts their ability to communicate, regulate behavior, and work co-operatively with others (Powers, 2004). Educators in this study highlighted the difference in student performance in these areas during place-based activities. Self-efficacy studies in education

have suggested that explicit instruction of skills related to self-efficacy is necessary in order to attain success (Bandura, 2004). Another recommendation, based on the results of this study, is that teachers also receive training for inclusion of these skills when developing units of inquiry. Including social/emotional skills in the development of projects will assist educators in providing consistent opportunities for students to self-reflect and evaluate their performance.

Recommendations for Further Study

As revealed in the literature review, there is limited research documenting the effectiveness in increasing student outcomes based upon valid, reliable, and readily useable measures of deeper learning and interpersonal and intrapersonal competencies (Gruenewald & Smith, 2008). This is especially true in special education where programs require adaptation and modification to make curriculum accessible to students with disabilities (Taylor & Kuo, 2011). The results of this study for special needs students are promising but not proven, as more rigorous evidence is needed to confirm that place-based practices are a better approach. While this study does build upon that body of knowledge, there is still need for additional research in this area. Based on educator perceptions, more research is necessary in determining the ability of place-based learning practices to improve both self-efficacy and academic achievement of learning disabled students.

This study focused on the broader definition of learning disabilities to include dysgraphia, dyslexia, dyscalculia, and attention deficit disorder (Learning Disability Association of America, 2017), as the majority of students are identified under this classification. However, there are several other classifications of disabilities identified under the Individual with Disabilities Act. Therefore it is recommended that a more focused study of

other specialized populations (i.e. gifted students with learning disabilities) could be beneficial in understanding the effect of utilizing place-based programs to develop self-efficacy.

By definition, place-based learning utilizes the local environment as the foundation for understanding and participation in local and regional issues, which focuses on local themes, systems, and context (Smith & Sobel, 2010). While New England was the area of focus for this study, it is recommended that further research be conducted in other areas of the country as well.

Participants of this study were educators, including teachers, special educators, and paraprofessionals. Bandura (2004) identified other stakeholders, namely students and parents, whose beliefs also impact the development of self-efficacy skills. Perceptions of adults in students' lives also impact student perceptions; therefore further research of these groups is also recommended.

Conclusion

The present study contributes to the body of knowledge regarding place-based learning as an effective methodology in developing self-efficacy skills in students with learning disabilities and demonstrating that constructivist teaching models such as place-based learning have been found to increase student achievement in some areas (Sobel, 2006). Educators' perceptions in this study acknowledged gains for students with learning disabilities during place-based environmental science units. Two major themes emerging from this study was an increase in student self and increase in community.

In examining the perception of educators regarding specific self-efficacy and academic skills, positive impact was perceived across the majority of areas surveyed.

Educators, however, are not the only stakeholders whose perceptions influence self-efficacy and academic performance. Parent and student perceptions also play a vital role in the development of these skills. With further implementation of place-based practices and research of these programs, a greater understanding can be achieved to ensure that students with learning disabilities will be able to reach their full potential.

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Appendix A: Educator Survey

Place-based Learning as an Effective Methodology for Developing Self-Efficacy Skills in

Students with Learning Disabilities

Place-based Learning Survey

Hello! My name is Melodee Carter-Guyette and I am a doctoral student at the University of New

England studying educational leadership. I am doing research on Place-based Learning projects.

This survey will help me find out how effective this methodology is in building students' self-

efficacy skills.

This survey is voluntary. Your answers will be analyzed as a group. Please be honest in your

responses.

Please click on the link below to read informed consent material.

Thank you!

Informed consent.html

1. Students demonstrate behaviors indicating they are more motivated to do well in the project(s)

than in my other classes. (i.e., require less redirection, more independent, initiate tasks on their

own, etc.)

1 Strongly Disagree

2 Disagree

3 Not Sure

4 Agree

5 Strongly Agree

2. Students demonstrate behaviors that they are more motivated to do well in other areas because

of the project(s). (ie. communicate desire to do well, communicate skill/talent that they have developed, etc.)

1 Strongly disagree

2 Disagree

3 Not Sure

4 Agree

5 Strongly Agree

3. After participation in the project(s) students appear more connected to community by behaviors of engagement (i.e.. greater communication with teachers/peers, taking on leadership roles, etc.).

