

Summer 2019

A Phenomenological Look at What Motivates and Challenges Teachers to Use Outdoor Learning Activities

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A PHENOMENOLOGICAL LOOK AT WHAT MOTIVATES AND CHALLENGES
TEACHERS TO USE OUTDOOR LEARNING ACTIVITIES

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Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Education in

Curriculum and Instruction

College of Education

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2019

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DEDICATION

I dedicate this work to my family who are no longer here to see its completion. To my husband, Sgt. Jonathan K. Peney, who always believed in me, even when I did not believe in myself. To my cousin, James Scott Bowers, who always kept me grounded and made sure I remembered from where I came. Many thanks.

ABSTRACT

The specific problem of practice on which this study is focused is the lack of opportunities for students to engage in outdoor learning experiences (OLEs) and one contributing factor to this problem, the hesitance teachers demonstrate towards engaging their students and themselves in OLEs (Rickinson et al., 2004). The purpose of this study was to gain a deeper and more thorough understanding of the beliefs about outdoor learning experiences (OLEs) held by teachers in my context. An investigative action research design using the phenomenological approach was selected for this study as teacher beliefs are complex, and are best understood when participants are allowed to respond freely and provide multiple perspectives, if applicable (Creswell & Plano Clark, 2018). Effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (Organization for Economic Cooperation and Development, 2009), and situated learning (Lave and Wenger, 1991) theories are integrated to form the theoretical framework for this study as they assert that learning, specifically that which can change beliefs, is situated in activity (Thacker, 2015; Richardson, 2003; Clark & Hollingsworth, 2002). Implications for education practitioners (teachers, administrators, and informal outdoor and/or environmental educators) are discussed as increasing the amount of outdoor time available to youth is essential for ensuring proper development of cognitive functions, enhancing interpersonal skills such as leadership, as well as providing real-world context for concepts introduced in the classroom (Wirth & Rosenow, 2012).

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CHAPTER 1 INTRODUCTION

For the past 16 years, I have developed and facilitated outdoor learning experiences (OLEs) for students and teachers from the K-12 setting (kindergarten through 12th grade) in the southeastern United States. Throughout these experiences I have seen how, as some research suggests (Gray & Martin, 2012), an OLE can provide a real-world context for concepts introduced in the classroom and can be an important element of a student's personal and academic development (Harte, 2013; Jacobi-Vessels, 2013; Gray & Martin, 2012; Wirth & Rosenow, 2012). However, I have also noticed an increasing hesitance among teachers to engage in the OLE along with their students. While some teachers engage deeply and personally in OLEs along with their students, other teachers are more hands-off and still others are completely uninvolved. I have seen teachers reach into the pluff mud of the saltmarsh, withdraw their dirty hand and exclaim, "I smell biology!" with a sincere joy for being in the outdoors. I have also seen teachers who do not observe their students at all, busying themselves with unrelated activities while their students are under my supervision in the outdoor setting. Observing this range in teachers' behavior during OLEs has motivated me to think more deeply about the things I can do to help teachers find the value in participating actively in the OLEs along with their students and how this involvement can deepen the learning experience for students.

In conversations with teachers, I have found that some will be up-front about their ill feelings toward being outdoors. They speak negatively about the possibility of getting dirty and/or sweaty and having to return to school to finish their workday with “the smell of the marsh all over” them. Some teachers are less forthcoming with their feelings about OLEs but nevertheless demonstrate their contempt through their actions. I have seen teachers who constantly check their watches and the surroundings, observing from the outskirts (versus actively participating) or completely ignoring the OLE. These experiences have led me to focus my research on gaining a better understanding of the underlying causes for these demonstrations of hesitance regarding OLEs. To this end, I have selected an action research is ideal for exploring this issue (Herr & Anderson, 2015).

Problem of Practice

The specific problem on which this study is focused is the lack of opportunities for students to engage in OLEs due to teachers’ hesitance toward engaging their students and themselves in such activities (Rickinson et al., 2004). Prior to the 2018–2019 school year, the Board of Education for the school district in which this study took place instituted a new policy that allowed teachers to withhold unstructured break time (encouraged to take place outdoors) in grades prekindergarten through 5 which created significant controversy in the community (Meyer, 2019). Although OLEs and unstructured break time are different, the misconception that learning does not occur when students are outdoors makes this recent controversy an important aspect of the problem in this context. Despite the evidence that supports the inclusion of outdoor learning components in effective curricula, teachers often report that fear, lack of

confidence, strict school requirements, and the need for additional resources prohibit the implementation of OLEs (Rickinson et al., 2004; Dymont, 2005). Research also indicates that a teacher's fear related to students' health and safety may prohibit the integration of OLEs into their instructional plans (Dymont, 2005; Ernst, 2013). Taking students outside heightens the risk of a student's allergic reaction resulting from exposure to insects and/or vegetation (Dymont, 2005). Also, the risk of students being injured while under their teacher's supervision increases when OLEs include physical activity (Dymont, 2005; Leggett & Newman, 2017). Further, elements of the outdoor space design, for example, the presence of large trees or features that include water, may compromise a teacher's line of vision or create additional hazards for the supervising teacher to manage beyond the actual learning activity (Dymont, 2005; Maynard & Waters, 2007).

Dymont (2005) and Rouse (2016) suggest that teachers lack the confidence to introduce OLEs into their lessons because of the conventional assumption that they should be masters in their content areas and know all the answers. Outdoor learning is highly suitable for teaching scientific concepts, specifically in environmental and physical sciences; this may be one reason that teachers outside of those disciplines lack the confidence to plan or attempt implementation of OLEs (Dymont, 2005). However, Forbes and Zint (2011) found no significant relationship between the number of environmental science courses teachers took at the postsecondary level (preservice education) and these teachers' beliefs and/or behaviors regarding outdoor learning or environmental education (Forbes & Zint, 2011).

Rickinson et al. (2004) indicated that teachers saw curriculum requirements and emphasis on standardized tests as barriers to implementing OLEs. This is supported in the

literature (Dyment, 2005; Gunn, 2006) noting teachers' hesitance to take their students outside when the OLE was not explicitly linked to the curriculum. According to Dyment (2005), teachers were concerned that taking their students outside for instruction may cost them time that could be best spent covering material that would be appear during standardized testing.

According to Ernst (2012), teachers view outdoor learning and environmental education as something "extra" to make time for as opposed to seeing it as part of their curriculum and instruction plans. This time barrier was acknowledged even for OLEs on the school campus as materials needed to be prepared inside and transported to the outdoor location, which required more of the teachers' planning and instruction time than traditional indoor lessons (Burriss & Burriss, 2011). Some teachers also reported that coordinating time with other teachers or activities to use the available outdoor learning areas was prohibitive as the area may not be vacant at a time that was conducive to their traditional instruction or daily routine (Dyment, 2005).

Theoretical Framework

Effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (Organization for Economic Cooperation and Development, 2009), and situated learning (Lave and Wenger, 1991) theories are integrated to form the theoretical framework for this study. Effective professional development should target learning that changes a teacher's practice in such a way that it directly improves student outcomes (Darling-Hammond, Hyler, & Gardner, 2017). Teacher beliefs have been operationalized by The Organization for Economic Cooperation and Development (OECD) (2009) as beliefs with which teachers approach their practice are based on their

personal and professional backgrounds (including types of certification(s), subject/content taught, gender, full-time versus part-time employment status, and length of tenure). Lave and Wenger's (1991) theory of situated learning contends that learning is rooted in social practices, including a person's interactions with other persons, objects, and their environment. The commonality among these theories that allows for their successful integration for this study is that they assert that learning, specifically learning that can change beliefs, is situated in activity (Clark & Hollingsworth, 2002; Richardson, 2003; Thacker, 2015).

