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TRANSFORMATIVE LEADERSHIP IN NATURE-BASED PRESCHOOL EDUCATION

By

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ABSTRACT

The general topic of this qualitative case study was nature-based education for preschool children, which was explored through the lens of transformative leadership and its key principles: equity, inclusion, and democracy. The purpose was to examine nature-based preschool leaders' perceptions of leadership. The research questions that guided this study were: a.) what are educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education? b.) what are educational leaders of nature-based preschool programs' perceptions of the impact their leadership style has upon their schools' stakeholders, which include teachers, students, parents, and community? The participants were the leaders of five nature-based preschool programs. The findings included the importance of modeling and meeting the needs of stakeholders, and the development of empathy and compassion as a key result of their leadership. Further, the leaders of these programs emphasized the significance of teamwork and collaboration coupled with building strong relationships with stakeholders. A pattern emerged from the data that the principles of transformative leadership tend to occur naturally in nature-based preschool education, and that the empathy and compassion that are developed contribute to an inclusive, equitable, and democratic learning environment. Additionally, nature-based preschool leaders recognize that their leadership has a significant impact on their stakeholders. Recommendations include developing a framework for leadership in nature-based preschool education and expanding professional development opportunities for leaders in this field.

Keywords: nature-based education, preschool education, transformative leadership

University of New England

Doctor of Education

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“Before I can tell my life what I want to do with it, I must listen to my life telling me who I am.”

— Parker J. Palmer

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CHAPTER 1: INTRODUCTION

Nature-based education is a pedagogy where nature is the central organizing theme of the curriculum (Larimore, 2016). Further, it is an educational philosophy where the natural world is the integrating thread that intentionally weaves together the philosophy, methodologies, classroom design, outdoor spaces, and public identity of the curriculum (Larimore, 2016). Another significant component of nature-based education is the advancement of a certain set of values: awareness and appreciation for the environment (Dolesh, 2015; Ferreira, Cruz, & Pitarma, 2016). The general topic of this study was nature-based education for preschool children, ages three to five. Further examination included transformative leadership, which is a style of leadership that has the capacity to provide a more equitable, inclusive, and democratic conception of education (Shields, 2010). Transformative leadership, and its principles of equity, inclusion, and democracy, was the lens through which nature-based preschool education was explored.

Nature-based education has been shown to improve cognitive, linguistic, social-emotional, and motor skills (Yildirim & Akamca, 2017). Further, Wojciehowski and Ernst (2018) demonstrated that improved creative thinking can be a result of nature-based education. Nature-based education has also shown the ability to promote environmentally friendly values in preschool children (Breiting, 2008; Nicol, 2014; Dolesh, 2015; Ferreira et al., 2016; Nxumalo, 2018). Consequently, the benefits of nature-based education are well-documented.

Nature-based education has its roots in the nature study movement of the late nineteenth and early twentieth centuries (Peters & Armitage, 2011). The term nature study referred to connecting peoples' minds to the conditions in which they live (Peters & Armitage, 2011).

Armitage (2009) examined the nature study movement and determined that it was clearly the foundation of environmental education and was a forerunner of later environmentalist ideologies.

Today, nature-based preschools are typically defined as licensed early childhood programs for three- to five-year-old children, with a minimum of 25% of the class day held outside, with elements of nature as the driving theme of the curriculum, and nature being infused into the indoor spaces, as well (Larimore, 2016). Finch and Bailie (2015) describe four defining criteria for nature-based preschools. These criteria include: nature themes and daily nature explorations as the central organizing concepts of a program; nature is not just one topic or activity centered among many, but rather is the focus of the preschool's philosophy, methodologies, classroom design, outdoor spaces, and public identity; the overall program must be equally committed to both high standards of developmentally appropriate early childhood education and the best practices of environmental education; the preschool must support dual aims for children, both meeting child development goals and acquiring conservation values (Finch & Bailie, 2015). These four characteristics highlight quality general education concepts embedded with nature themes throughout.

Statement of the Problem

This qualitative case study explored the perceptions of nature-based preschool educational leaders of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education. Further exploration included nature-based preschool educational leaders' perceptions of the impact that their leadership style has upon the school's stakeholders. These stakeholders include teachers, students, parents, and the community.

Numerous studies have been conducted on the effectiveness of nature-based education in terms of history, purpose, and impacts. However, few studies have been conducted on leadership in preschool nature-based education. Although studies have been conducted on the influences that adults have on children regarding nature, the specific leadership styles that these adults exhibit has not been thoroughly examined (Ernst, 2014; Tonge, Jones, & Okely, 2019). This study builds upon prior research on leadership in nature-based preschool education and examines the problem of the lack of research on the topic and its potential impacts on effective leadership in nature-based preschool education.

Purpose of the Study

The purpose of this qualitative case study was to explore the significance of the components of transformative leadership and how they are perceived by nature-based preschool educational leaders. Further, this study examined nature-based preschool educational leaders' perceptions of the impact their leadership style has upon their school's stakeholders, which include teachers, students, parents, and community. This study begins to fill the gap in the research on the effects of leadership in nature-based preschool education.

The participants of this study were the educational leaders of five different nature-based preschool programs. These leadership roles included directors, founders, program managers, and lead teachers. The participants reported on how important they feel the elements of transformative leadership - inclusion, equity, and democracy - are to nature-based preschool education. They also reported on their perceptions of the impact that their leadership style has on their programs' stakeholders. At each site one to three people in leadership positions were interviewed. The interviews examined preschool educational leaders' perceptions of the

significance of transformative leadership and the impact of their leadership style on their program's stakeholders.

Nature-based learning conducted in an outdoor setting is greatly beneficial to children's health and well-being (Keffer, 2015). In terms of preschool-aged children, three to five years-old, nature-based education has been shown to have positive impacts on their growth and development (Merewether, 2015; Filler, 2015; Lysklett & Berger, 2017; Barnett, 2016; Yildirim & Akamca, 2017; Wojciehowski & Ernst, 2018). By exploring leadership in preschool nature-based education, this qualitative case study bridges the gap in the research by exploring leadership's role in promoting these positive impacts on children's health, well-being, growth, and development.

Research Questions

As stated previously, there is a notable lack of research on the impact of leadership in nature-based preschool education. There have been studies conducted on the significance of professional development on nature-based educators (Spektor-Levy & Abromavich, 2017), and specific attributes of leadership, such as supporting and coaching (Lunneblad & Garvis, 2017). However, transformative leadership in this field, and the perceptions of leaders on its impacts on stakeholders has not been specifically studied.

The research questions that guided this study were:

- What are educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education?

- What are educational leaders of nature-based preschool programs' perceptions of the impact their leadership style has upon their schools' stakeholders, which include teachers, students, parents, and community?

Conceptual Framework

This study used transformative leadership theory as a theoretical framework. The researcher took the position, based on the work of Freire (1998) and Shields (2010), that transformative leadership and leadership for inclusive, equitable, and democratic learning environments are mutually inclusive. Transformative leadership theory (Shields & Hesbol, 2019) comprises two basic theoretical suppositions. The first supposition concerns the individual, or private, good, and suggests that when the learning environment is inclusive, respectful, and equitable (Shields & Hesbol, 2019), students are more able to focus on academics, therefore improving the outcomes of their academic achievement. The second supposition is that when educational establishments confront such public good issues as democracy, civic life, and citizenship, then democratic society will be bolstered through the participation of knowledgeable and caring citizens (Shields & Hesbol, 2019).

Transformative leadership takes earnestly Freire's (1998) contention "that education is not the ultimate lever for social transformation, but without it, transformation cannot occur" (p. 37). Transformative leadership begins with questions of equity, inclusion, and democracy. It critiques inequitable practices and offers the potential for greater individual achievement and a better life lived in common with others (Freire, 1998; Shields, 2010; Shields & Hesbol, 2019). Transformative leadership, therefore, inextricably links education and educational leadership with the wider social context within which it is embedded (Shields, 2010). The conceptual framework, consequently, was based on Shields and Hesbol's (2019) suppositions that when the

learning environment is inclusive and equitable, student achievement improves, and when education addresses components of the public good, then democracy is fortified. These suppositions were examined in the context of nature-based preschool education.

Definition of Terms

Democratic Education---A form of education that emphasizes justice, liberation, inclusivity, and openness (Shields, 2010).

Equity---A concept in transformative leadership where the educational leader creates learning contexts in which social capital is enhanced in such a way as to provide opportunities for all students as they take their place as functioning and contributing members of society (Shields, 2010).

Inclusion---Education that encourages diversity among all learners. “It presumes that the aim of inclusive school development is to eliminate exclusionary processes that are a consequence of attitudes and responses to diversity in relation to race, social class, ethnicity, religion, gender and perceived abilities” (Ainscow & Messiou, 2018, p. 2).

Nature-Based Education---Nature-based education is a pedagogy where nature is the central organizing theme of the curriculum (Larimore, 2016).

Transformative Leadership---A leadership theory that critiques inequitable educational practices “...and offers the promise not only of greater individual achievement but of a better life lived in common with others” (Shields, 2010, p. 559). It is also a framework for organizational transformation with the principles of equity, inclusion, and democracy at its foundation (Shields & Hesbol, 2019).

Assumptions, Limitations, and Scope

Embracing the concepts inherent within transformative leadership theory - equity, inclusion, and democracy - this study made assumptions about the commonality of experiences among nature-based preschool leaders. Further, assumptions were made that the leaders participating in the study fit the most common example of a nature-based preschool leader. Finally, the researcher assumed that the educational leaders that participated in the study responded honestly and with integrity.

Assumptions are statements that the researcher holds true as they enter into their study (Bloomberg & Volpe, 2016). Further assumptions of this study were that the participants met the study criteria, that they were telling the truth, and that their motives were only to benefit the study. It is these assumptions that have assisted the researcher in drawing conclusions about the significance of transformative leadership in nature-based education.

Limitations of a study are those qualities of design or methodology that potentially influenced the interpretation of the findings. They also reveal the conditions that may undermine the study (Bloomberg & Volpe, 2016). Specific limitations of this study included a small sample size, limited access to the study sites and participants due to the current pandemic, and personal biases. These limitations have the potential to restrict the generalizability of the study and its application to practice (Price & Murnan, 2004).

Ethical issues and potential conflicts of interest are potential problems in any study. These ethical issues include potential biases. Roberts (2010) has developed guidelines to assist in the elimination of bias in scholarly writing. Among these guidelines are potential pitfalls for bias, and how to avoid them. Roberts (2010) advocates avoiding language that suggests evaluation, reinforces stereotypes, or makes unsupported assumptions. As the researcher worked

in this field of study, every effort was made to avoid these biases. Member checks and peer debriefing assisted in this process.

The scope of a study refers to the elements that will be covered in the study (Chetty, 2020). These elements include the duration of the study, the population, geographical location, purpose of the study, and topics (Chetty, 2020). The research and analysis for this study took place in early 2021, beginning in February and concluding in April. The educational leaders of five nature-based preschools in a primarily rural state in the northeastern United States agreed to participate. The criteria for selection were that all participants be educational leaders of nature-based preschool programs that have decision-making authority in the program. This primarily included founders, directors, and lead teachers. The research questions guided the study, and the data collected through the interviews was analyzed. The resulting analysis answered the research questions in regard to the educational leaders' perceptions of the impact of their leadership styles and about the evidence of transformative leadership in their actions. Nature-based preschool leaders' viewpoints were key elements of the data. This sample fits with the purpose of the study as it is these leaders that have assisted in the exploration of the significance of the components of transformative leadership in nature-based preschool education, and how their significance is perceived by the educational leaders of these programs.

Rationale and Significance

Nature-based preschool education is a dynamic and rapidly evolving field (Finch & Bailie, 2015). This field needs leaders that have the ability to reach all potential constituents. This study emerged from the researcher's interest in exploring the ways that nature-based preschool education can promote equity, inclusion, and democracy. The significance of a study

is determined by the degree to which it examines an important issue, meets a recognized need, and fills a gap in the current knowledge base (Roberts, 2010). This study met all those criteria.

Scholarly research on leadership in nature-based preschool is a recognized need (Talan, Bloom, & Kelton, 2014; Tonge et al., 2019). The quality of the interactions between educational leaders of nature-based preschool programs and their constituents is critical for the success of students (Tonge et al, 2019). Consequently, further research into the effects of quality interactions that will support all aspects of children's learning, development health and well-being is recommended (Tonge et al., 2019). There is also a dearth of research on the effectiveness of the different models of leadership in nature-based preschool education (Talan et al., 2014).