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

4. Students appear more organized in the project(s) than in other classes.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

5. Students appear more able to remember information presented from participation in the

projects.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

6. Students appear more able to participate in class discussions from participating in the project(s).

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

7. After participating in the project(s), students appear more able to learn mathematics.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

8. After participating in the project(s), students appear more able to learn science.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

9. After participating in the project(s), students appear more able to learn reading.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

10. After participating in the project(s), students appear more able to learn writing.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

11. Students are more interested and appeared more confident about themselves.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

12. Students are more engaged in the project(s) than they do in other classes.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

13. After participating in the project(s) students appear more able to finish assignments by deadlines.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

14. After participation in the project(s) students appear more able to concentrate on class assignments.

1 Strongly Disagree

2 Disagree

3 Not sure

4 Agree

5 Strongly Agree

15. In the space below, please include anything else that you would like me to know about participation in the project(s).

16. If you wish to elaborate on your survey responses you may participate in a semi-structured interview. Please send your contact information to mcarterguyette@une.edu or call 603-926-1977. By providing your contact information your answers are no longer anonymous, but will be kept confidential. [SEP] Thank you! [SEP]

Appendix B: Semi-structured Interview Questions

1. Can you describe the projects you were involved in?

2. In what capacity were you involved with this project?

3. What was your role & responsibility in the projects?

4. How many years have you taught/supported students in this project(s)?

5. What types of supports do students require when participating in this project (s)?

6. What skills do students learn that directly relate to their daily lives?

7. How do you find the student attitudes when they participate in the project(s)?

8. Are they more or less engaged in activities? Do they participate more or less than they do in traditional lessons? Can you provide an example?

9. Do you notice a difference in the work quality?
Are they more or less inclined to do things over, spend more time on getting it right? Describe.

10. Do you find that students require more or less redirection, support with task initiation, and follow through? Describe.

11. When participating in this project(s), do students require more or less encouragement? Describe.

12. When participating in this project(s), do you find that students view tasks as a positive challenge that they can work towards? Can you give examples?

13. When participating in this project (s), do students benefit from modeling that provided by others? In what ways?

14. When participating in this project(s), do students take on leadership roles when working in groups? How so?

15. When participating in this project(s), do you find a difference in student social skills abilities? How so?

16. Is there anything else that you would like me to know about participation in the project(s)?

Appendix C: Informed Consent

University of New England
Educator Consent for Participation in Research

Project Title: Place-based Learning as an Effective Methodology for Developing Self-efficacy Skills in Learning Disabled Students

Principal Investigator(s): Melodee Carter-Guyette, Graduate student, University of New England, mcarterguyette@une.edu

Introduction:
- Please read this form. The purpose of this form is to provide you with information about this research study, and if you choose to participate, document your decision.

- You are encouraged to ask any questions that you may have about this study, now, during, or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

Why is this study being done?
- This study is being done as part of course requirements for a Doctor of Education in Educational Leadership through the University of New England.

- The purpose of this study is to explore selected educator perceptions regarding the self-efficacy of students with learning disabilities who have experienced place-based teaching practices.

Who will be in this study?
- Participants in the study will include teachers, specialists, and paraprofessionals who have shared experience in environmental place-based projects.

What will I be asked to do?
- As a teacher/specialist/paraprofessional, you will be asked to complete a survey. You will also be asked to participate in a semi-structured interview that will provide an opportunity for you to elaborate on your survey responses.

What are the possible risks of taking part in this study?
- There are no reasonably foreseeable risks associated with participation in this study.

- Should you feel discomfort at any time you may indicate that you do not wish to participate further.

What are the possible benefits of taking part in this study?
- There are no direct benefits to you for participating in this study. The research will provide additional information to existing research related to the topics of place-based learning and self-efficacy skills in students with learning disabilities.

What will it cost me?
- There is no cost to participants as a result of participation in research.

How will my privacy be protected?
- Participant privacy will be protected in several ways. Surveys and interviews will be coded identifying the place-based project participants were involved in. No names will be used to identify participants.

How will my data be kept confidential?
- Research records will be kept in a locked file in the locked office of the Principal Investigator.
- Surveys will be coded
- Individually identifiable data will be destroyed after the study is complete

What are my rights as a research participant?
- Your participation is voluntary. Your decision to participate will have no impact on your current or future relation with the University.
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate there is no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.
  - If you chose to withdraw from the research there will be no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.
- You will be informed of any significant findings developed during the course of the research that may affect your willingness to participate in the research.
- If you sustain an injury while participating in this study, your participation may be ended.

What other options do I have?
- You may choose not to participate.

Whom may I contact with questions?
- The researcher conducting this study is Melodee Carter-Guyette.
  - For more information regarding this study, please contact her at: 603-926-1977 or mcarterguyette@une.edu.

- If you choose to participate in this research study and believe you may have suffered a research related injury, please contact: Dr. Marylin Newell, Lead Advisor, University of New England, at mnewell@une.edu.

- If you have any questions or concerns about your rights as a research subject, you may call Mary Bachman DeSilva, Sc.D., Chair of the UNE Institutional Review Board at (207) 221-4567 or irb@une.edu.