Professional Development

Clark and Hollingsworth (2002) define professional development as an opportunity for growth and learning to find greater fulfillment in one's practice. Unfortunately, not all professional development opportunities are created equal, which means that the level of their effectiveness varies, most often as a result of their design (Darling-Hammond, Hyler, & Gardner, 2017; Thacker, 2015; Steiner, 2004). Darling-Hammond, Hyler, and Gardner (2017) identify seven characteristics of effective professional development for teachers: (1) Focused on content. (2) Incorporates active learning. (3) Allows for peer collaboration. (4) Uses models and/or modeling. (5) Offers expert/professional support. (6) Incorporates reflexive activities. (7) Provided over a sustained period.

According to Ernst (2007), professional development for outdoor learning and environmental education has been predominantly science-oriented rather than focused on interdisciplinary methods and concepts. While outdoor learning is most commonly seen in science instruction, students' skills in literacy, mathematics, and social sciences have

also been shown to improve as a result of outdoor learning (Ernst, 2012; Wirth & Rosenow, 2012). Ernst (2007) further states that the majority of the in-service trainings offered are focused on environmental content instead of using the environment as a teaching tool.

Teacher Beliefs About Outdoor Learning

Richardson (2003) defines a belief as an understanding or disposition that a person holds as true regardless of the logic. Many teacher beliefs are developed through their life experiences, sociocultural backgrounds, and professional expertise and environments (Nghia, 2017, OECD, 2009), and these beliefs have the potential to influence curriculum decisions and other teaching behaviors (Bourtozoglou, Emmanouloudis, & Georgopoulos, 2016; OECD, 2009). It is possible for teachers to change their beliefs based on new experiences; however, research indicates that beliefs rooted in sociocultural matters are not revised as easily as those formed through experiences and environmental conditions (Nghia, 2017).

A significant implication from Ernst's (2013) study is that early childhood educators already believe in the importance of outdoor learning and environmental education, but indicates that teachers' resistance to implementing OLEs is a perceived lack of space or time, which is corroborated Bourtozoglou et al. (2011). Specifically, Bourtozoglou et al. (2011) noted that teachers were only willing to spend time and/or money to include OLEs in their curriculum if they personally felt that conservation and environmental quality were important issues. These findings corroborate the assertion (Ernst, 2013) that many teachers believe outdoor learning and environmental education are important in instruction, yet they do not implement such curricular components.

Situated Learning

Situated learning theory, as first proposed by Lave and Wenger (1991), emphasizes the environment (social and physical) and its interaction with a person (his or her beliefs and behaviors) for learning and a change in behavior to occur (Brink & Tanggaard, 2016). According to situated learning theory, a person does not learn simply by being part of a group, but rather by actively participating in the social practices of the group and with the artifacts or facets of the physical environment (Brink & Tanggaard, 2016; Lave & Wenger, 1991). Adapting to situations in this manner leads a person to consciously contemplate his or her decisions and behaviors (Williams, 2017; Leaman & Flanagan, 2012).

A study conducted by D'Amato and Krasny (2011) to better understand outdoor learning from the perspective of individuals who had participated in an immersive OLE program found that participants reported interacting with the natural environment along with fellow participants to complete the assigned tasks as having the greatest impact on their beliefs and behaviors. While most participants had access to natural areas before the course, being submerged in the wilderness was a new experience that they believed spurred personal growth (D'Amato & Krasny, 2011). These findings (D'Amato & Krasny, 2011) support findings by Cassidy, Streat, Wright, and Watson (2015), who assert that even seasoned educators benefit from participating in OLEs, suggesting that these immersive experiences provide teachers with a renewed understanding of the ways that their students learn and process information.

Theory Integration

Teachers commonly report one source of apprehension toward including OLEs in their instruction as a lack of experience with outdoor learning (Rouse, 2016; Scott, Boyd, & Colqohoun, 2013; Dymont, 2005; Rickinson et al., 2004). Since Banack (2015) and Thacker (2015) acknowledged professional development as an essential part of maintaining teacher effectiveness in the classroom and for initiating educational reform, a similar emphasis on professional development pertaining to OLEs is needed for educators to feel comfortable and confident using such activities.

Professional development opportunities are one mechanism for changing teacher beliefs (Ioannidou-Koutselini & Patsalidou, 2015; Ernst, 2012; Clark & Hollingsworth, 2002). Tomazic (2011) found that factual knowledge alone does little to change teacher beliefs, but according to Torkar (2015), professional development that includes both factual knowledge and physical exposure is more successful in changing beliefs. Similarly, Steiner (2004) asserts that professional development opportunities for educators are most effective when subject-matter and school reform efforts are coherently linked. Further, Clark and Hollingsworth (2002) claim that significant changes in teacher beliefs are likely to occur only after a teacher has field-tested the new information. These claims support rooting professional development in situated learning (Lave & Wenger, 1991) theory so that teachers have authentic practice on which to base their beliefs (Ioannidou-Koutselini & Patsalidou, 2015).

The current study involves the implementation of a professional development workshop created to help investigate teachers' beliefs regarding motivations for and challenges against including OLEs as a regular component of the curriculum in a coastal

Georgia public school system. This workshop was designed to provide an opportunity for the researcher to gain access to the inner thoughts and beliefs about OLEs of the participating teachers while also providing the teachers with targeted support for engaging their students in OLEs. Effective professional development, teacher belief, and situated learning theories were integrated to provide a base for the design of the workshop.

Research Question

The purpose of this action research study was to gain a deeper and more thorough understanding of the beliefs about OLEs held by teachers in my context (a public school system in coastal Georgia). Stemming from my position as an outdoor learning educator, this study is an investigation of the underlying beliefs of teachers about OLEs and how those beliefs translate into their hesitance to engage in OLEs with their students. Gaining a better understanding of the teachers' beliefs in my context through this investigative action research study will enable me to more adequately prepare future interventions that can bring teachers into the experience and appreciate the value of OLEs.

In my experience, teacher beliefs regarding OLEs appear to be highly variable among teachers and they are often hesitant to share their true beliefs about OLEs. Acknowledging that this is likely due to my role as an outdoor learning facilitator who is working within their local context, I needed to develop a novel approach to data collection that could allow me to gain authentic access to the personal beliefs about OLEs held by these teachers. Drawing on my assertion that an immersive, outdoor professional development experience for teachers can lead to positive changes in teacher beliefs about OLEs, I designed an OLE experience for teachers that offered me a unique opportunity to

capture the thoughts and beliefs of these teachers as they were immersed in an authentic OLE. Using a qualitative, phenomenological approach to data collection (Creswell, 2009), I attempted to uncover insight into the following research questions: (1) What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom instruction? (2) What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs?