This qualitative case study explored an important issue because increased understanding of how the principles of transformative leadership are perceived by nature-based preschool leaders has the potential to assist future educational leaders in promoting these values. An additional rationale for this study was to find meaning in the connection between transformative leadership and the leaders' perceptions of their impact on stakeholders at nature-based preschools. While there is consensus among practitioners that strong leadership is essential in preschool education, there is little research on effective models of leadership development in this realm (Talan et al., 2014). The results of this study could benefit the leaders in this growing field, as well as their constituents, which includes their staffs, students, parents, and their communities (Finch & Bailie, 2014). Additionally, this study could be the impetus and starting point for future studies.

Conclusion

Nature-based education, preschool education, and educational leadership are vital areas of study. All have been well researched individually, but there is a lack of comprehensive studies analyzing their integration. This qualitative case study explored their amalgamation through the lens of transformative leadership. By examining educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education, this study assessed Shields and Hesbol's (2019) contention that when the learning environment is inclusive and equitable, student achievement improves. Further, by analyzing how nature-based preschool educational leaders' perceptions of the impact their leadership style has upon their school's stakeholders, this study attempts to fill the void in research on leadership in nature-based preschool education. The following chapters will review the literature on transformative leadership and nature-based preschool education and explain in detail the methodology that was used in this qualitative case study. Chapter 2 presents a review of the associated literature concerning nature-based preschool education and transformative leadership. Chapter 3 outlines the research design and specific methodology used in this qualitative case study. Chapter 4 presents the study's findings, and Chapter 5 analyzes these findings and offers recommendations for action and further research.

CHAPTER 2: LITERATURE REVIEW

The purpose of this literature review is to explore, with a sample of nature-based preschool educational leaders, how nature-based preschools promote positive growth, development, and environmentally friendly values by immersing students in nature. The purpose of this qualitative case study was to explore educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education, as well as nature-based preschool educational leaders' perceptions of the impact their leadership style has upon the school's stakeholders, which include teachers, students, parents, and community. This study builds upon and complements the prior research on leadership in nature-based preschool education.

The review of the literature includes an analysis of the previous research on this topic and addresses the key components of prior studies. The review's primary elements consist of a brief history of nature-based education, key definitions and primary functions, its impact on the growth, development, and values-orientation of preschool children, and educator preparation. These values include an environmentally friendly, inclusive, equitable, and democratic viewpoint, which are the key principles of transformative leadership. There is a significant lack of literature on the impact of leadership in nature-based preschool education, and this study examined the role of the nature-based preschool leader in the promotion of these values.

This review is organized in a general to specific manner. It begins with a broad look at the history and definition of nature-based education and narrows its focus to an examination of the effects that leadership has on effective nature-based preschool education. The following areas of literature are reviewed: the history and definitions of nature-based education, the functions of nature-based education at the preschool level, the impact of nature-based education

on preschool children, and the significance of leadership in promoting effective nature-based preschool education. These concepts are all developed around the theoretical framework of transformative leadership.

Beginning with a brief history of nature-based education in general, the review also examines and analyzes the various definitions of nature-based education, including the functions of nature-based preschool education, which are both pedagogical and values-based. The review examines both functions and how they are utilized. The review also examines the effects of nature-based education on children in terms of growth development, and values. Studies conducted on all children are reviewed with an emphasis on preschool aged children at nature-based preschools. These studies are featured, for the most part, chronologically in the review. Finally, the review analyzes transformative leadership and its potential to positively impact nature-based preschools.

Multiple sources of information were used to conduct this literature review including books, dissertations, websites, professional journals, and periodicals. The majority of sources are from the past five years; this is significant because the focus of this study is on current practices. Each topic reviewed concludes with an analytical summary of the research, and how the material contributes to the development of the study's conceptual framework. In the second section of this literature review a conceptual framework is developed to help guide this study. The framework is based on the research questions proposed in Chapter 1. The theoretical framework of transformative leadership practices in nature-based preschool education is used as a lens to facilitate an understanding of leadership practices in this field.

The significance of this literature review is two-fold. First, it defines nature-based education with the intention of giving readers a common understanding of its structure and purpose. Second, this literature review highlights the effects of nature-based education on preschool children's growth, development, and values. In terms of growth and development, these studies call attention to several positive impacts of nature-based education, including improved cognitive, linguistic, social-emotional, and motor skills (Yildirim & Akamca, 2017). Further, Wojciehowski and Ernst (2018) have demonstrated that improved creative thinking has been a positive result of nature-based education. In regard to values, nature-based education has shown the ability to promote environmentally friendly attitudes in preschool children (Breiting, 2008; Nicol, 2014; Dolesh, 2015; Ferreira, et al., 2016; Nxumalo, 2018).

Conceptual Framework

In this study the researcher took the stance that nature-based education is an integral part of the development of young children. By starting children at a young age (preschool, 3-5 years old) educators and parents present children with the opportunity to develop an understanding and appreciation for nature and their environment (Louv, 2005). Further, utilizing the appropriate leadership style is a key component of successful implementation of a nature-based curriculum (Spektor-Levy & Abramovich, 2017).

Spektor-Levy and Abramovich (2017) contend that professional development is a key component in the transformation of leadership in nature-based preschool education. They posit that when teachers experience greater opportunities for professional growth and acquire greater trust in their ability to achieve higher-order goals, they feel empowered and committed to their work. Lunneblad and Garvis (2017) see leadership in nature-based preschool education in terms of conflict. This is a conflict between being supportive and directive. Leaders want to distribute

leadership and allow their staff to be supported and coached, on the other hand, they are ultimately the final decision-makers (Lunneblad & Garvis, 2017). Hence, the conflict between supportive and directive leadership. Further, according to their study, there is often tension between the educational leaders of nature-based preschools and parents because the parents have an expectation of achievement, but the educational leaders are often burdened with limited financial resources. Nature-based preschool leaders are also responsible for the quality of their respective preschools and curricula. They are also considered key influencers in supporting all areas within early childhood education (Lunneblad & Garvis, 2017).

The conceptual framework provides the scaffolding of a study (Roberts, 2010). The scaffolding of this study was based on the principles of transformative leadership: inclusion, equity, and democracy (Shields, 2010). Given the previously aforementioned significance of nature-based education in the development of preschool children (Louv, 2005), the importance of utilizing the appropriate leadership style (Spektor-Levy & Abramovich, 2017), and the influence that educational leaders have on early childhood education (Lunneblad & Garvis, 2017), these key transformative leadership principles were integral building blocks to this study.

Theoretical Framework

The theory that provided the framework for this study was transformative leadership as interpreted and explained by Shields (2010). Transformative leadership theory is a deeply philosophical and intense theory yet has important implications and relevant applications to leadership in nature-based preschool education. Shields (2010) uses terms such as promise, liberation, hope, empowerment, activism, risk, social justice, courage, and revolution to describe transformative leadership and its application to education. These are powerful words, yet they

aptly describe the impact that transformative leadership can have on any educational setting, including a nature-based preschool.

Shields (2010) posits that transformative leadership has the potential to offer a more inclusive, equitable, and democratic understanding of education. These are key concepts in education, and, as preschool children are just beginning their educational journeys, getting them started on a solid footing is of the utmost importance (Louv, 2005). Hence, inclusion, equity, and democracy can add a stable educational foundation for emerging learners (Shields, 2010).

Shields and Hesbol (2019) further examine transformative leadership through a framework with organizational transformation at its core. One of the goals of transformative leadership is equity, and through a series of interconnected relationships, Shields and Hesbol (2019) highlight how an inequitable organization can be transformed by these relationships. In terms of leadership in nature-based preschool education, these relationships are key components to assuring that every child is provided the opportunity to learn and experience nature (Larimore, 2016).

The concept of transformative leadership theory is rooted in the work of Freire (1985). He suggests that education is about finding meaning, and that learning without meaning has little impact. Freire (1985) saw learning as a means to freedom. To attain this freedom, of course, the learning must have meaning, and be connected to the “student’s sociocultural reality” (p. 46). Hence, education is a quest for both teachers and students to not only find meaning, but also put the learning into the appropriate context.

Transformative leadership theory provided a framework for this study in various ways. The primary structure is built on three pillars: inclusion, equity, and democracy. The shell of this

structure was based on Shields' (2010) and Freire's (1985) philosophy of immersing education into the specific environment in which it exists.

Inclusion. Shields (2010) sees transformative leadership theory as a theory based on rights at a societal level, and that every individual is entitled to be treated with dignity and respect. This formidable statement is what makes it an important pillar in the theoretical framework. A significant component of nature-based education is the promotion of a particular set of values, which include awareness and appreciation for the environment (Dolesh, 2015; Ferreira et al., 2016). This set of values certainly has impacts at a societal level, and, as noted by Shields (2010), all students deserve the opportunity to participate in this process.

Equity. Another key component of transformative leadership theory is equity. In terms of its application to education, it is the essential work of the educational leader to create learning contexts or communities in which social and cultural capital is enhanced in such a way as to provide opportunities for all students as they take their place as functioning and contributing members of society. By enhancing the cultural capital of a given learning community, educational leaders have the opportunity to make significant and consequential contributions to society (Shields, 2010; Shields & Hesbol, 2019). As it applies to nature-based preschool education, this component, equity, provides all students with the possibility of healthy growth and development (Merewether, 2015; Filler, 2015; Lysklett & Berger, 2017; Barnett, 2016; Yildirim & Akamca, 2017; Wojciehowski & Ernst, 2018), and its positive effects on cognitive, linguistic, socio-emotional, and motor skills (Yildirim & Akamca, 2017).

Democracy. Democracy is about having a voice. Shields (2010) contends that leadership that results in changes in pedagogical approaches, highlights the relationship between equitable instructional practices and the creation of democratic learning contexts in which all

children are included and their needs attended to. By being aware of, and concerned about, the wider social issues that account for some children being more able learners than others, educational leaders and teachers can more readily take responsibility for the changes they affect within their schools (Shields, 2010).

In terms of nature-based preschool education, this translates into uniting rather than dividing students (Shields & Hesbol, 2019). Shields (2010) suggests building community within schools as opposed to dividing students into separate remedial groups. This study explored this practice as a pillar supporting the frame of transformative leadership in nature-based preschools.

Immersion. Whereas, inclusion, equity, and democracy are the pillars of this theory, immersion is the body, or shell, of this theoretical framework. Immersion in nature is an important element of nature-based education (Handler & Epstein, 2010; Keffer, 2015). The immersion of education and educational leadership into the context in which it exists is a key component of transformative leadership theory (Freire, 1985; Shields, 2010; Shields & Hesbol, 2019). The integration of these two concepts, and how this can transform leadership in nature-based preschool programs, was a primary focus of this study.

Review of the Literature

The primary objective of this review of the literature is to examine prior research on nature-based preschool education. The purposes include analyses of the research and addressing the key components of these prior studies. These components consist of a brief history of nature-based education, definitions, and its functions at the preschool level, which are both pedagogical and purposeful. This review also compares these functions in various settings. Further, the review analyzes the impact of nature-based education on the growth, development, and values-

orientation of preschool children. The significance of educator preparation and the connections to transformative leadership are also addressed.

History of Nature-Based Education

Nature-based education is often associated with the nature study movement of the late nineteenth and early twentieth centuries. The term nature study movement was propagated by Cornell University professor of horticulture, Liberty Hyde Bailey (Peters & Armitage, 2011). Many of the central figures in the environmental movement, such as Leopold and Carson, were grounded in nature study as children, and it clearly influenced their worldview (Armitage, 2009). These early connections with nature are what led these founding environmentalists to their philosophies and conclusions that influence our understanding of nature-based education today.

Definitions of Nature-Based Education

Nature-based education is an educational philosophy where nature and the outdoors are the organizing themes of the curriculum, and the natural world is the component that integrates all elements of the pedagogy (Larimore, 2016). Another notable element of nature-based education is the promotion of the value of awareness and appreciation for the environment (Dolesh, 2015; Ferreira et al., 2016). The general topic of this review is nature-based education for preschool children, ages three to five. Further inquiry delves into the definitions, functions, impacts on the growth, development, and values of children, as well as leadership in this realm. The studies analyzed in this literature review were primarily conducted at nature-based preschools and preschool programs. These programs are located in the United States and various other countries around the world.

Nature-based education at the preschool level is not a topic that, historically, has been extensively researched. It has only been within the last decade that significant studies have

emerged. Larimore (2016) states that nature-based preschools have typically been defined as licensed programs for three- to five-year old children with at least a quarter of the class day held outside. Nature is the driving theme of the curriculum, and it is infused into the indoor spaces, as well.

Finch and Bailie (2015) characterize nature-based preschools as having four key components. These components include: nature themes and daily nature investigations as the central organizing concepts; nature is not just one concept centered among many, but rather is the focus of the preschool's philosophy, methodologies, classroom design, outdoor spaces, and public face; the program must be equally committed to both high standards of developmentally appropriate early childhood education and the best practices of environmental education; the preschool must support dual aims for children, both meeting child development goals and acquiring conservation values (Finch & Bailie, 2015). These four components feature important general education concepts infused with nature themes throughout.

Though a small number of nature-based preschools have existed around the world for decades, it was not until Louv (2005) highlighted what he called "nature-deficit disorder" (p. 10) that they were brought to the forefront of peoples' consciousness. Nature-deficit disorder, according to Louv (2005), describes the costs of peoples' disconnection from nature, including diminished use of the senses, difficulties with attention, and higher rates of physical, mental, and emotional illnesses. Further, he suggests that direct exposure to nature is an integral part of healthy childhood development and for the physical and emotional health of children (Louv, 2005).

Functions of Nature-Based Education at the Preschool Level

Nature-based education functions as both pedagogy and as a tool to promote certain values (Breiting, 2008; Ferreira et al., 2016; Nicol, 2014; Nxumalo, 2018). Key elements of nature-based education pedagogy are scaffolding, immersion in nature, and partnerships with environmental organizations (Bailie, 2010; Dolesh, 2015; Handler & Epstein, 2010; Keffer, 2015; Zurek et al., 2014). Louv (2016) provides activities, resources, and primary and secondary research on the benefits of nature-based education. He goes on to explain that it is not only necessary for parents to expose children to nature, and encourage nature-based learning in schools, but to embed nature-based learning in all aspects of life. This could include daily activities, household chores, and even seeking out doctors and other professionals that share a similar worldview.

Pedagogy. Zurek et al. (2014) note that scaffolding is a key component to a nature-based curriculum. In a qualitative study utilizing a running record of seventy-four observations over a two-year period, the researchers examined the teaching methods used in a nature-based preschool. Scaffolding, the process of allowing children to problem solve with a gradual release of outside adult assistance, was seen as a consistent pedagogical tool (Zurek et al., 2014). The findings indicated that this teaching method had a significant impact on creating a culture of inquiry. Inferential questioning, a component of scaffolding, was also a frequently used strategy (Zurek et al., 2014). The research team surmised that this was effective given that preschoolers are prone to asking questions about their immediate surroundings as opposed to overarching concepts (Zurek et al., 2014). In turn, this line of questioning required the students to consider the reasons why certain phenomena existed.

Handler and Epstein (2010) also acknowledge that an emerging body of research shows the harmful effects of children's separation from nature and the benefits of strengthening those ties. Further, it was determined that there are significant implications for children's physical, intellectual, and social-emotional development if the separation from nature is not addressed (Handler & Epstein, 2010). An important finding of their research was that adult attitudes toward the natural environment have a profound effect on how children view and experience it (Handler & Epstein, 2010). Given this data, it is critical for educators to understand that it is not only important to develop solid curricula, but it must be delivered in a positive and developmentally appropriate way (Handler & Epstein, 2010).

Keffer (2015) determined through observation and research of nature immersion therapy that preschool children's health and wellness improved greatly. This work was conducted as part of the 10 Million Kids Outdoors Initiative. In 2012, the National Recreation and Parks Association (NRPA), in partnership with the National Wildlife Federation (NWF), launched an ambitious initiative at the National Congress on Parks and Recreation in Anaheim, California, to connect ten million kids to nature and the outdoors. These two groups believed that by working together they could connect park and recreation agencies with schools and other institutions to provide meaningful time outdoors for children in nature-based outdoor activities, especially in recurring activities and experiences which have been shown to have the most significant effects on creating an appreciation for nature (Dolesh, 2015). The organizers believe that by 2015 they had reached their goal of ten million children. The work continues today encouraging parents, grandparents, caregivers, and adults in general, to spend time outdoors with children. The organizers are coordinating with child-serving institutions, such as park and recreation agencies

and schools, to provide more opportunities for children to spend in nature-based activities, and to encourage policy reforms at all levels to enable more children to spend time in nature.

A key component of effective nature-based education is developing partnerships with environmental education organizations and other nature centers. Bailie (2010) suggests that by partnering with nature centers, early childhood teachers can offer meaningful experiences and education for young children in the natural world. However, an important factor to consider is that the experiences must be developmentally appropriate for the education to have the most significant impact.

There are a variety of educational philosophies commonly utilized in nature-based preschool education. These include place-based education, the Reggio Emilia Approach, Waldorf education, Montessori education, and play-based education. Place-based education is the process of using the local community and environment as a starting point to teach concepts in various disciplines across the curriculum (Sobel, 2004). The Reggio Emilia Approach to early childhood education is an innovative pedagogy that “values the child as strong, capable and resilient; rich with wonder and knowledge. Every child brings with them deep curiosity and potential and this innate curiosity drives their interest to understand their world and their place within it” (Reggio Children, 2020). Waldorf education focuses on creativity, experiential education, and life-long learning. It fosters a balance of independence and inclusion and is designed to generate an enthusiasm for learning (Association of Waldorf Schools of North America, 2020). At the core of Montessori education is self-direction. Most Montessori preschools encourage hands-on learning and encourage play and collaborative activities. Mixed-age classrooms are commonly utilized to teach children how to work together and learn from each other as they become proficient in basic life skills (McGolerick, 2017). Play-based

education is based on the theory that moving in and out of imaginary situations via play will enhance a child's ability to move between abstract concepts and concrete situations (Abdo & Carulla, 2019).

Promotion of Environmentally Friendly Values. Ferreira et al. (2016) conducted a study to determine whether nature-based education produced environmentally friendly behaviors in preschool children. The study examined both teaching pedagogy and resources, as well as the children's perceptions of how these teaching methods affected them. Using a qualitative study, the researchers conducted group interviews using song, participant observation, and collective dialogue with the children. All these methods were used at the beginning and at the end of each learning activity with the children. It was determined that this relaxed atmosphere promoted an environmentally conscious mindset in the preschool children that they studied. In the context of recycling and reducing the waste stream, the children learned valuable environmentally friendly concepts. At the end of the study, the children understood the role of recycling bins, distinguished the different types of recycling bins, understood why people should use recycling bins, identified biodegradable and non-biodegradable materials, understood the importance of reusing waste, recognized the importance of their behavior for the environment, and knew the importance of environmental protection. Further, the children showed increased ability to work in groups and developed their speaking skills.

Impact of Nature-Based Pedagogy and Curriculum on Preschool Children

Several studies have been conducted within the last five years that point to the health and cognitive benefits of nature-based education for preschool children. These studies have shown notable positive impacts on their growth and development, as well as health and cognitive

ability. Further, it has also been demonstrated that nature-based education is instrumental in influencing an environmentally friendly values orientation.

Growth and Development. Through observation and research, Keffer (2015) determined that nature-based learning conducted in an outdoor setting was greatly beneficial to all children's health and well-being. While not specifically focused on preschool children, these health benefits include general wellness, reduction of attention deficit hyperactivity disorder (ADHD) symptoms, and an increase in critical thinking skills (Keffer, 2015). Merewether (2015) investigated young children's perspectives of the outdoor environment in their early childhood education settings. This qualitative study included 50 three- and four-year-old children and was conducted using multi-method research and educational approaches including child-led tours, photography, and photographic elicitation and conversations. The findings emphasized the importance of children being able to pretend, move, observe, and be social. These findings have implications for designers of both curriculum and outdoor spaces for young children (Merewether, 2015).

Conducting research at an organization called Educating Children Outside (ECO), Filler (2015) observed that through nature-based education children learn to navigate each day's challenges in a more carefree way. They learn and grow both physically and mentally. ECO operates at a 1:8 ratio (instructor to child) at all times. ECO is led by a licensed and certified early childhood educator. Students are divided into groups and the three-year old children participate two mornings per week and four-year old children participate three mornings per week. This formula has shown tremendous benefits to the children's overall health and well-being. Filler (2015) concludes that an informative method to learn more about the health

benefits and the ways that humans connect with nature is to examine how children interact with their natural world.

Lysklett and Berger (2017) conducted a mixed-methods study that included both questionnaires and interviews that intended to provide basic information about how nature preschools in Norway differ from other preschools in how they organize information. A total of 204 educators were included in this study from 56 nature preschools and 52 other preschools. The conclusion was that nature preschools, where the students spend a large amount of time in nature, have routines that grant children a significant amount of trust. These findings have important implications for the designers of nature-based preschool curricula. By allowing a high degree of trust in the children, these preschools are utilizing a significantly student-centered approach. This level of trust is also applicable to Filler's (2015) aforementioned care-free methodology.

In a multiple case study of three nature-based preschools, Barnett (2016) noted that all the adult educators displayed a relaxed and calm attitude. The participants dealt with change in a flexible and positive manner. On a regular basis the flow of the school day changed to match the children's interests, to accommodate for weather patterns, and to ensure the students' enjoyment of their time in nature. This flexibility and accommodation are integral to the students' enjoyment of nature, and enjoyment is a critical component of effective nature-based education (Barnett, 2016).

Further studies have expanded on the previously mentioned approaches. Yildirim and Akamca (2017) conducted a quantitative study in Turkey that was directed towards revealing the effects of outdoor activities on cognitive, motor, linguistic and social-emotional development of preschool children. Through a pretest and posttest process they found that even among the most

disadvantaged students, outdoor activities improved the cognitive, linguistic, social-emotional, and motor skills of preschool children. This highlights the fact that not only does nature-based education have positive health and well-being effects, it can also improve cognitive and motor skills.

Wojciehowski and Ernst (2018) conducted a study that found that nature-based education in preschool had a profoundly positive impact on creative thinking test scores. The instrument they used was called the Thinking Creatively in Action and Movement (TCAM) assessment. Participants in this quasi experimental study took a pretest and a posttest. These participants included children ages three to six who attended four nature preschools in Minnesota. In addition, participants included one class of children who attended a non-nature preschool program located on a university campus, administered through the university, and within the same geographic region as the nature preschools. All enrolled preschool children were invited to participate. There were 19 children from nature preschool A, 13 children from nature preschool B, 17 children from nature preschool C, and 26 children from nature preschool D who participated in this study. There were 11 children from the non-nature preschool who also participated in this study. Wojciehowski and Ernst (2018) suggest that the findings of this study are significant because there are a plethora of environmental issues that will need creative solutions in the future. Although the sample size is relatively small, the results indicate that nature-based education, particularly nature-play, has a positive impact on the creative thinking of preschoolers.

Values. Nature-based education has often been used by parents and educators to promote a certain set of values. Breiting (2008), through a series of interviews of educators at a variety of nature-based education centers, asked the overarching question: Does environmental education

increase students' interest in sustainability? It was determined through these interviews that when given specific tasks in nature, students would take greater ownership of these tasks than when simply learning about the environment in a classroom. Nicol (2014) takes this a step further and argues that nature-based education could be considered a means to not only encourage, but to promote an environmentally friendly values orientation.

Ferreira et al. (2016), as referenced earlier in terms of pedagogy and purpose, examined nature-based education's impact on children's values, as well. This study, to establish whether nature-based education produced environmentally friendly behaviors in preschool children, examined both teaching pedagogy and resources, as well as the children's perceptions of how these teaching methods affected them. Through group interviews using song, participant observation, and collective dialogue with the children, the researchers found that this relaxed atmosphere promoted an environmentally friendly mindset in the preschool children that were studied. This concept was further promoted in a qualitative study conducted in British Columbia, Canada by Nxumalo (2018), which examined a nature-based preschool using observation and interviews. The purpose of this study was to determine if the study of bees could influence children's attitudes toward nature in general. What they found was that children's close connection with the life and death of bees had a significant effect on their desire to live more ethical lives (Nxumalo, 2018).

Educator Preparation

Professional development is a key component of any quality educational program. In terms of nature-based preschool education, Spektor-Levy and Abramovich (2016) conducted a study that investigated the influence of the Environmental Leadership Professional Development (ELPD) program on preschool teachers. The goal of the program was to significantly enhance

environmental awareness and to develop environmental citizenship and leadership in these teachers. The program's offerings included experiential and reflective learning, meetings with environmental researchers and educators, discussions, a course website, and an environmental undertaking exemplifying active environmental leadership and citizenship (Spektor-Levy & Abramovich, 2016). The authors gathered information through questionnaires which were presented before, immediately after, and one year after the end of the program. Another source of data was portfolios created by the participants documenting their environmental undertaking's processes and outcomes. This qualitative evidence highlighted positive changes among the participants. The educators in the study demonstrated personal growth and empowerment as educators and leaders, even a year after the program ended. The results indicate that the ELPD program may serve as a professional development model for empowering teachers to become both environmental leaders and environmental citizen role models (Spektor-Levy & Abramovich, 2016).

There are several nature-based educator preparation programs conducting workshops and trainings in the area of the United States where this study takes place. The principles of these programs typically center around discovery and expression (Project Learning Tree, 2020), developing values-based educational leaders (Nature-Based Learning Institute, 2020), and healthy child development practices (Timbernook, 2020). These programs provide the critical support that educational leaders need to operate functioning nature-based preschool programs. This support includes business planning and philosophy development (Samara Early Learning, 2020).