I chose to engage this small group of volunteer teachers in a one-day professional development workshop so that I might compare the thoughts expressed by these teachers during the OLE with their thoughts prior to and after the workshop. This approach and these research questions were selected based on my relationship with the participants, the limited time I had for studying this phenomenon, and the nature of my problem of practice. Regardless of the positive or negative nature of the beliefs, the beliefs are important factors to consider in my work to provide effective OLEs for students in my context.

Researcher Positionality

When developing an action research study, the researcher must determine his or her positionality (stance in relation to the participants) and discuss its implications to the study in terms of potential biases (Herr & Anderson, 2015). While traditional research methods call for the researcher to eliminate or minimize these impacts, action research leads a researcher to embrace these as part of the research process (Herr & Anderson, 2015).

As an action researcher in the current study, it is important to acknowledge my position as an outsider (Herr & Anderson, 2015). The study participants are teachers at a

local public school in the coastal southeastern United States, and while I have met all of the participants either through working with their colleagues in my contracted position or through mutual participation in volunteer organizations, I am not a permanent staff member in their school system and have not directly provided any of their students with OLEs. The arrangement between my employer (the nonprofit organization contracted to provide science enrichment programs and OLEs at select schools in the school system) and the school district from which the teachers have been selected makes me an outsider as defined by Herr and Anderson (2015).

However, as Efron and Ravid (2013) state, I am an outsider who is “intimately involved and familiar with the context” (p. 4) of the problem, since I have worked in the same school system as the study participants for several years. This type of outsider positionality does have inherent ethical considerations as the participants will be sharing personal (and perhaps confidential) information at times; however, measures were included in the study design to protect this information so that the participants provide all necessary data (Herr & Anderson, 2015).

As previously noted, I have worked in the field of outdoor and environmental education for over 15 years, and I bring my own beliefs about OLEs to this research project. I can recall my middle school language arts teacher taking my class outside on sunny days to sit on the grass while reading or journaling; I can also recall my high school history teacher opening the frosted windows in his classroom on days when the weather was nice so that sunlight could enter the room and the students could see the courtyard. At the time, I acknowledged these activities as a welcomed deviation from the

norm because this was not my experience in other classes, but I did not truly appreciate how rare these instances were until I stumbled upon the field of outdoor learning.

I did not realize that a career in outdoor learning was even a possibility, never having heard the term. Like many other high school graduates I knew, I worked at a summer camp prior to starting college. During this experience, I realized that I enjoyed sharing my knowledge with others. Consequently, I began an undergraduate degree program in education; however, something never felt quite right. I soon realized that it was more than just sharing knowledge that I loved—I most enjoyed sharing knowledge related to the outdoors. Yet, I had no idea of how this could become a viable career.

After my academic advisor informed me about camp management classes offered in the recreation department, I began there by taking an introductory camp management course. However, that did not seem to be a good fit as the program was designed with business and recreation safety (best practices for canoeing, archery, etc.) as the primary components rather than educational programming at camp facilities. Eventually, I landed in the forestry school just as they were developing a new major for students with interests similar to mine. (I later became part of their first graduating class!) While completing the course work required for this major, I was introduced to techniques for improving the outdoor learning experience through courses on ecotourism (identifying outdoor elements of importance and how to captivate an audience with them) and interpretive design (strategic use of tactile elements and signage that enhance the outdoor learning experience).

I gained most of my professional experience with OLEs while working for an environmental education center in coastal Georgia owned by the University of Georgia.

Teachers bring their students from various areas throughout the southeastern United States for three- or five-day field-study experiences, and our staff was responsible for the design and instruction associated with the OLEs the teacher selected for the trip. It was not uncommon to see teachers observe their classes from a distance during these OLEs, especially during the sessions that involved students interacting on the beach or in the salt marsh, both areas where participants could get dirty.

After nine years at this facility, I transitioned to an educational nonprofit organization that partners with the local public school system to provide specific schools in the district with science enrichment and OLEs for an entire semester. This job, like my previous position, involved engaging students in OLEs, and again, I noticed teachers' hesitance to engage in these experiences with their students. For example, there were times when I arrived at a school to take a class on a field trip only to find that the teacher had gotten a substitute teacher for that day, possibly to avoid joining their students during the OLE. Although not all teachers did this (thankfully), it was common enough for me to contemplate the reasons, thus planting the seed (or developing the wondering, as presented by Dana, 2013) that would later develop this investigative action research study.

As a product of my own experiences and previous education, I believe that outdoor learning is an important, yet overlooked, instructional tool. Witnessing the positive results of OLEs and being familiar with the literature led me to develop this study. However, to distance my own beliefs and ensure the integrity of the research, I will use the bracketing technique, as described by Moustakas (1994), to "bracket" or remove

my previous experiences with and beliefs about OLEs from the data collection and analysis processes so that I may intentionally focus on the experience of the participants.

Herr and Anderson (2015) warn that studies involving “outsiders studying insiders” may often miss the mark of true action research; however, the aim of this study is to gather information that can be used to inform decisions regarding and/or solve a local problem of practice, which is a defining characteristic of action research (Fraenkel, Waller, & Hyun, 2015). Another aspect of action research satisfied in this study is the involvement of stakeholders (Herr & Anderson, 2015). The teachers participating in the study are considered stakeholders because the results of the study can potentially improve their practice as research indicates that there are positive outcomes for students who engage in OLEs (Jacobi-Vessels, 2013; Wirth & Rosenow, 2012). As the researcher, I am also a stakeholder because study results will impact the development and presentation of lessons and activities I use with teachers and administrators.

Research Design

Based on the aforementioned experiences, this issue is framed as a problem of practice that is suitable for an action research study (Runt, 2009). *A problem of practice* is an observable issue of instructional concern that is within the teacher’s or the school’s ability to control (Runt, 2009). Action research is growing in popularity and recognition—especially in education (Herr & Anderson, 2015). Action research allows practitioners to study issues of professional interest in their local contexts with the goal of generating immediately usable knowledge directly related to the specific context, as opposed to the goal of producing generalizable findings in traditional research formats (Efron & Ravid, 2013). Runt (2009) elaborates that this approach is favorable in

education because it enables research, practice, and policy to come together in a meaningful way that engages all stakeholders and produces results that are immediately applicable to the practicing teacher. Nancy Fichtman Dana (2013) describes action research as a method for practitioner inquiry wherein the results contribute to the researcher/practitioner's professional growth, as well as allows him/her to more powerfully impact program changes and educational reform. Investigative action research follows the Inquiry Cycle (Dana, 2013) which allows the researcher to extensively explore the research question through literature review and data collection before ultimately leading the researcher to design and take action rather than intervention-style research where an action is taken and the results observed.

Another benefit of action research is that it is authoritative, meaning that the teacher (practitioner)—not an outside expert—becomes the authority on the things that work in his or her classroom (Mills, 2007). Although it is important that action research is a collaborative effort among *educators* to improve their practice (Mertler, 2017) and while I may not consistently work at the same schools as the research participants due to the contract-based nature of my position, I am still a fellow educator as I am responsible for developing and delivering content-based lessons as specified in my current contract.