Transformative Leadership

As noted previously, few studies have been conducted on leadership in nature-based preschool education. Shields (2010), however, contends that transformative leadership can provide a more inclusive, equitable, and democratic notion of education. These are key principles in education, and, as preschool children are at the outset of their educational paths, a solid start is critical (Louv, 2005). The transformative leadership principles of inclusion, equity, and democracy can provide a secure educational underpinning for young learners (Shields, 2010).

Nature-based education has positive impacts on the growth and development of preschool children (Louv, 2005, Yildirim & Akamca, 2017). The importance of utilizing the appropriate leadership style, therefore, is significant (Spektor-Levy & Abramovich, 2017). Additionally, the influence that educational leaders have on early childhood education (Lunneblad & Garvis, 2017), makes these key transformative leadership principles important components to both the education of preschool children and to this study.

Conclusion

Nature-based education has a long history. It has roots in the Nature Study Movement of the late 1800s, which promoted a thirst for knowledge as opposed to the recitation of facts (Bailie, 2012). However, it has only been extensively studied in the last decade. In order to effectively study nature-based education it is important to have a working definition. The key components to the definition of nature-based education are nature themes as an organizing concept, a significant part of the class day is held outside, and a focus on conservation values (Finch & Bailie, 2015; Larimore, 2016).

Nature-based education also serves a variety of functions for all children. It is typically done with a purpose, which can be both pedagogical and values based. In terms of pedagogy, scaffolding is typically a key component (Zurek et al., 2014). Pedagogy also includes partnerships with other environmental organizations (Bailie, 2010) and immersion in nature (Handler & Epstein, 2010; Keffer, 2015). The promotion of environmentally friendly values is also a function of nature-based education (Ferreira et al., 2016). These environmentally friendly values are encouraged through exposure to nature (Dolesh, 2015; Ferreira et al., 2016) and the study of nature-based topics (Breiting, 2008; Nicol, 2014; Nxumalo, 2018).

In terms of preschool-aged children, nature-based education has been shown to have positive impacts on their growth and development (Merewether, 2015; Filler, 2015; Lysklett & Berger, 2017; Barnett, 2016; Yildirim & Akamca, 2017; Wojciehowski & Ernst, 2018). Yildirim and Akamca (2017) concluded that outdoor, nature-based activities have a positive effect on cognitive, linguistic, socio-emotional, and motor skills. Through a pretest and posttest process they determined that even the most socioeconomically disadvantaged students showed significant improvement on these skills when exposed to a nature-based education (Yildirim & Akamca, 2017).

To date, research on nature-based education as evidenced in the literature reviewed here, has primarily focused on growth, development, and conservation values. This is true particularly at the preschool level. While some studies have been conducted on the impact of adult attitudes regarding nature, there has been very little research on the specific leadership styles that are most effective in promoting these developmental and values-oriented outcomes.

CHAPTER 3: METHODOLOGY

This chapter details the purpose of the study and defines the research questions and design. Additionally, the chapter presents specific information on the study sites and population. The sampling methods, instrumentation, and data collection procedures are also addressed. The two levels of data analysis, within case and cross case, are also explained. The limitations and ethical issues are also discussed. The chapter concludes with a summary of the methodology and its components.

The purpose of this qualitative case study was to examine educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education and their impact on stakeholders. The rationale for the study was to find meaning in the connection between transformative leadership and the leaders' perceptions of their impact on stakeholders at nature-based preschools. Bloomberg and Volpe (2015) suggest that a researcher describe the methodology with a "rationale for its suitability regarding addressing the research questions and citing appropriate methodological literature" (p. 11). A case study is a suitable research design because it takes "into consideration how a phenomenon is influenced by the context within which it is situated" (Baxter & Jack, 2008, p. 556). In this case, the phenomenon was leadership style, and the contexts were nature-based preschool programs.

Research Questions and Design

This study addressed the following research questions: What are educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education? What are educational leaders of nature-based preschool programs' perceptions of the impact their leadership style has upon their

schools' stakeholders, which include teachers, students, parents, and community? The research questions were answerable with the acquired data because the interview questions (Appendix) were directly aligned with the research questions.

The study took the form of a bounded case study with multiple sites. According to Creswell and Guetterman (2019) a case study "is a variation of an ethnography in that the researcher provides an in-depth exploration of a bounded system (e.g., an activity, an event, a process, or an individual) based on extensive data collection" (p. 620). Baxter and Jack (2008) suggest placing boundaries on a case so it isn't too broad or contains too many objectives. This case study was bound by five specific nature-based preschool programs, and the perceptions of the leaders of these programs regarding the pillars of transformative leadership: equity, diversity, and democracy (Shields, 2010). These criteria made this bounded case study narrow enough to be addressed in a single study.

Site Information and Population

The research took place at five organizations with nature-based preschool programs. The five sites are identified in this study with pseudonyms to alleviate any privacy concerns. The leaders that were interviewed are addressed by titles such as the *Education Director of Nature-Based Preschool Program A*, not their actual names, to protect their anonymity. Site descriptions include the roles and educational backgrounds of the participants, the year of the program's founding, program size, core philosophy, funding, and other available demographic information.

Sites

Nature-Based Preschool Program A is an environmental education organization with a nature-based preschool component. The preschool program's philosophy is to promote

environmental literacy so that children can become effective stewards of the environment. Nature-Based Preschool Program B is a Reggio Emilia-inspired nature-based preschool. The central philosophy of this program is based on connecting children with nature and promoting the values of wildlife and environmental sustainability. Nature-Based Preschool Program C is a Montessori-influenced nature-based preschool with an experiential education focus that promotes collaborative play in nature and environmental stewardship. Nature-Based Preschool Program D is a nature-based school with multiple grade levels, including a preschool component. It focuses on place-based education where children's education is rooted in the context of the natural environment. Their programs promote responsible citizenship and engage students in their community. Nature-Based Preschool Program E is a home-based nature preschool connected to a national franchise. It is a small Waldorf-influenced multi-aged nature program with a play-based option for preschoolers. Their core philosophy is based on the following tenets: outdoor play is therapeutic, children require time and space to move their bodies, nature provides the ultimate sensory experience, children deserve distance from the adult world regularly, ample outdoor play benefits children physically, mentally, and emotionally. All of the preschools are located in a primarily rural state in the northeastern United States.

Participants

At each site, one to three leaders participated in the study. At Nature-Based Preschool Program A, the Director of Education and the Early Childhood Education Program Manager were interviewed. At Nature-Based Preschool Program B, the Founder/Education Director was a participant. At Nature-Based Preschool Program C, the Education Director was the participant. At Nature-Based Preschool Program D, three leaders participated. The Founder, the Director, and the Lead Teacher were interviewed at this site. Lastly, at Nature-Based Preschool Program

E, the Founder/Lead Teacher was the participant. Merriam (2009) explains that an adequate number of participants, sites, or activities to answer the research questions is necessary, and that a saturation point must be reached. Given that nature-based preschool programs are generally small, this point of saturation was reached with a small population at each site.

The eight participants in this study provided ample data to answer the research questions and provide reasonable coverage (Patton 2002, Merriam, 2009). The five sites have students with slightly different age ranges, different population sizes, with varying core philosophies. All of the educational leaders have varied backgrounds, as well. Some leaders have environmental education backgrounds, while some have backgrounds in early education.

Sampling Method

In order to provide a sense of the scope of a study, a researcher must describe and identify in detail the methods used to select the research sample (Bloomberg & Volpe, 2016). In this study a purposeful sampling procedure was used to select the research sample. Purposeful sampling is based on the premise that the researcher wants to recognize, understand, and gain insight, so as a result, must select a sample from which the most can be learned (Merriam, 2009). This involves identifying individuals or groups of individuals that are particularly experienced with a phenomenon of interest (Palinkas et al., 2015). The criteria for selection for this study was that all participants be educational leaders of nature-based preschool programs and have supervisory and/or decision-making authority at the school. This primarily included program founders, education directors, and lead teachers.

The rationale for choosing the educational leaders of these nature-based programs was that it is their perspectives on leadership that drove this study. These individuals yielded the insight and understanding of the phenomenon of transformative leadership principles in nature-

based preschool educational leaders (Bloomberg & Volpe, 2016). The research questions guided the study, and the data collected through in-depth interviews were analyzed. The resulting analysis answered the research questions regarding the educational leaders' perceptions of the impact of their leadership styles and about the significance of the principles of transformative leadership in their actions. Nature-based preschool leaders' viewpoints were key elements of the data. This sample fits with the purpose of the study as it is these leaders that assisted in the exploration of transformative leadership principles in nature-based preschool education.

Instrumentation and Data Collection Procedures

Multiple in-depth interviews were utilized for this study. The interview questions were field tested as a means of improving the instrument. Data collection took place over four weeks in February of 2021. At that point in the school year, the educational leaders had a sense of the challenges they faced and a true understanding of their school populations.

There were limitations to this data collection method. Roberts (2010) suggests that limitations, typically, are areas where the researcher has little control, but that it is important to express them genuinely and explicitly. Limitations of the methods of this study were the small population size (eight leaders at five preschools), length of time available to meet with these preschool leaders, and access to the leaders and their preschool programs.

Interview

Interviewing was the instrument utilized because "it has the potential to elicit rich, thick description" (Bloomberg & Volpe, 2015, p. 154). Further, it allows the researcher to ask clarifying questions and probe for supplemental details. "Interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them. It is also necessary to interview when we are interested in past events that are impossible to replicate"

(Merriam, 2009, p. 88). There was a prepared set of questions, or interview guide; however, the freedom to explore deeper when the opportunity arose was utilized in a semi-structured manner (Merriam, 2009). Given the pandemic that existed at the time, personal access was difficult, so all interactions were virtual.

The framework of the interview questions revolved around the primary tenets of transformative leadership theory: equity, inclusion, and democracy. In the context of this study, equity is defined as a concept in transformative leadership where the educational leader creates learning contexts in which social capital is enhanced in such a way as to provide opportunities for all students as they take their place as functioning and contributing members of society (Shields, 2010). Inclusion in the framework of this study was education that advocates for diversity among all learners. “It presumes that the aim of inclusive school development is to eliminate exclusionary processes that are a consequence of attitudes and responses to diversity in relation to race, social class, ethnicity, religion, gender and perceived abilities” (Ainscow and Messiou, 2018, p. 2). Democracy refers to a structure of education that emphasizes justice, liberation, inclusivity, and openness (Shields, 2010).

Field Test

A field test of the interview questions was used to assist in the process of improving the instrument. A field test enlists several people to test the instrument and assess its validity (Roberts, 2010). The people selected for the field test were not involved in the study. As the researcher has colleagues at a local university not affiliated with the study, there were several people willing and able to take part in the field test. The researcher asked five people at this location to participate in the interview field testing process. The field test ensured that the instrument met the following criteria: had understandable instructions, clear wording, elicited

adequate answers, provided sufficient detail, accounted for regional differences, lacked irrelevant questions, were an appropriate length, and were convenient for the respondents (Roberts, 2010).

This study utilized these criteria during the field test process to revise the instrument.

Based on the results of the field test, the following revisions were made. The introduction was revised to make the purpose of the interview clearer. While the overall focus of the interview questions was not changed, two of the questions were adjusted for clarity. Question 12 was adjusted to include all of the core principles of transformative leadership: equity, inclusion, and democracy. Question 14 was simplified to make it more readable and understandable based on the feedback from the field test respondents. Lastly, the closing statement was condensed to reduce repetition.

Data Analysis

This section examines how the data was coded and the themes and patterns that emerged. These themes and patterns were analyzed on two levels, within-case analysis and cross-case analysis. The findings were then validated and evaluated for credibility, transferability, confirmability, and trustworthiness.

Coding

This study implemented a six-step process for coding data. To get a sense of the whole picture, all transcriptions were read carefully and thoroughly. The researcher was looking for specific evidence, based on the first research question, of transformative leadership practices in the responses of the participants. The next step was to make a list of all the topics that emerged from the previous step. These topics were clustered together. Each of the topics were abbreviated, and they became the codes. During this process, new categories and codes began to emerge. The number of categories was then narrowed to a manageable level. This process was

repeated a second time based on the second research question regarding the leaders' perceptions of the impact of their leadership style on their stakeholders. At this point, interrelationships and patterns became apparent.

The initial proposal for this study described an eight-step coding process. However, the data that was collected was not as broad as initially anticipated. The participants' responses were relatively uniform in their content, and there was less variety than the researcher had prepared for. So, it was not necessary to choose just one transcript to find the essential meaning as initially stated; each transcript had very similar meaning. This depth and consistency of response further substantiated the themes that emerged.