Qualitative action research using a phenomenological design is ideal for the current study as teacher beliefs are complex and are best understood when participants are allowed to respond freely and provide multiple perspectives, if applicable (Creswell & Plano Clark, 2018). Phenomenology allows a researcher to understand an experience from a participant's perspective (Creswell, 2009); in this study, the experience is OLEs and data was collected both prior to and following a related professional development

workshop. This research design allows information on teacher beliefs about OLEs to be explored in greater depth as, according to Creswell (2009), it allows for an emergent process that capitalizes on particular moments and thus encourages the participants to fully share their perceptions of the experience. A unique feature of both action research and phenomenology is the researcher's ability for and acceptance of a participatory role (Creswell, 2009; Efron & Ravid, 2013).

Specifically, this study uses an investigative action research approach following the Inquiry Cycle as presented by Dana (2013). Using this design, the researcher begins by developing questions (referred to as "wonderings" by Dana, 2013) through reflection of his/her own experiences - these questions or wonderings can be related to individual or groups of students, curriculum, or teaching strategies and techniques (Dana, 2013). Next, a method(s) for collecting data is developed to help the researcher gain insight to their wondering, followed by analyzing the data in conjunction with any relevant literature (Dana, 2013). This process ultimately leads the researcher to take action, which is different from traditional intervention-style research where action is taken and then the results observed (Dana, 2013).

The participants in this study were certified and practicing teachers in a public school system in coastal Georgia who volunteered to engage in the study. The system has 58 schools (elementary through high school) and a total enrollment of 36,436 students (State of Georgia, 2017). Participants had shown interest or curiosity in using OLEs in their curriculum but were not currently including such activities with any regularity in their classroom practice. Although the degree of hesitancy to include OLEs from these teachers is not the same as that previously discussed in the identification of the problem

of practice, their willingness to try OLEs makes them the ideal participants for this study as they can provide access to information about schools and/or district that I do not have access to as an outsider.

The study began with a semi-structured interview, a data collection method that is commonly used in phenomenological studies and action research (Creswell, 2009; Mills, 2007). Interviews were conducted before and after the OLE professional development workshop. A semi-structured format was used so that the same base questions (Appendix A) were asked before and after the workshop, giving me the option to ask follow-up questions in case respondents needed to elaborate or if I needed to clarify their responses (Mertler, 2017). Following the workshop, participants were asked to implement an OLE that was developed during the workshop and then complete a follow-up semi-structured interview which was the final interview for the study.

Observations and discussions with teachers during the OLE professional development workshop were an additional data source in the current study, increasing the study validity (Efron & Ravid, 2013). An unstructured observation technique described by Mertler (2017) was used to allow the flexibility necessary to alternate between observing and conducting the workshop. Interviews were transcribed and the researcher observations were transcribed, when needed, before analysis. A modified version of the *Steivick-Colazzi-Keen* method was used for data analysis as Creswell (2007) asserts that this six-step process yields the “most practical and useful” (p. 159) analysis of phenomenological data. This data analysis method allowed for significant statements and themes to emerge from the transcripts to develop a narrative of the participant experience.

Study Significance

Allowing youth to spend time outdoors is essential to their cognitive development, provides them with a real-world context for some of the concepts they learn in the classroom, and enhances their interpersonal skills (e.g., leadership) (Wirth & Rosenow, 2012). Therefore, it is important to identify the sources of teachers' discomfort with these experiences and to attempt to reduce their hesitance. Findings from this study can possibly be used to support other teachers at the selected study site who did not participate in the OLE workshop. The results of this study may be significant to nontraditional or informal educators who work with outdoor learning programs at nature centers and similar facilities as the results may impact program development and/or marketing efforts. There also is limited transferability to all teachers as "the great outdoors" is common to everyone, the teacher simply needs to be comfortable taking his/her students into the outdoor spaces available.

Action research often addresses social justice issues, and the need for outdoor learning easily fits into that category. Special-needs students, especially those with ADD (attention-deficit disorder) or ADHD (attention-deficit/hyperactivity disorder), have shown great improvements in cognitive function after participating in OLEs (Jacobi-Vessels, 2013). One area of significant improvement for these students is concentration; when a struggling student can concentrate better inside the classroom as a result of spending time outside the classroom, the student's potential to learn is greater (Jacobi-Vessels, 2013). Therefore, the results of this study may be favorable to teachers supporting the needs of special-needs students at the study site and possibly at similar schools.

Study Limitations

A major limitation of this study is that all participants had expressed interest, at some point or another, in including more OLEs in their instruction. The problem of practice for this study focused on teacher hesitance regarding the use of OLEs, but identified teachers actively avoiding OLEs as the predominant spark for initiating the research project. While some of the participants had previously attempted to provide their students with OLEs, they were currently hesitant to do so on a regular basis despite having some interest in doing so if the potential challenges they faced (e.g., planning and/or implementation time, resources) could be reduced. Further, using participants who already had some interest in OLEs, but were not regularly using such activities, provided a unique opportunity to gain insight into the inner workings of the schools and school system (which I am not privy as an outsider) that could help in the development of future and/or professional development opportunities.

One limitation of the current study is the fact that the professional development opportunity was held on a student holiday where multiple professional development options were available. Thus, some teachers who may have been interested in participating in the OLE workshop could have selected or been assigned to a different professional development option. Further, as this research was conducted as part of an unfunded doctoral study, the ability of recruiting teachers who were completely resistant to using OLEs was diminished as there was no possibility of providing tangible classroom materials, official certifications, or other compensation for participating in the workshop and associated research study.

Another limitation is that the duration of the professional development experience was constrained by the available time-frame and schedules of the participating teachers and the researcher. However, Kennedy (as cited in Steiner, 2004) claims that extending the duration of professional development programs is not enough to ensure their effectiveness. Professional development opportunities that emphasize multiple characteristics of effective professional development (Darling-Hammond, Hyster, & Gardner, 2017; Steiner, 2004) can still be successful in a short time-frame; however, adequately addressing several of these characteristics typically requires a program that lasts longer than one day (Steiner, 2004). Recognizing the limitation of time available for the traditional workshop component of this research study, I began the conversations about OLEs with each of the participants prior to their attendance at the workshop and continued the conversation and offered support for their OLE implementation following the workshop in an attempt to lengthen the duration of the experience.

Chapter Summary and Organization of Dissertation

Despite research (Harte, 2013; Jacobi-Vessels, 2013; Gray & Martin, 2012; Wirth & Rosenow, 2012) indicating that outdoor learning is beneficial to student development, teachers remain reluctant to implement such activities. One reason for this apprehension is the stress of preparing to leave the classroom in addition to preparing the lesson (Banack, 2015; Dymont, 2005; Rickinson et al., 2004). Identifying the elements of planning and implementing lessons involving OLEs that cause teachers discomfort will enable administrators to provide educators with better outdoor learning training opportunities. If teachers are less stressed and more secure when planning OLEs, they will be less hesitant and more likely to utilize such instruction.

The empirical and relevant literature regarding the importance of outdoor learning will be presented in Chapter 2, effective professional development and teacher beliefs regarding outdoor learning will also be established. Chapter 3 will introduce the methodology used for this study, including a brief historical review and rationale for the use of the specific qualitative action research investigation with phenomenological approach, as well as detail the research procedures. The *Stevick-Colazzi-Keen* data analysis process is outlined and the results of the data collection are presented in Chapter 4, along with participant vignettes to provide context and increase the narrative detail. Capitalizing on the information offered in Chapter 4, conclusions drawn from the data and recommendations for future studies that may encourage teachers to increase their implementation of OLEs will be discussed in Chapter 5.

Definitions of Key Terms

The following terms will be used throughout the current study:

Content area: Grade or subject taught by study participant.

Immersive: Active participation in authentic socially and/or environmentally situated practices (Brinck & Tanggaard, 2016).

Outdoor learning experience: Referred to as an OLE, this is a broad term for real learning that is a result of planned, direct experiences in the out of doors. Learning can be in the form of play (early education), environmental education, school projects, adventure activities, team building exercises, or development programs (Institute for Outdoor Learning, n.d.).

Professional development: An opportunity for growth and learning to find greater fulfillment in one's practice (Clark & Hollingsworth, 2002).

Teacher beliefs: An idea or attitude that a teacher holds to be true, regardless of actual truth, that impacts his or her practice (Richardson, 2003).

CHAPTER 2

LITERATURE REVIEW

The purpose of this action research study was to gain a deeper and more thorough understanding of the beliefs about outdoor learning experiences (OLEs) held by teachers in my context (a public school system in coastal Georgia). Stemming from my position as an outdoor learning educator, this study is an investigation of the underlying beliefs of teachers about OLEs and how those beliefs translate into their hesitance to engage in OLEs with their students. Gaining a better understanding of the teachers' beliefs in my context through this investigative action research study will enable me to more adequately prepare future interventions that can bring teachers into the experience and appreciate the value of OLEs.

Clark and Hollingsworth (2002) claim that significant changes in teacher beliefs are likely to occur only after a teacher has field-tested the new information. These claims support rooting professional development in situated learning theory (Lave & Wenger, 1991) so that teachers have authentic practice on which to base their beliefs (Ioannidou-Koutselini & Patsalidou, 2015). These theories have guided the research design and enactment of this study as well as the development of the following research questions; (1) What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom instruction? (2) What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs?

The literature review contained in this chapter will begin with the history of environmental education and outdoor learning. The benefits of outdoor learning will then be discussed with reference to associated learning theories. Next, the design features of outdoor learning are discussed as understanding these features helps us understand the possible variety of benefits granted by outdoor learning. Both anticipated and documented barriers to the implementation of outdoor learning are addressed, and the chapter concludes with a review of the impact of professional development opportunities on teachers' willingness or desire to change their beliefs, behaviors, and/or practices.

Purpose of the Review

Although its use in action research is debatable, the literature review has long been an integral component of the traditional research and dissertation process (Mills, 2007). Reviewing the literature allows a researcher to find support for a proposed problem as well as expose potential challenges to solving the proposed problem, both of which are important to study refinement if the study moves forward (Mills, 2007). A detailed literature review further allows a researcher to examine the problem through other lenses, which may indicate that there are other solutions (Mills, 2007).

It is crucial to understand how OLEs are theoretically aligned with current curricular and instructional strategies before proposing methods for implementation. The facets of outdoor learning addressed in this literature review (i.e., the progression of outdoor learning, its benefits and barriers, unique design features, opportunities for professional development) guided the development of the current study. The keywords that were used to search the EBSCOhost and ERIC databases for relevant literature included the following: *outdoor learning, environmental education, outdoor education,*

teacher beliefs, situated learning theory, professional development, preservice teacher education, and in-service teacher training. Additional sources of information were located based on the information referenced in the materials reviewed.

Background of the Problem

Children's interactions with nature, especially at early ages, enhance their cognitive and physical development (Wirth & Rosenow, 2012). Therefore, it is important for teachers to provide OLEs because today's youth do not spend time in the natural world while at home as those from earlier generations did. Most modern families have two working parents, which limits opportunities for supervised outdoor time (Burriss & Burriss, 2011; Jacobi-Vessels, 2013). This limited time that children are spending outside coupled with parents becoming more overprotective and an increased reliance on technology has diminished children's exposure to nature, referred to by Richard Louv (2005), co-founder of the Children and Nature Network, as *nature-deficit disorder*.

There are many reasons that teachers do not include OLEs in their instruction: (1) Some teachers simply do not like being outdoors, perhaps due to allergies, fear of animals, dislike of certain hot or cold temperatures, or personal preferences. (2) Teachers with little experience or training in outdoor learning may lack the confidence to attempt such lessons (Dyment, 2005). (3) Some teachers, in our current litigious society, may feel that the risk associated with leaving the classroom does not outweigh the benefits gained from such activities (Stan & Humberstone, 2011). (4) Also, many teachers cover some of their own classroom expenses, and adding new materials and time to plan OLEs could increase that expense, thus discouraging teachers from engaging in OLEs (Bourtotzoglou, Emmanouloudis, & Georgopoulus, 2016). In this action research study, I will explore

teachers' beliefs related to OLEs at the study site and what impact an in-service professional development workshop has on those beliefs and, ultimately, their usage of OLEs.

History of Outdoor Learning and Environmental Education

Outdoor learning is rooted in environmental education, which was first defined in 1969 (McCrea, 2006). While some of the terms associated with outdoor learning may be relatively new, the concept of using the natural world to integrate theory and practice was documented as early as 1762 in Rousseau's *Emile* (Ibimilua & Amuno, 2014; McCrea, 2006). In this novel, Rousseau suggests that the natural world is an integral component of a child's education as both a content area and a place that will facilitate learning.

Additionally, in 1846, Louis Agassiz, known for his contributions in multiple scientific fields, became a professor at Harvard University and impacted the field of education by stressing that he wanted his students to learn from nature rather than from books (as cited in Disinger, 1997). His unique teaching style set the stage for Wilbur Jackman's 1891 publication *Nature Study for the Common School*, which introduced nature study concepts to formal education practices (McCrea, 2006). Fear that urban migration would eliminate children's opportunities to learn by direct contact with the natural world propelled the nature study movement (Fraser, Gupta, & Krasny, 2015). Jackman introduced many ideas and skills, including experience-based inquiry and discovery, that are still seen in the modern-day elementary science curriculum (Disinger, 1997).

Outdoor learning and environmental education began to gain more support in the United States in the 1930s as the Dust Bowl (of 1930) spawned the need for conservation education (Fraser et al., 2015; McCrea, 2006). During this time, conservation was

considered a matter of morality—those following proper conservation practices were morally right, and those who were not were morally wrong (Disinger, 1997). Since schools were historically the agent responsible for promoting appropriate youth behavior, society assumed that including conservation education in the formal education curriculum would improve both individual and, subsequently, societal behavior in and toward the natural world (Disinger, 1997). State and federal government agencies supported this movement along with many nongovernmental resource management organizations (Fraser et al., 2015; McCrea, 2006).

John Dewey’s influence in the progressive education movement during this time served as a further catalyst for outdoor learning and environmental education (Thornburn & Allison, 2017). He realized that everyone, but specifically youth, learns outside of formal education settings by integrating their past and present experiences (Dewey, 1938). Dewey (1938) believed that this natural learning method could be successfully replicated in formal education by connecting experience and reflection with subject matter. This belief formed the focus of the “learn by doing” strategy of the progressive education movement, which promoted learning about the environment while surrounded by the environment (Disinger, 1997). Dewey furthered this method by introducing an interdisciplinary approach that balanced subject content with students’ lives and experiences (Thornburn & Allison, 2017). Although he is often criticized for the ambiguous nature of his claims regarding this approach to experiential education, “learn by doing” remains one of the principle tenets of modern outdoor learning and environmental education (Thornburn & Allison, 2017).