Skillful coding "leads to total immersion in and closeness with your data, and becoming intimately familiar with its details, nuances, and subtleties" (Bloomberg & Volpe, 2016, p. 200). In this study there were eight participants located at five different sites. It is a relatively small sample size. However, that afforded the researcher the ability to look deeply into the data and discover multiple dimensions within it.

Themes and Patterns

The themes and patterns that emerged were analyzed using two levels of data analysis: within-case analysis and cross-case analysis. The first step was within-case analysis. Merriam (2009) explains that at this level "each case is treated as a comprehensive case in and of itself" (p. 204). This method was used to learn about the context in which these programs operate and the variables that impact the case.

The cross-case analysis stage begins when the analysis of each individual case is completed (Merriam, 2009). This method was used to identify themes, compare cases, and

develop descriptions of leadership at nature-based preschools. This led to the conclusions regarding transformative leadership in nature-based preschools that are identified in Chapter 5.

At this stage the findings were validated and assessed for trustworthiness. Triangulation, member checks, and interrater reliability were used to establish trustworthiness (Roberts, 2010). These concepts are further explored in the following section.

Limitations of the Research Design

Limitations of a “study are those characteristics of design or methodology that impacted or influenced the interpretation of the findings. [They also] expose the conditions that may weaken the study” (Bloomberg & Volpe, 2016, p. 164). Specific limitations to this study included a small sample size, limitations of access to the study sites and participants, and personal biases. The small sample size was addressed through the depth and breadth of the interview questions. The limitations of access to the study sites and participants were addressed through virtual interviews with the nature-based preschool leaders. The virtual platform of Zoom was used to conduct the interviews.

Ethical issues and conflicts of interest are also discussed in this chapter. These ethical issues include potential biases. Roberts (2010) has developed guidelines to assist in the elimination of bias in scholarly writing. Among these guidelines are potential pitfalls for bias, and how to avoid them. Roberts (2010) suggests “avoiding language that suggests evaluation or reinforces stereotypes... [or] make unsupported assumptions...” (p. 41). As this researcher works in this field of study, every effort was made to avoid these biases. Member checks and peer debriefing assisted in this process.

Credibility

The criterion of credibility ensures that the researcher's portrayal of the participants and their perceptions match. Specifically, the researcher must accurately represent what the participants think (Bloomberg & Volpe, 2016). Methods that were used in this study to verify credibility included triangulation of sources, member checking of transcripts, and peer debriefing. Peer debriefing involves inviting a colleague to analyze field notes to assist the researcher in examining assumptions (Bloomberg & Volpe, 2016). Credibility can be "approached through careful attention to a study's conceptualization and the way in which the data are collected, analyzed, and interpreted, and the way in which the findings are presented" (Merriam, 2009, p. 210). Careful attention is the key phrase here. In this study, the conceptual framework was closely adhered to. Consequently, another similar study could be conducted and produce comparable results.

Member Checking Procedures

Member checking is the process of asking for critique of the emerging conclusions of the study from the respondents (Merriam, 2009). This can take place by feeding back data, categories, interpretations, and conclusions to the respondents from whom the data were originally acquired. This process strengthens the data because the researcher and respondents tend to look at the data from different perspectives (Korstjens & Moser, 2018). In this study each of the preschool program educational leaders that were interviewed had the opportunity to critique the transcribed interview responses, which adds to the credibility of the study. Merriam (2009) states that "the process involved in member checks is to take your preliminary analysis back to some of the participants and ask whether your interpretation 'rings true'" (p. 217). In

this study, the respondents were asked if the researcher's interpretation matched their experience. The participants all corroborated the data.

Transferability

Transferability refers to the fit “between the research context and other contexts as judged by the reader” (Bloomberg & Volpe, 2016, p. 164). In this study, rich, thick descriptions of the settings, programs, leadership styles and their impacts were used. Merriam (2009) defines thick description as the “complete, literal description of the incident or entity being investigated” (p. 43). In this study, the entities were the five preschools being explored. The behaviors and experiences of the eight nature-based preschool leaders were examined, as were the contexts in which these behaviors and experiences took place so they will have more meaning to an outside party.

Confirmability

Korstjens and Moser (2018) define confirmability as the “degree to which the findings of the research study could be confirmed by other researchers. Confirmability is concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but clearly derived from the data” (p. 121). This study employed an audit trail. This included a complete set of notes on decisions made during the research process, reflections, sampling, research materials adopted, emergence of the findings and information about the data management (Korstjens & Moser, 2018). This process allows unbiased readers to validate the findings of a study by following the trail of the researcher (Merriam, 2009).

Participant Rights

Ethical considerations are of the utmost importance when conducting a qualitative study. It is the responsibility of the researcher to protect the rights and privacy of the participants in the study. Ethical issues can originate in any phase of the research process, including data collection, data analysis and interpretation, and publication of the findings (Bloomberg & Volpe, 2016). Possible ethical issues in terms of data collection are protection of the privacy and rights of the participants and ensuring confidentiality. These protections can take place in several forms. However, the most significant consideration is that “informed consent is central to research ethics” (Bloomberg & Volpe, 2016, p. 162). The participants must be aware of what they are committing to, as well as how the information will be used. In terms of data analysis and interpretation, it is important for the researcher to take coherent notes and remain organized in order to avoid any confusion over the data being analyzed.

In this study, pseudonyms were used for all organizations involved, and title names were used to identify the participants. These details were disclosed in the consent letter that was presented to the participants. All participation in this study was confidential, and data was reported in a comprehensive manner. If specific examples or quotations were used, all identifying details were changed. All participation in the study was voluntary and is only known by the researcher, the dissertation committee, and the Institutional Review Board (IRB). The study received IRB approval based on the study proposal. The researcher has completed the Collaborative Institutional Training Initiative (CITI) program. The researcher provided clear information on the purpose and process of the research and ensured confidentiality of the data. The recordings and transcripts of the interviews were stored in a cloud-based, password-protected account. At any point, the participants were free to withdraw from the study. There

was minimal risk to the participants. The researcher was attentive to any ethical concerns or considerations that arose during the study. Further, the process remained completely transparent, and the respondents had the opportunity to critique and comment on the data prior to publication.

Conclusion and Summary

This qualitative case study was intrinsically bound by the scope of transformative leadership and educational leaders' perceptions of its impacts on nature-based preschool education. The purpose of this qualitative case study was to explore the significance of the components of transformative leadership and how they are perceived by nature-based preschool educational leaders. Further, this study analyzed eight nature-based preschool educational leaders' perceptions of the impact their leadership style has upon their school's stakeholders, which include teachers, students, parents, and community. This study begins to fill the existing void in research on the effects of leadership in nature-based preschool education. Credibility, transferability, and confirmability have been attended to through member checking, triangulation, peer debriefing, thick description, and leaving a coherent audit trail. Further, every effort was made to address any ethical issues or conflicts of interest.

CHAPTER 4: RESULTS

This qualitative case study examined educational leaders' perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education, as well as the impact of their leadership style on stakeholders. This researcher believed that, based on the work of Freire (1998) and Shields (2010), transformative leadership and leadership for inclusive, equitable, and democratic learning environments are interdependent variables. This chapter describes the analysis method, the coding process and the emergence of themes and patterns, and presents the key findings obtained in the interviews of nature-based preschool program leaders.

Brief Review of Methodology

This study was conducted by interviewing eight educational leaders at five different preschool nature-based programs. These interviews took place over the course of four weeks during the month of February 2021. The educational leaders' tenures at their current locations ranged from eight years to over thirty years. The educational leaders interviewed represented a variety of titles and roles, but all had supervisory positions in their respective programs (see Table 1). Each interview followed the set interview protocol (Appendix). On occasion, follow-up questions or clarifications were necessary. The interview questions were crafted to elicit not just thoughts about experiences, but descriptions of experiences themselves. Interviews were conducted and recorded using the Zoom virtual platform and then transcribed. Abridged transcripts were sent to each participant to confirm that the interview was accurate and to ask for any additional commentary. Once interview data were confirmed, transcripts were coded.

Table 1

Participant Table

Site/ Participant	Role/Educational Background	Year of Founding	Size of Program	Core Philosophy	Funding
A/1	Director of Education/ Environmental Education	2005	Average 350 per year	Authentic/ Science-Based	Private non- profit
A/2	Early Childhood Education Program Manager/Early Childhood Education and Environmental Education				
B/1	Founder/Education Director/Environmental Education and Leadership	2009	52 enrolled with 36 on site at a time	Reggio Emilia Approach	Private
C/1	Education Director/Environmental Education	2011	32 during school year plus 20 in summer	Montessori	Private
D/1	Founder/Owner/Farming	1989	Licensed for 40 students	Multiple educational approaches including Reggio Emilia, Waldorf, and Montessori	Private
D/2	Director/ Teacher/Early Childhood Education				
D/3	Lead Teacher/Early Childhood Education				
E/1	Founder/ Lead Teacher/Waldorf and Therapeutic Recreation	2018	15-18 students per session with multiple sessions per year	Waldorf- influenced and play- based	Private

This study employed a six-step process for coding data which included getting a sense of the whole, making a list of topics, going back to the data and abbreviating topics as codes, creating categories, alphabetizing the codes, and assembling the data belonging to each category in one place. This process was repeated until a manageable number of categories and codes emerged. The result was two main categories based on the research questions, and three subcategories under each one. This chapter provides a summary of the participants' experiences, describes in more detail the codes, themes, and patterns, and provides quotes from the interviews to illustrate the participants' perspectives more clearly. Table 2 illustrates the results of the coding process.

Table 2

Coding Results

Categories	Codes	Themes and Patterns
Significance of Transformative Leadership Components:	Modeling	The Importance of Modeling
Inclusion	Reduction of Barriers	Development of Empathy and Compassion
Equity	Empathy	Transformative Leadership Principles Often Occur Naturally in Nature-Based Preschool Education
Democracy	Compassion	
Impact of Leadership Style on:	Modeling	Meeting Needs
Teachers	Trust	Relationship Building is a Key Component of Effective Leadership
Students	Building Relationships	The importance of Teamwork and Collaboration
Parents/Community	Community	Transformative Leadership Principles Often Occur Naturally in Nature-Based Preschool Education
	Communication	
	Teamwork	
	Togetherness	
	Collaboration	

Presentation of Results

This section elaborates on the results of the interviews, the codes and categories that were developed, and the themes and patterns that emerged from the data analysis process. Bloomberg and Volpe (2016) consider this an opportunity to highlight the myriad viewpoints substantiated by the different quotations that the research produces. As themes and patterns emerged, the researcher reviewed the transcripts several times to find data that supported them.

Findings

Several interesting findings emanated from the data collected. In terms of the data on the participants' backgrounds, there was a wide range of prior experiences that led them to where they are today. Most have experience in early childhood education, but in many cases the program that they are currently leading is their first experience with nature-based education. Only three of the eight participants had experience with nature-based education before acquiring their current leadership role. Only one of the participants has had leadership training.

All the nature-based preschool programs studied have been in existence for at least three years. One of the programs has been in place for over thirty years, and the founder still has an active role. The programs reach between 40 and 350 preschool students per year. This wide range is attributed to the varying formats of the programs. Nature-Based Preschool Program A reaches the most students in a year, 350 on average, but it is the only program that does outreach to other preschools and hosts field trips at its site. The other sites are place-based, so they do not reach the same number of children. Nature-Based Preschool Programs B, C, and D host essentially the same children throughout the year. Nature-Based Preschool Program E has multiple short sessions throughout the year, each session accepting 15-18 students.

These preschool programs were chosen because they all have a nature-based structure. However, aside from the variations in size and format, they also differ in their core philosophies. The leaders of Nature-Based Preschool Program A describe their program as "authentic and science-based." Nature-Based Preschool Program B has a clear Reggio Emilia philosophy, whereas Nature-Based Preschool Program C is solidly based on Montessori principles. The educational leaders of Nature-Based Preschool Program D characterize their

program as a hybrid of Reggio Emilia, Montessori, and Waldorf education. This hybridization is based on the backgrounds of the Director and Lead Teachers. Nature-Based Preschool E is a franchise operation, part of a larger organization founded on the principles of Waldorf education, and considers itself “play-based.” These programmatic differences contribute to a variety of perspectives on leadership in nature-based education. However, even though all these leaders come from different educational and experiential backgrounds, and their programs are founded upon different pedagogies, their universal emphasis on nature-based education brought forth several common themes.

Given the small sample size, eight leaders at five different sites, it is not surprising that the data set is small. However, one item of note is that there was significant uniformity in the participants’ responses. The eight educational leaders contributed considerable depth in their responses, but there wasn’t a notable breadth to their answers. This finding will be analyzed to a greater extent in the next chapter.