Building on Dewey's foundation, Kurt Hahn is considered to be one of the pioneers of experiential education as it is known today. Hahn, once a teacher in Germany, fled to England after voicing his opposition to the Nazi party and being jailed (Howden, 2012). Hahn believed that several attributes were declining among youth (and throughout society): fitness, initiative, imagination, craftsmanship, self-discipline, and compassion (Howden, 2012). To combat this decline, he developed a series of physical activities or experiences for his students to complete (Howden, 2012). Although the experiences were designed to be intensely physical, when asked about them, he would focus on the emotional, social, and psychological benefits, specifically the element of student reflection, which is an essential component to experiential education (Howden, 2012).

The environmental movement of the 1960s and 1970s, often attributed to the 1962 publication of Rachel Carson's *Silent Spring*, brought the term *environmental education* to the national stage (Disinger, 1997). In 1969, the National Environmental Policy Act was passed, calling for a better "understanding of the ecological systems and natural resources important to the Nation" (PL 91-190). That same year, Dr. William Stapp of the University of Michigan produced the first published definition of environmental education, stating that its purpose was to generate a society that was knowledgeable regarding the natural world and its associated issues as well as driven to solve these problems and implement the necessary solutions (Stapp, 1969). Support for outdoor learning and environmental education exploded in the 1970s with the establishment of the North American Association for Environmental Education (called the National Association for Environmental Education at that time) and multiple United Nations conferences to develop a formal definition and set of objectives for this new educational

directive (McCrea, 2006). It was during this time that outdoor learning split from environmental education; the former considered an educational approach more concerned with the location of instruction, and the latter was focused on content (Disinger, 1997; Fraser et al., 2015).

Benefits of Outdoor Learning

The benefits of outdoor learning have been extensively researched, predominantly through the lens of environmental education, as the National Environmental Education Act of 1990 tasked the Environmental Protection Agency to establish an Office of Environmental Education that would assist in development of environmental education programs and train educators to deliver such programs, as well as provide grant funding for such programs (Environmental Protection Agency, 2018). Providing learning opportunities outside has been shown to positively impact students' cognitive function, motor skill development, social and personal skills development, and environmental stewardship, with these impacts being even greater with special education students (Burdette & Whitaker, 2005; Jacobi-Vessels, 2013; Rickinson et al., 2004; Wirth & Rosenow, 2012). A benefit for both teachers and students is the ability of OLEs to have interdisciplinary reach (Gray & Martin, 2012).

Cognitive Benefits

Humans, specifically young children, are motivated by curiosity to explore the outdoors (Jacobi-Vessels, 2013). When not bound by traditional classroom activities, children can more freely explore their abilities and strengths. For example, a child who struggles with reading may have an excellent understanding of plants or weather, which could be derived from outdoors experiences (Burriss & Burriss, 2011). Children allowed

time for OLEs are more likely to become involved in their communities at a young age by engaging in “real world” situations and tackling relevant issues (Burriss & Burriss, 2011) because outdoor sessions inspire problem-solving and allow children opportunities to make their own decisions (Burdette & Whitaker, 2005). Outdoor experiences can encourage the development of executive functions, defined as “planning, organizing, sequencing, and decision making” (Burdette & Whitaker, 2005, p. 48); these higher level skills are essential to both academic performance and general independence later in life (Burdette & Whitaker, 2005).

Appropriate interactions with nature improve concentration and promote the development of observational skills and creativity (Wirth & Rosenow, 2012). Burdette and Whitaker (2005) assert that the ability to concentrate or be attentive is directly related to inhibition and impulse control. They also believed that development of this cognitive aspect allows students to better participate in activities where they are expected to take turns or listen to others (Burdette & Whitaker, 2005). Observational skills can also be improved through outdoor learning and affect many aspects of cognitive and emotional development (Wirth & Rosenow, 2012). Heightened observational skills enhance a student’s ability to use logic and reasoning, which leads to his or her increased ability to engage in critical thinking (Harte, 2013). Extensive critical thinking ability can be beneficial to children’s academic performance, and it is also valuable in personal and professional situations later in their lives (Banack, 2015).

Motor Skill Development

In terms of children’s motor skill development, one of the greatest advantages of outdoor learning is the extended space to move freely (Maynard & Waters, 2007). In a

case study by Rouse (2016), the parents of preschool-aged children acknowledged that when their children spent time in a space designed as an outdoor classroom, their balance and climbing skills improved. Maynard and Waters (2007) also suggest that balance and coordination tend to be better developed in students who are able to explore natural environments instead of manufactured landscapes.

In a study of students ranging in age from 11 to 14 years, Flett, Pfeiffer, Blanton, and Moore (2014) reported some of the things that these students recognized about outdoor learning. One student said that it required her to utilize all of her senses and different muscle groups, which helped to prevent her from feeling clumsy; another participant stated that he appreciated OLEs because it provided him with an opportunity to complete tasks on his own and improve his skills instead of merely watching the teacher or a video (Flett et al., 2014). While all of the participants indicated that they enjoyed the OLEs, many also expressed concern that sometimes the environmental conditions (grounds/trail maintenance, etc.) presented a challenge when attempting to master a new skill. These findings (Flett et al., 2014) indicate that older students may understand that OLEs improve their motor skills as long as there is a balance between challenge and skill.

Social and Personal Skill Development

Outdoor learning experiences are believed to have positive impacts on a child's development of social (leadership, teamwork, etc.) and personal skills (time management, risk calculation, etc.) often called *soft skills*, regardless of the child's gender (American Institutes for Research, 2005; Harun & Salmuddin, 2013). Ernst and Tornabene (2012) found that children who live closer to natural areas (areas with no human development or

interference) exhibit lower levels of anxiety and have greater self-confidence than their peers. This is corroborated by two additional studies (Cassidy, Streat, Wright, & Watson, 2015; Mirrahimi, Tawil, Abdullah, Surat, & Usman, 2011), both citing that stress negatively impacts student learning. Both studies (Cassidy et al., 2015; Mirrahimi et al., 2011) found that students who interacted with the natural environment had lower levels of stress. Cassidy et al. (2015) expanded this line of study into the realm of cognitive development by suggesting that time in nature also improves a student's verbal and nonverbal memory by reducing their cytokine levels, which are stress-related hormones.

Exposure to calculated risks (on behalf of the teacher) has been shown to help students learn to use their own judgment to make sensible decisions, which in turn boosts the students' confidence (Stan & Humberstone, 2011). Students feel a sense of ownership in the outdoor classroom because of their ability to make decisions that drive the activities (Brodin, 2009; Stan & Humberstone, 2011). Stan and Humberstone (2011), through the use of researcher observations at a residential outdoor center, additionally found that students who were allowed to take certain risks in an outdoor setting were more likely to later accept challenges or take risks in indoor settings. Conversely, they (Stan & Humberstone, 2011) observed that when teachers were overly focused on student safety they often controlled the activity, leaving students little independence to achieve the desired task.

According to Harun and Salamuddin (2013), participation in OLEs produces positive changes in teamwork, leadership, confidence, and time management. This quasi-experimental (intervention imposed on a sample formed prior to the study onset) study (Harun & Salamuddin, 2013) indicated that teamwork, leadership, confidence, and time

management skills improve as a result of outdoor learning. This is similar to findings from the American Institutes for Research (2005), who surveyed the students, parents, and teachers from four sixth-grade classes in California, the students having attended outdoor education programs at designated study sites. This study used a quasi-experimental pretest/post-test design (similar to Harun and Salamuddin, 2013), but the AIR (2005) study included a second post-test, which was administered six to ten weeks after the program. Results from the student surveys showed no statistically significant increase to personal and social skills immediately following the outdoor education program, but a statistically significant increase was detected in the time following their participation as compared to students who did not participate (AIR, 2005). Interestingly, the teachers also reported perceiving these skill increases although the parents did not (AIR, 2005).

Environmental Stewardship

According to Christiana, Davis, and Freeman (2014), youth who spend time outside after school are more likely to appreciate nature and the natural world; and are thusly more motivated to participate in outdoor activities individually and in small groups. This is consistent with Fraser et al. (2015) and Cohen (as cited in Fraser et al.) that a prerequisite for initiating environmental protection measures is to have people experience and interact with nature. Conversely, Christiana et al. (2014) found that youth who did not spend time outdoors after school considered the outdoors to be boring with nothing to do, were only marginally motivated to spend time outdoors if they were with friends, and would not engage in outdoor activities alone.

When children are in early developmental stages, they are in prime phases of their lives for an affinity for the natural world to be cultivated (Gray & Martin, 2012). In a mixed-methods study, Larson, Castleberry, and Green (2010) indicated that eco-affinity, or environmental stewardship, decreased as students got older (starting around 10 years of age) possibly as a result of more focus being placed on standardized testing as students age. The same study (Larson et al., 2010) also revealed that this decrease can be reversed if outdoor time is put back into students' routines. One participant (Larson et al., 2010) stated that he originally had no interest in nature or being outside, but after participating in OLEs, he could now appreciate nature and wanted to be outdoors; this supports previous research acknowledging that direct interaction with nature is the foundation of environmental stewardship.

Special Education

Outdoor learning experiences are known to have cognitive benefits, but these benefits have been shown to be greater for people with special needs, specifically those with attention-related disorders (Jacobi-Vessels, 2013; Mirrahimi et al., 2011; Wirth & Rosenow, 2012). Jacobi-Vessels (2013) reported that students with ADD (attention-deficit disorder) or ADHD (attention-deficit/hyperactivity disorder) showed fewer symptoms after participating in OLEs in green spaces as compared to similar activities indoors or activities involving manufactured materials. To be impactful, OLEs do not have to be lengthy; according to Rushton and Rushton (2008), concentration is improved after a student spends only 20 minutes outdoors.

Students with learning disabilities frequently have difficulty receiving, processing, and storing information, which means that they typically need more learning

time to understand the concepts being taught (Brodin, 2009). Not only can OLEs be designed to provide that extra learning time, but they can be used to build routines and emphasize a continuation of skills that better assists the learning processes of students with special needs (Brodin, 2009). When lessons are conducted outdoors, students with learning disabilities have the opportunity to learn in a tangible environment as many of these students have difficulty with abstract thought (Brodin, 2009; Jacobi-Vessels, 2013). Brodin (2009) further asserts that the use of all five senses (sight, smell, hearing, taste, and touch) can be integrated into OLEs, which creates multiple avenues that can facilitate learning for students with intellectual disabilities.

Many children with special needs may have low self-esteem and poor social skills, but participating in OLEs can promote a sense of stewardship that can help them overcome these feelings (Wilson, 1994). Special needs students and those in special education also experience social and emotional benefits following OLEs because they often feel a sense of peace or freedom in outdoor environments that they cannot feel indoors (Brodin, 2009; Jacobi-Vessels, 2013). This is supported by Wirth and Rosenow (2012), who claim that natural green spaces on school grounds provide a safe place for students who struggle to freely and confidently express their emotions. It is also believed that OLEs can improve student-teacher relationships for students with special needs and foster overall positive attitudes for school and school staff (Wilson, 1994) as well as promote inclusion (Brodin, 2009).

Interdisciplinary Content

Lack of exposure to the outdoors has caused a disconnect between children and the natural environment (Fraser et al., 2015; Gray & Martin, 2012). This disconnect has

many implications, but it is significant in education because students are unable to understand the parallels between textbook material and the events and phenomena occurring outside (Gray & Martin, 2012). While outdoor learning is most commonly seen in science instruction, students' skills in literacy, mathematics, and social science have also been shown to improve as a result of outdoor learning (Ernst, 2012; Wirth & Rosenow, 2012). The relationship between humans and the natural resources on which humans rely is another avenue for outdoor learning that is often overlooked (Wilson, 1994). Outdoor learning experiences in which interdisciplinary concepts are emphasized promote the development of students' critical thinking and problem-solving skills, especially with regard to both natural and anthropogenic environmental impacts (Ernst, 2012).

When OLEs are properly designed, they do more than simply get kids outside (Paterson, 2010). Paterson (2010) identified one of the greatest accomplishments of outdoor learning as getting students excited or interested in topics that were previously just words on a page. Outdoor learning helps students grasp the idea that many subjects or disciplines—like science, government, and history—are often linked (Paterson, 2010). The interconnectedness of disciplines and concepts is better understood by students who have engaged in activities in the natural world as they are able to experience how the components come together and interact rather than remaining segments from various text books or content-specific materials (Wirth & Rosenow, 2012). Further, cognitive imaging shows that interdisciplinary activities, like outdoor learning, simultaneously activate multiple sections of the brain, increasing the synaptic activity and the student's capacity to learn (Rushton & Rushton, 2008).

Design Features of Outdoor Learning

According to Ernst and Tornabene (2012), teachers perceive different outdoor settings as having different benefits or challenges for use as outdoor learning spaces. An outdoor learning space may simply be an outdoors area with a picnic table, but it is important that these spaces are well defined just as indoors learning spaces are (Burriss & Burriss, 2011; Ernst & Tornabene, 2012). Outdoor learning areas can be categorized as follows: on-campus natural areas, on-campus maintained areas (e.g., green space with trails, benches, and/or pavilions), on-campus manufactured areas (playgrounds and hardscapes), off-campus natural areas, and off-campus maintained areas (Burriss & Burriss, 2011; Ernst & Tornabene, 2012).

Ernst and Tornabene (2012) found that teachers overwhelmingly preferred outdoor areas with clear boundaries and places for students to sit; however, it is possible that the teachers' personal preferences influence their preferences for outdoor learning areas. Ideally, teaching materials could be stored in the outdoor learning space so that teachers do not have to transport materials every time they use the space because this burden alone often could discourage use (Burriss & Burriss, 2011).

Barriers for Implementing Outdoor Learning

Common barriers to the successful implementation of OLEs can be placed in five main categories, all of which were identified in a review of the literature (Rickinson et al., 2004) pertaining to outdoor learning: (1) fear, (2) confidence, (3) school requirements, (4) resources, and (5) professional expectations.

Barrier 1: Fear

There are many ways in which a teacher's fear may prohibit the integration of OLEs in his or her instructional plans. One fear is related to students' health and safety (Dyment, 2005; Ernst, 2013). Taking students outside heightens the risk of a student's allergic reaction resulting from exposure to insects and/or vegetation (Dyment, 2005). Also, the risk of students being injured while under their teacher's supervision increases when OLEs include physical activity (Dyment, 2005; Leggett & Newman, 2017). Further, elements of the outdoor space design, for example, the presence of large trees or features that include water, may compromise a teacher's line of vision or create additional hazards for the supervising teacher to manage beyond the actual learning activity (Dyment, 2005; Maynard & Waters, 2007).