Emergence of Themes and Patterns

Several key themes and patterns emerged from the coding process. The one that was most prevalent is the importance of modeling the desired behaviors. Another key theme that emerged was that the educational leaders felt that meeting the needs of teachers and students is of paramount importance in accomplishing their goals. A third theme to appear from the data was that the educational leaders of the nature-based preschool programs perceived that their leadership style encouraged the development of empathy and compassion in the teachers and students in their programs. A fourth theme that emerged was the leaders’ perception of the significance of building relationships with all stakeholders. A fifth theme that surfaced was the importance of teamwork and collaboration in both the significance of transformative leadership

principles and the leaders' perceptions of their leadership styles' impact on their stakeholders. Finally, a significant pattern became evident: the principles of transformative leadership - inclusion, equity, and democracy - often occur naturally in nature-based preschool education. Table 3 organizes the themes and subthemes as they appear in the text.

Table 3

Themes and Patterns

Themes and Patterns	Subthemes and Sub Patterns
The Importance of Modeling	Promoting the Values of Transformative Leadership
	Influencing Students and Teachers
Meeting the Needs of Teachers and Students	Being Present
	Valued Members of the Team
The Development of Empathy and Compassion	Environmentally Friendly Values
	Respect for Nature
The Significance of Building Relationships	Communication
	Key to Transformative Leadership
The Importance of Teamwork and Collaboration	Reggio Emilia Approach
	Manifestation of the Principles of Transformative Leadership
Transformative Leadership Occurs Naturally	Moral and Social Justice
	Democratic Practices
	Suppositions of Transformative Leadership

The Importance of Modeling. This was the theme that materialized most often and was present in most of the categories and subcategories. In terms of the transformative leadership principles of equity, inclusion, and democracy, the code *modeling* appeared in every participant's responses. The average number of times the term was used was three. The term was used by participants in the context of their perception of its importance in promoting those values to both

students and teachers. Five of the eight participants referred to modeling as the primary way that they promote inclusion in their programs. Murphy (2012) emphasizes that children need to be able to see what these behaviors look like so they can follow them and internalize how they feel. That was the consensus of the nature-based preschool program educational leaders participating in this study, as well.

Regarding the perception of the impact that their leadership style has on their stakeholders, modeling was again a term that appeared regularly. Modeling seems to be the primary way that the educational leaders in nature-based preschool programs attempt to influence both the students and the teachers in their programs. The Founder and Lead Teacher of Nature-Based Preschool Program E explained that “modeling how to approach others” is an effective way to encourage preschool children to be kind and respectful of each other. The Director of Nature-Based Preschool D leads their teachers and staff by modeling “appropriate behavior” which includes “being positive around the students.” Also, by being willing to express their “awe of nature with teachers and staff” they can also have a positive effect on students, as well. The Early Childhood Education Program Manager of Nature-Based Preschool Program A explained that modeling can also be an effective way to show parents how they can help their children interact with nature.

Meeting the Needs of Teachers and Students. In terms of leadership style, the leaders of these programs overwhelmingly felt that meeting the needs of teachers and students was a critical component of their leadership style. In terms of the educational leaders’ perceptions of their leadership style’s impact on teachers, keywords that became codes were *trust*, *teamwork*, *togetherness*, and *building relationships*. All the participants used the phrase “meeting their needs” in one form or another, as well. Simply being present and being there when the teachers

need them are key components of most of the leaders' styles. The Founder of Nature-Based Preschool Program D posited that "it is important to make the teachers feel comfortable." This sentiment was echoed by several other nature-based preschool educational leaders.

Further, to meet their teachers' and staffs' needs, several leaders acknowledged that it is of critical importance to encourage networking and training. Not only does this improve their ability to do their jobs effectively, but it shows that they are valued members of the team. The Education Director of Nature-Based Preschool Program C stated that it is also necessary as a leader to show teachers that their ideas and contributions are valued. Another key component of meeting the needs of teachers, according to several of the educational leaders, is to show the teachers and staff members in their programs that they are all part of a team. *Teamwork* was another frequently used term that became one of the codes. This will be further discussed under the theme of the *Importance of Teamwork and Collaboration*.

Regarding students, many of the same terms were used by the participants. One term, *being present*, became one of the codes because of the frequency of its use. However, the concepts of teamwork, trust, and building relationships were also regularly alluded to. Sodikovna (2021) posits that the promotion of teamwork is a primary responsibility of an early childhood educator. This concept was abundantly apparent in the nature-based preschool leaders' perceptions of their leadership style.

The Development of Empathy and Compassion. The educational leaders perceived the development of empathy and compassion as a significant part of their work as nature-based educators. The two terms, *empathy* and *compassion*, appeared regularly in the transcription of the interviews. In fact, one or the other of the two terms, often both, were used by all the participants. Hence, they became codes, and their development clearly emerged as a

theme. Nature-based education encourages children to adopt an environmentally friendly values orientation (Ferreira et al., 2016). The findings of this study seem to bear that out.

The development of compassion and empathy is approached in several ways. One way is by teaching children about empathy through nature. This is typically done by teaching respect for nature, which, in turn, can translate into respect for all living creatures. The Director of Nature-Based Preschool Program D encourages their teachers to promote the “ideal that we (humans) have something in common with nature.” The Education Director of Nature-Based Preschool Program C was “thrilled” to be asked about their feelings regarding the benefits of nature-based education for preschoolers in terms of moral and social justice development. They explained that:

...by being out there, connected, appreciating the natural world the social justice piece happens... we have been integrating farm education [and] social justice issues such as clean air and clean water for everyone, and food justice issues, and doing what we can to teach and engage kids from the earliest ages, so they grow up with that. If you don't know, you can't be part of the solution.

Fullan (2001) advances the notion that effective leaders must have a moral purpose. Based on the data collected in this study, this seems to be a common theme among nature-based preschool leaders.

The Significance of Building Relationships. The educational leaders of all these programs expressed that building relationships is a key component of their leadership style. This includes their relationships with teachers, students, parents, and community members. In fact, more than one leader acknowledged that building strong relationships is not only good practice

for effective leadership, but they also believe that this practice helps to induce the components of transformative leadership: inclusion, equity, and democracy.

Kotter (2012) suggests communicating messages frequently and powerfully, embedding them within everything that you do to build strong relationships. It is also important to demonstrate the kind of behavior that you want from others. In terms of the nature-based preschool programs' educational leaders' perceptions of the significance of relationship building in their leadership styles, a keyword that was used by all eight participants was *communication*. Communicating openly with teachers and staff, students, parents, and community members is the best way to build strong relationships. According to these leaders, strong and open communication encourages a sense of community among the various stakeholders. More than one leader used the phrase "we are all in it together", and that is a mantra that they use with their teachers, staff, and students, as well as with parents and the local community. The Education Director of Nature-Based Preschool Program C tries to "create a sense of belonging" among teachers and students, and "hopes that they feel that this is their place."

Not only is building relationships an important component of leadership style, but the data also suggests that it is a key component of transformative leadership, according to the educational leaders of these programs. The phrase "we are all in it together" not only appeared in the participants' responses to the interview questions regarding leadership style, but it was also frequently used in the questions referencing the transformative leadership principle of inclusion. Several leaders indicated that to create an inclusive environment, building strong relationships with open communication at the core was necessary to create a sense of inclusion and community. Similar sentiments were echoed concerning the transformative leadership

principles of equity and democracy. In terms of equity, the Founder and Lead Teacher of Nature-Based Preschool Program E posits that “building strong relationships lifts that walls that kids place there.”

Building relationships is also an important factor in promoting democracy according to several of the educational leaders. In most of the interviews, the questions that referenced democracy seemed to be the most troublesome to the participants. However, upon clarification and drawing attention to the interview specific definition of democratic education, the participants were able to articulate their perceptions of its significance in nature-based preschool education. The interview specific definition of democratic education is a form of education that emphasizes justice, liberation, inclusivity, and openness (Shields, 2010). Once it was put into those terms, it became more accessible to the participants in this context. Several of the leaders expressed that it is important to give everyone, teachers, staff members, students, and parents, the chance to express themselves as means of promoting democracy. The Founder of Nature-Based Preschool Program D suggested that “it is important to find time to have a conversation and to respect what everyone brings to the table.”

The Education Director of Nature-Based Preschool Program A indicated that democratic practices are an important part of attracting funding for their programs. This is particularly true when applying for grants. This leader explained that: “We are more competitive when more partners are involved.” The Early Childhood Education Program Manager of Nature-Based Preschool Program A affirmed that by stating that “seeing adults being collaborative had an impact on children. [It is] important for them to see that grownups are still asking questions.” The founder of Nature-Based Preschool Program D also noted that “collaboration between similarly-minded schools is becoming more common.”

Relationship building is a primary leadership tool for working with teachers, but the participants also noted that it is a key component with and between students. The Founder and Lead Teacher of Nature-Based Preschool Program E highlighted the connection between nature and relationships between students which they model in their program:

When kids are exposed to each other, of all different abilities, they have a chance to understand what the other kids can do, not what they can't do. Outside they are more free to love one another. There is less 'us and them.' There is a chance for everyone to intermingle more, that's where morality begins... in a relationship.

The Importance of Teamwork and Collaboration. The theme of the importance of teamwork and collaboration emerged across both categories in the coding process. The terms *teamwork*, *togetherness*, and *collaboration* were distributed throughout the interview transcriptions, and became codes during the coding process. These terms are all significant in the previously aforementioned findings but were also pervasive enough to stand alone as a theme.

The Reggio Emilia Approach, a primary pedagogy utilized in nature-based preschool education, promotes collaborative planning among teachers (Gall, 2018). This was evident to some degree among all of the programs involved in this study, but appeared in a more significant sense at Nature-Based Preschool Programs B and D. The leaders of both programs employ the Reggio Emilia Approach in their programming, and it was evident in their responses to the interview questions. At Nature-Based Preschool Program B collaboration happens at all levels - with teachers and staff, students, and parents and community members. Regarding teachers and staff, collaboration happens in planning based on the fact that the core philosophy of the program is the Reggio Emilia Approach. However, collaboration takes the form of teamwork and

togetherness, as well. The Founder and Education Director of Nature-Based Preschool Program B perceives their leadership as having an impact on the teachers in their program because they “are willing to do anything that they [the teachers] do.” This promotes a spirit of teamwork and togetherness.

This theme was more prevalent in the interviews with the educational leaders of the programs with the largest year-round staffs. Nature-Based Preschool Programs B, C, and D have the largest staffs, and the leaders of these programs perceived encouraging teamwork and collaboration as key components of their leadership styles. Further, the leaders of these programs also perceived teamwork and collaboration as being significant elements in the manifestation of the transformative leadership principles of inclusion, equity, and democracy. The Director of Nature-Based Preschool Program D sees their “whole school as being a community.” This is also the program with the largest year-round staff. The Education Director of Nature-Based Preschool Program C sees one of their roles as forming collaborations with parents. They want to “weather the storms together” with the parents of their students. The Founder and Education Director of Nature-Based Preschool Program B has a similar view of their role in terms of parents: “It’s about building a community.” They also stated that this collaborative spirit is an integral part of creating an inclusive environment.

Nature-Based Preschool Program A, while having a smaller year-round staff, also promotes collaboration, albeit from a different angle. The Education Director of Nature-Based Preschool Program A considers collaboration as a crucial factor in obtaining funds through grants. As noted earlier in terms of collaboration “we get support by letting partners get involved in structuring grants.” They acknowledge that this form of collaboration is somewhat self-serving but see it as necessary to build their organization.

Transformative Leadership Occurs Naturally. One surprising pattern that was revealed from the data is that the principles of transformative leadership, which include inclusion, equity, and democracy, often occur naturally in the nature-based preschool environment. All the educational leaders of these programs indicated at one time or another that they had not realized that they were practicing transformative leadership, when, indeed, they were. There were numerous examples of this phenomenon. When asked how they perceived their leadership style impacted the students in their program, the Founder and Education Director of Nature-Based Preschool Program B replied “oh, that is kind of a need-to-know question”, but like some of the other participants, hadn’t considered their impact as a leader on students. As leaders, they tend to consider their impact on the teachers and staff members within their programs, but not necessarily the students. However, all but one of the leaders is also a teacher, and it is in that role that they consider their impact on students. In finding an answer to the question regarding their impact on students, the Founder and Education Director of Nature-Based Preschool Program B explained that “I want students to know who I am even if I am not in their classroom... by being present, open, flexible, and adventurous. I want them to see me outside.” It comes back to the importance of modeling, one of the primary themes that emerged from the data.

Given that this study is based on complex and far-reaching concepts such as moral and social justice development, equitable, inclusive, and democratic practices, civic life and citizenship, the researcher often had to prompt the participants with follow-up questions to put these concepts into the context of nature-based preschool education. One question that regularly needed elucidation was regarding the benefits of nature-based education for preschoolers in terms of moral and social justice development. However, after pauses and prompts, all the

participants were able to answer the question as it pertained to leadership in nature-based preschool education. They did not realize that they were doing it until it was brought to their attention and they were asked to think about it. The Early Childhood Education Program Manager at Nature-Based Preschool Program A explained: “Having seen the same groups of children interact both indoors and outdoors, I have seen increased teamwork and cooperation happen just because of authentic experiences that they were having outside.” The Founder of Nature-Based Preschool Program D noted that when children are regularly outdoors, they inherently feel that they should pick up litter. The Education Director of Nature-Based Preschool Program C explained that when children are immersed in nature, they tend to be healthier, and “healthy people are better able to meet other people where they are, [and that] deprivation has a lot of faces.” The implication being that outdoor learning brings health and wellness, which, in turn, allows a child to be their best self.

Another interview question that often required the participants to think outside of their normal frames of reference was regarding the culture of their programs as they pertain to democratic practices. In many cases the respondents knew they had an answer but were challenged to articulate it. However, by broadening the definition to include the ideals of justice, liberation, inclusivity, and openness (Shields, 2010), the educational leaders were able to see how democratic practices were, indeed, a component of their practice. In the traditional sense of the term *democratic*, The Early Childhood Education Program Manager at Nature-Based Preschool Program A explained that they “provide opportunities for everyone to speak and participate... [to] contribute in some way.” The Founder and Lead Teacher of Nature-Based Preschool Program E interpreted this question from two perspectives. They noted that in the nature-based education model that they use, they are trained to hold democratic

meetings. Looking at it another way, they also indicated that, as a leader in a preschool setting, they “don’t impose inclusion.” Stating that, while inclusion is important, it is also valuable to let it happen organically. These responses get to the heart of the interview question but are particularly significant because the respondents were not previously making these decisions consciously.

One of the suppositions of transformative leadership theory is that when the learning environment is equitable, inclusive, and democratic, students are more able to focus on academics, therefore improving the outcomes of their academic achievement (Shields & Hesbol, 2019). The participants were asked if they had noticed evidence of this in their work. While many of them had never thought about their leadership in these terms, all were able to answer the question once they had time to consider it. The Director of Nature-Based Preschool Program D exclaimed that “there is this outcome that happens when they are outdoors.” The outcome is improved focus and academic achievement. Another supposition of transformative leadership theory is that when educational establishments integrate such public good issues as democracy, civic life, and citizenship, then democratic society will be bolstered through the participation of knowledgeable and caring citizens (Shields & Hesbol, 2019). The participants were asked if they thought that their leadership could promote those ideals. Again, many of these educational leaders hadn’t previously connected their leadership with these ideals, but given the opportunity to process these concepts, they could see how they were manifested in their work. The Founder and Education Director of Nature-Based Preschool Program B provided an excellent example of both moral and social justice, as well as civic life and citizenship, but did not recognize it as such until this question was presented. They described an activity where the students were asked to draw a self-portrait with their mask on. This activity was done during the COVID-19

pandemic. The students were then asked, “do you feel accepted?” This prompted a discussion where the students, preschool-ages three to five, recognized “that they had a moral obligation... with the mask they were part of the solution.” This, of course, took place outdoors in a nature-based setting.

All of these examples of the principles of transformative leadership, inclusion, equity, and democracy, were manifesting themselves organically and, quite often, unconsciously. These include, but are not limited to, moral, social justice, and democratic practices. Further, two of the suppositions of transformative leadership, that the core principles can improve student focus and achievement, and promote citizenship and civic life, were exhibited in the educational leaders, teachers, and students as a matter of course. This pattern was present throughout the transcriptions and substantiated with deeper analysis.

Summary

The six themes and patterns that emerged are by no means mutually exclusive. In fact, parsing them out was a challenge because they are so interconnected. Collaboration, in particular, became a code because of the frequency of its use throughout the participants’ responses. It emerged as a theme of its own, however, because it is a key component of the educational leaders’ perceptions of the significance of the principles of transformative leadership in nature-based preschool education. Further, the educational leaders viewed collaboration as an important element of their leadership styles, as well. These themes and patterns will be used to answer the research questions and their implications, and to clarify the need for further action and research in the next chapter.

CHAPTER 5: CONCLUSIONS

This chapter describes the study's findings and utilizes them to answer the research questions. The topic was investigated through direct accounts of individual nature-based preschool educational leaders' experiences and perceptions. Interview transcripts were coded, and themes were drawn out. Both the respondents' candid answers and the thematic analysis assisted in approaching the study's research questions.

Interpretation of Findings and Alignment with Literature

The findings and themes of the study were analyzed to answer the research questions that directed the study. While there were minor differences in comparing the findings of this study to the overall body of literature, commonalities were present. This study used transformative leadership theory as a theoretical framework. The position was assumed that transformative leadership and leadership for inclusive, equitable, and democratic learning environments are mutually inclusive (Freire, 1998; Shields, 2010). Transformative leadership theory (Shields & Hesbol, 2019) comprises the following theoretical suppositions. The first supposition suggests that when the learning environment is inclusive, respectful, and equitable, students are more able to focus on academics, therefore improving the outcomes of their academic achievement (Shields & Hesbol, 2019). The second supposition is that when educational establishments confront such public good issues as democracy, civic life, and citizenship, then democratic society will be bolstered through the participation of knowledgeable and caring citizens (Shields & Hesbol, 2019). When compared to the core principles embedded within the conceptual framework, the findings of this study support the basic principles, but the occurrences were often incidental as opposed to deliberate.

As noted in the previous chapter, there was considerably more depth to the participants' responses than breadth. There was significant uniformity to their answers to the interview questions. This is not completely unexpected given that the sample size was relatively small, and the programs are all generally located in the same geographical area. However, considering each program was chosen based on its individuality to stand out from the others, the stark uniformity was somewhat surprising. Each program is based around a different pedagogy, yet the leaders tended to perceive their leaderships' impact on their stakeholders in very similar ways. These will be elaborated upon in the following sections.

Perceptions of the Significance of Transformative Leadership

The first research question explored the perceptions of nature-based preschool program leaders of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education. One of the core principles of transformative leadership theory is inclusion (Shields, 2010). According to the findings of this study, the educational leaders of the nature-based preschool programs maintain that there are several ways to achieve this in an organization. One way to achieve this is by modeling inclusive behavior for their teachers and students. Another way to achieve this is by building strong relationships with stakeholders. Further, by encouraging an environment of teamwork and collaboration they can develop an atmosphere of inclusion in their programs.

Equity is another key component of transformative leadership theory (Shields, 2010). The findings of this study suggest that equity is fostered through an environment of inclusiveness and the promotion of teamwork and collaboration. In turn, teachers and students, and to a smaller degree, parents, begin to develop more empathy and compassion through their interactions with nature. Another essential principle in transformative leadership theory is

democracy (Shields, 2010). The findings show that the nature-based preschool program leaders see collaboration as the primary vehicle to encouraging democratic practices.

The findings lead to two significant conclusions in terms of nature-based preschool leaders' perceptions of the significance of transformative leadership principles in nature-based preschool education. One significant conclusion is that nature-based education contributes strongly to the development of empathy and compassion in both teachers and students. This empathy and compassion, in turn, contributes to an inclusive, equitable and democratic learning environment. The second conclusion based on the findings is that the principles of transformative leadership occur naturally in the nature-based preschool realm. This is a significant finding that leads directly to a conclusion. These conclusions will be analyzed further in the following sections.

Nature-Based Education Promotes Compassion and Empathy. The development of compassion and empathy is a key component of nature-based preschool education according to the findings. This is not an area that has been extensively researched, but a Canadian study where preschool children were immersed in stories of the lives of bees highlighted the fact that children can recognize interspecies relationships (Nxumalo, 2018). This is significant because, not only did children understand the interconnectedness of humans with another species, but they developed compassion for the bees, as well. This highlights an informative alignment with the literature.

This is a reasonable development considering the essential characteristics of nature-based education, one of which is encouraging students to acquire conservation values (Finch & Bailie, 2015). Conservation and compassion are inextricably linked. Compassionate conservation is an emerging movement within conservation science that gives prominence to ethical conservation

practices that place empathy and compassion and the moral principles of “doing no harm and individuals matter” at the forefront of conservation practice (Griffin, Callen, Klop-Toker, Scanlon, & Hayward, 2020, p. 1). This philosophy is exemplified in the field of nature-based preschool education. Further, given the various preschool pedagogies’ emphasis on empathy - Montessori: naming and defining feelings; Reggio Emilia: students are facilitators in their own education; Waldorf: giving special attention to the head, heart, and hands - it is not surprising that empathy and compassion are a natural result of nature-based education.

Inclusion, Equity, and Democracy are a Natural Result. Nature-based preschool education and the key components of transformative leadership, inclusion, equity, and democracy are inextricably linked by the principles which drive them. Just like with compassion and empathy, the connections between these components are directly associated with the pedagogical philosophies that typically give structure to nature-based preschool programs. In terms of inclusion, in the Montessori philosophy the teacher must be prepared to thoughtfully accommodate individual student needs within the environment, rather than make children conform to a formal standard (McKenzie, Zascavage, Rigaud, Dahlmeier, & Vo, 2021). The transformative leadership principles of inclusiveness, equity, and democracy are fully encapsulated in the Reggio Emilia approach which defines the classroom as a “living organism, a place of shared relationships among the children, the teachers, the parents, and a feeling of belonging in a world that is alive, welcoming, and authentic” (The Compass School, 2017, p. 1). Additionally, Waldorf education rejects discrimination in all its forms, and embraces the principles of common humanity (Association of Waldorf Schools of North America, 2020). These philosophical and pedagogical underpinnings drive nature-based preschool education and are manifested in the leaders, teachers, and students.

Perceptions of the Impact of Leadership Style

The second research question examined the perceptions of the educational leaders of nature-based preschool programs of the impact that their leadership style has upon their programs' stakeholders, which include teachers, students, parents, and community. One of the primary stakeholder groups of the leaders that participated in this study is the nature-based preschool teachers that work in these programs. The leaders overwhelmingly perceived that their leadership styles have a significant impact on this group. In fact, all the findings support this. This includes modeling desired behaviors, meeting their needs, the development of empathy and compassion, building strong relationships, and teamwork and collaboration. Another significant stakeholder group is the students in these programs. Like the teachers, all the findings support the leaders' perceptions of the impacts of their leadership on this group. The study's participants saw themselves as having the least impact on this stakeholder group, the parents and community. They believed that by modeling desired behaviors, building strong relationships, and collaborating, they could have some impact on this group, but it was not as strong as on the other stakeholder groups.

Based on the findings, three significant conclusions can be drawn regarding the nature-based preschool leaders' perceptions of the impact of their leadership style on their stakeholders. These conclusions are that modeling is an important teaching method, relationships are built on mutual understanding and trust, and that teachers and students whose needs have been met are more effective. These conclusions are elaborated upon in the subsequent sections of this chapter.

Modeling is Teaching. Based on the findings, it appears that modeling is a key leadership strategy in the realm of nature-based preschool education and aligns fittingly with the literature. This is because it is a learning environment, and learning requires modeling.

Leaders must lead by modeling the values and behavior that represent collective goods. If learning, individual and collective, is the central responsibility of leaders, then they must be able to model the learning they expect of others. Leaders should be doing, and should be seen to be doing, that which they expect or require others to do. Likewise, leaders should expect to have their own practice subjected to the same scrutiny as the exercise toward others. (Fullan, 2001, p. 130).

This philosophy is embedded in the leadership styles of the nature-based preschool leaders that participated in this study. They see themselves as teachers as well as leaders, and that leadership is both a learning and a teaching process. One of the ways that they teach is by modeling desired behaviors. They model these behaviors for both the adults, teachers, staff, and parents, and the students. In terms of students, telling them what to do is not nearly as effective as showing them what the quality looks like (Murphy, 2012).

Relationships are Built on Trust. None of the findings, based on the leaders' perceptions, could happen without a level of trust between the leaders and their stakeholders. The leaders explained that building strong relationships is of paramount importance in leading their respective programs. These relationships must be built on mutual understanding and trust (Kotter, 2012).

One of the key words that emerged from the findings was *trust*. Trust is a key pillar of strong relationships. The leaders of the nature-based preschool programs acknowledged this, and prior research has indicated this, as well. Trust between educational leaders, teachers and staff,

and students is fundamental to the organization of nature-based preschool programs (Lysklett & Berger, 2017). This is a strong connection to prior research.

The findings also highlighted the leaders' perceptions that collaboration and teamwork were important components of their leadership styles, as well as results of their work. Prior research also suggests that the following values and attitudes result from nature-based education at the preschool level: autonomy, responsibility, teamwork, involvement, initiative, curiosity, dismay, and joy (Ferreira et al., 2016). These are important values in making these relationships function. Without a level of trust between the leaders and their various stakeholders, autonomy, responsibility, teamwork, and, perhaps initiative and curiosity, would not manifest themselves in the teachers, students, or parents.

Meeting Their Needs. One of the primary findings of this study was that nature-based preschool teachers need to feel valued. The perception of the educational leaders of these programs is that encouraging networking, training, and professional development is one way to support this. Not only does this improve the teachers' ability to do their jobs effectively, but it shows that they are valued members of the team. Professional development for nature-based preschool teachers has been shown to empower them to become both environmental leaders and environmental citizen role models (Spektor-Levy & Abramovich, 2016). Consequently, this has multiple positive implications. First, nature-based preschool teachers feel both valued and empowered. Second, they can become role models as environmental stewards and leaders, and this study has shown that modeling is a critical leadership and teaching tool. These conclusions are graphically organized in Figure 1.

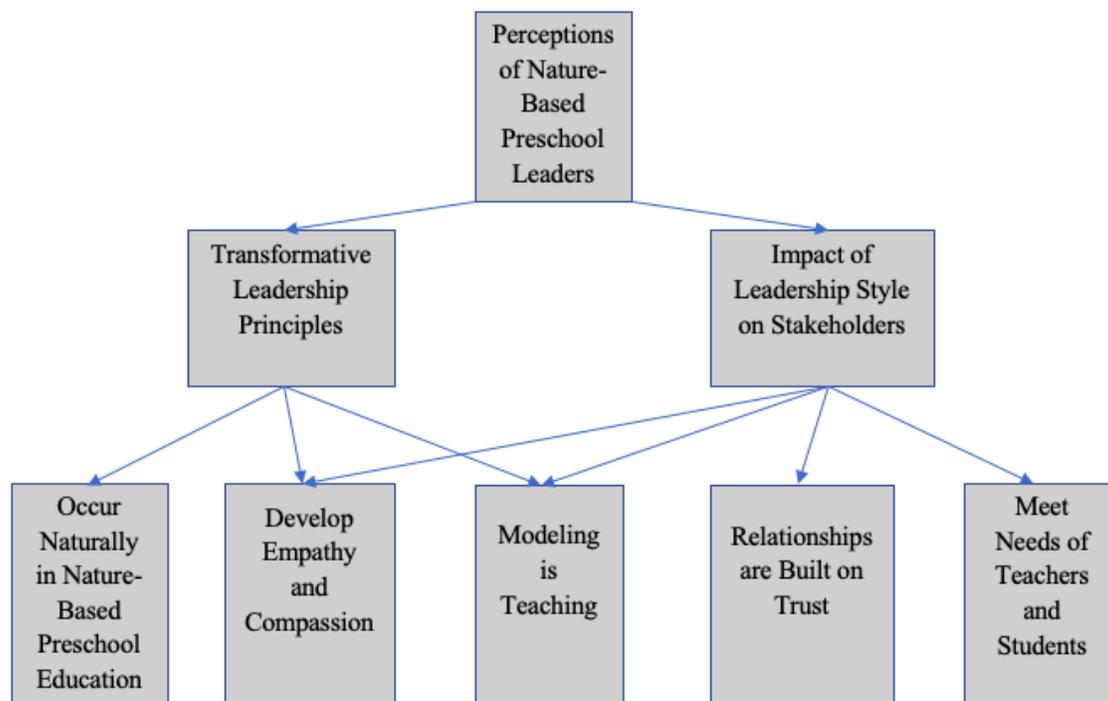


Figure 1. Conclusions

Implications and Recommendations for Action

The study findings highlight several potential implications in terms of theory, practice, and research. In terms of theory, the findings shed light on the significance of the principles of transformative leadership theory in nature-based preschool education. The educational leaders of the programs featured in this study overwhelmingly acknowledged the importance of inclusion, equity, and democracy in nature-based education. These principles were manifested in the development of empathy and compassion in both teachers and students. Additionally, through the modeling of these behaviors, they are more likely to take hold. Further development of transformative leadership theory in the context on nature-based preschool education would benefit the field immensely.

Given the lack of prior research on leadership in nature-based preschool education, there is little in the way of a framework available for leaders in this field. The development of a

framework for leadership in nature-based preschool education would benefit the leaders of these programs as well as their stakeholders. Given that, according to this study, the principles of transformative leadership, inclusion, equity, and democracy, tend to happen naturally in nature-based education, a framework based on these principles would be an asset to the field.

In practice, more professional development for the leaders of nature-based preschool programs would allow them to become better role models for the teachers and students in their programs. Effectively designed professional development programs that encourage professional growth and self-efficacy can enable preschool teachers to become leaders in environmental education (Spektor-Levy & Abramovich, 2016). As this study has shown, modeling is a key tool for nature-based preschool leaders. Therefore, when nature-based preschool teachers become leaders, which effective professional development can encourage, significantly more environmental stewardship and leadership can be modeled for those in their zone of influence. Further, when teachers recognize within themselves the capacity to make change and achieve loftier goals, they tend to demonstrate long-term commitment, not only to environmental education, but to behavior dedicated to making real change (Spektor-Levy & Abramovich, 2016). This is significant not only for the individual programs that require effective leaders and teachers, but for the long-term health of the field of nature-based preschool education.

Recommendations for Further Study

This study assisted in narrowing the literature gap regarding the role of leadership in nature-based preschool education. However, there is certainly more room for study in this area. Due to the bounded scope and size of this study, the data is somewhat limited. A larger sample of educational leaders of nature-based preschool programs could provide a deeper and

broader understanding of the significance of transformative leadership and the impact of leadership style on the stakeholders of these programs.

A similar study using the same criteria should be undertaken among the teachers and students of these programs. Where this study looked at educational leaders' perceptions of the impact of their leadership style on stakeholders, a similar study examining the effects of leadership style on stakeholders could further elucidate the connection between leadership style and impacts in nature-based preschool education. Likewise, a study exploring the actual significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education from the perspective of teachers, staff, students, and parents could inform its functionality in this field.

Comparative analysis of leadership in nature-based preschool programs with programs for older children could assist in further understanding whether there is consistency in the manifestation of the aforementioned principles. This would require a longitudinal study of the significance of the transformative leadership principles of inclusion, equity, and democracy on a specific data set of students. Additionally, this comparative analysis could extend to the impact of leadership styles on this same data set over time. Data on the impact on both teachers and students could inform future leaders in the field of nature-based preschool education.

Conclusion

This qualitative case study analyzed the perceptions of educational leaders of nature-based preschool programs in terms of the significance of transformative leadership components and the impact of their leadership style on their programs' stakeholders. Interviews were conducted with eight educational leaders at five different sites. Significant findings in the perceptions of the participants included the importance of modeling desired behaviors and

meeting the needs of the teachers and students in their programs. Other notable findings, according to the perceptions of the leaders featured in this study, included the development of empathy and compassion through nature-based education for both teachers and students. Also, building relationships and teamwork and collaboration were deemed as critical to both effective leadership and to creating inclusive, equitable, and democratic learning environments.

These findings led to two consequential conclusions in terms of nature-based preschool leaders' perceptions of the significance of transformative leadership principles in nature-based preschool education. One conclusion is that nature-based education contributes markedly to the development of empathy and compassion in both teachers and students. The resulting empathy and compassion contribute to an inclusive, equitable and democratic learning environment. The second conclusion based on the findings is that the principles of transformative leadership, inclusion, equity, and democracy, tend to occur inherently in nature-based preschool education. This is a significant finding that leads directly to a conclusion.

The findings contribute to three key conclusions in terms of the impacts of leadership style on the stakeholders of nature-based preschool programs. First, modeling is a key leadership strategy in this field, and that it is a form of teaching both the students and the educators in these programs. Second, relationships are built on trust and mutual understanding. This is true in areas outside of nature-based preschool education, of course, but has consequential significance in this realm. Lastly, teachers that have their needs met, particularly through professional development programs that support their requirement to feel valued and empowered, can become effective role models to the constituents that they serve.

The educational leaders that participated in this study were eager to share their perceptions and experiences. Their insights shed a great deal of light on both transformative

leadership and the impact of leadership style on their stakeholders. The findings of this study point to significant opportunities for both practical application and further research.

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Appendix

INTERVIEW PROTOCOL

Verbatim Interview Instructions

Hello. Thank you so much for taking the time to share your perceptions with me today. I have asked you to participate in my study because you are recognized as an educational leader in a nature-based preschool program. Also, thank you for signing the informed consent form.

Today, I will be recording the interview to allow for transcription. All files will be password protected and will be destroyed by 12/31/21. Please know that this interview process will take less than one hour. You are welcome to ask clarifying questions, if necessary. You have the right to withdraw participation or refuse to answer any question that I ask. Do you have any questions about the interview process, about your rights as a participant, or about the research focus before we begin? May I have your oral confirmation that you understand your rights and the process?

Interview Specific Definitions

- Democratic Education---A form of education that emphasizes justice, liberation, inclusivity, and openness (Shields, 2010).
- Equity---A concept in transformative leadership where the educational leader creates learning contexts in which the networks of relationships are enhanced in such a way as to provide opportunities for all students as they take their place as functioning and contributing members of society (Shields, 2010). In education, the term equity refers to the principle of fairness. Equity encompasses a wide variety of educational models, programs, and strategies that may be considered fair, but not necessarily equal (The Glossary of Educational Reform, 2016).

- Inclusion---Social inclusion covers all aspects of peer relationships and peer group dynamics, such as inclusive and exclusive behaviors, peer acceptance and popularity, friendships, and intergroup relationships. Social inclusion may also refer to classroom-level constructs, such as classroom norms and social hierarchies (Frontiers, 2020). In terms of schools “...it presumes that the aim of inclusive school development is to eliminate exclusionary processes that are a consequence of attitudes and responses to diversity in relation to race, social class, ethnicity, religion, gender and perceived abilities” (Ainscow and Messiou, 2018, p. 2).
- Nature-Based Education---Nature-based education is a pedagogy where nature is the central organizing theme of the curriculum (Larimore, 2016).
- Transformative Leadership---A leadership theory that critiques inequitable educational practices “...and offers the promise not only of greater individual achievement but of a better life lived in common with others” (Shields, 2010, p. 559). It is also a framework for organizational transformation with the principles of equity, inclusion, and democracy at its foundation (Shields and Hesbol, 2019)

Research Questions

- What are educational leaders’ perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education?
- What are educational leaders of nature-based preschool programs’ perceptions of the impact their leadership style has upon their schools’ stakeholders, which include teachers, students, parents, and community?

Interview Questions

1. What is your title and role in your program, and how long have you been in that role?
2. What is your background in nature-based preschool education?
3. What is your background in leadership? Have you had specific leadership training?
4. How long has your program been in place, and how is it funded?
5. How many students does your program serve?
6. What is the core educational philosophy of your program?
7. What are your feelings regarding the benefits of nature-based education for preschoolers in terms of cognitive, motor, and social-emotional development?
8. What are your feelings regarding the benefits of nature-based education for preschoolers in terms of moral and social justice development?
9. Please describe the culture in your program as it pertains to inclusion. (RQ1)
10. Please describe the culture in your program as it pertains to equity. (RQ1)
11. Please describe the culture in your program as it pertains to democratic practices. (RQ1)
12. Transformative leadership contributes to organizational transformation through raising questions of equity, inclusion, and democracy in practice. Can you describe an experience where you felt that your leadership exhibited these qualities? (RQ1)
13. One of the suppositions of transformative leadership theory is that when the learning environment is equitable, inclusive, and democratic (Shields and Hesbol, 2019), students are more able to focus on academics, therefore improving the outcomes of their academic achievement. Have you seen evidence of this in your work? If so, can you describe a time when that happened? (RQ1)

14. Another supposition of transformative leadership theory is that when educational establishments integrate such public good issues as democracy, civic life, and citizenship, then democratic society will be bolstered through the participation of knowledgeable and caring citizens. How do you think your leadership can promote these ideals? (RQ1)
15. How do you think that your leadership style impacts the teachers in your program? (RQ2)
16. How do you think that your leadership style impacts the students in your program? (RQ2)
17. How do you think that your leadership style impacts the parents and community? (RQ2)

Verbatim Interview Closure

Thank you for taking the time to share your perceptions. After I analyze the data, I will follow up with you via email to ask for your review and confirmation, clarification, and/or correction of my interpretations. I look forward to analyzing your perceptions of the significance of the transformative leadership components of inclusion, equity, and democracy in nature-based preschool education and the impact that your leadership style has upon the schools' stakeholders, which include teachers, students, parents, and community.