Compounding this fear for students' health and safety is the fear that should an injury or adverse reaction result from taking students outdoors, the teacher could become the target of a lawsuit (Stan & Humberstone, 2011). In a grounded theory study (Leggett & Newman, 2017), Australian teachers reported that national regulations offered some support, but mainly restricted the OLEs because of the stringent equipment regulations and limitations. These teachers further stated that it was difficult to offer OLEs that were engaging for students when working within the confines of the national regulations concerning sun safety and dehydration (Leggett & Newman, 2017).

Some teachers may fear interacting with certain animals or plants while participating in or leading OLEs. Torkar (2015) found that teachers who were fearful of or had negative associations with snakes were more likely to have negative attitudes regarding wildlife and environmental conservation, thus producing an aversion for OLEs.

Additionally, Torkar (2015) shared that teachers who fear animals often stifle their students' understanding and appreciation of animals. Stan and Humberstone (2011) reported that when teachers are forced to implement activities related to their fear(s)—without overcoming that fear—they tend to overcompensate by shouting or using other controlling behavior, which causes students to lose interest in the activity and rely on the teacher(s) instead of making their own decisions as a result of the teacher's behavior.

Barrier 2: Confidence

Outdoor learning is highly suitable for teaching scientific concepts, specifically in environmental and physical sciences; this may be one reason that teachers outside of those disciplines lack the confidence to plan or attempt implementation of OLEs (Dyment, 2005). According to Ernst (2007), professional development for outdoor learning and environmental education has been predominantly science-oriented rather than focused on interdisciplinary methods and concepts. Ernst (2007) further states that the majority of the in-service trainings offered are focused on environmental content instead of using the environment as a teaching tool.

However, Forbes and Zint (2011) found a statistically significant relationship between a teacher's years of experience and the use of OLEs. Respondents with the most years of teaching experience reported being more confident in providing OLEs and more likely to integrate outdoor learning and environmental education activities in their lessons. Interestingly, Forbes and Zint (2011) found no significant relationship between the number of environmental science courses these teachers took at the postsecondary level (preservice education) and these teachers' beliefs and/or behaviors regarding outdoor learning or environmental education (Forbes & Zint, 2011).

Similarly, Glackin (2016) found that biology teachers were no more effective with OLEs than teachers from any other science disciplines. Those teachers who successfully used OLEs were more likely to hold beliefs of social constructivism and have relativist science positions. Glackin (2016) also reported that these teachers were more likely to consider the purpose of science education as helping students understand the scientific method. Conversely, Glackin (2016) found that teachers in the study who did not use OLEs were more likely to hold traditional “sage on the stage” beliefs and consider the purpose of science education imparting subject-area knowledge and ensuring a future supply of scientists. According to Glackin (2016), participants who did not use OLEs regularly only valued such activities for their novelty and believed that planning these activities was unnecessary because the treat of going outside should be enough to hold the students’ attention.

Dyment (2005) and Rouse (2016) suggest that teachers lack the confidence to introduce OLEs into their lessons because of the conventional assumption that they should be masters in their content areas and know all the answers. This is supported by Moseley, Reinke, and Bookout (2002), who found that preservice teachers rated their abilities to conduct OLEs as *high* immediately following an outdoor education program. However, two months following the program, teachers reported significantly lower rates of self-efficacy (Moseley et al., 2002). One potential explanation for this is that the materials provided for the OLE outlined the methods and expected outcomes for the teachers, which may have given them a false sense of security or activity simplicity. Another explanation is that there was no reinforcement of content or methodology following the OLE in subsequent preservice education courses. A third possible

explanation is that during the two months following the program, teachers were able to re-evaluate their abilities more objectively (Moseley et al., 2002).

Conversely, Bourtotzoglou, Emmanouloudis, and Georgopoulos (2016) indicate that preschool teachers feel comfortable with their students engaging in hands-on water quality activities (both indoor and outdoor). These teachers also reportedly believed they could answer the students' questions about the subject matter or activity materials. This study (Bourtotzoglou et al., 2016) pertained to reported self-efficacy regarding preparation and implementation of activities appropriate for preschool-aged students only (Bourtotzoglou et al., 2016). However, these findings (Bourtotzoglou et al., 2016) supported those from Ernst (2007) and Moseley et al. (2002) relating teachers' confidence in answering students' questions to teachers' training and/or experience.

Barrier 3: School Requirements

Rickinson et al. (2004) indicated that teachers saw curriculum requirements and emphasis on standardized tests as barriers to implementing OLEs. This is supported in the literature (Dyment, 2005; Gunn, 2006) noting teachers' hesitance to take their students outside when the OLE was not explicitly linked to the curriculum. Some teachers reported that the variety of learning outcomes afforded by outdoor learning makes it difficult to document or account for all of the learning that takes place, which is a requirement in many areas (Maynard & Waters, 2007).

According to Dyment (2005), teachers were concerned that taking their students outside for instruction may cost them time that could be best spent covering material that would be appear during standardized testing. This concern could stem from the perception that teachers must be supervisors rather than educators when taking their

students outside the classroom because of their need to protect their students' safety and well-being (Leggett & Newman, 2017). However, formal science education in the classroom is failing at improving students' appreciation and achievement (Hudson, 2001; Soh & Meerah, 2013). Further, Soh and Meerah (2013) found that OLEs (traditionally considered *informal education*) were integral to students' success in science-related fields.

Barrier 4: Shortage of Resources

According to Ernst (2012), teachers view outdoor learning and environmental education as something “extra” to make time for as opposed to seeing it as part of their curriculum and instruction plans. This time barrier was acknowledged even for OLEs on the school campus as materials needed to be prepared inside and transported to the outdoor location, which required more of the teachers' planning and instruction time than traditional indoor lessons (Burriss & Burriss, 2011). However, Dymont (2005) seemed to disagree with this barrier as the teachers in this mixed-methods study reported that they did not see preparation time for on-campus OLEs as a hindrance (especially when compared to off-campus activities). However, the teachers did feel that coordinating time with other teachers or activities to use the available outdoor learning areas was prohibitive as the area may not be vacant at a time that was conducive to their traditional instruction or daily routine (Dymont, 2005).

Participants in Bourtotzoglou et al. (2016) reported their unwillingness to spend time or other resources to develop materials dedicated to outdoor learning because they considered environmental education a “personal matter” to promote to their students if they chose to do so (via examples and volunteering) as opposed to an approach to

teaching content. These teachers further stated that OLEs are not good uses of their time or money and that preparing for such activities results in unnecessary clutter that interferes with the learning of other subject matter (Bourtotzoglou et al., 2016).

Gunn (2006) also identified the costs associated with OLEs as a significant deterrent; however, Gunn concentrated on the use of formal nature centers and residential facilities offering multiday programs. Even if programs at these off-campus locations are free of charge, the cost of transportation must still be considered (Ernst, 2012). However, Bunting (2006) asserted that teachers at schools with no extra funding or those that serve under-resourced populations can provide successful on-campus OLEs for their students. As Bunting suggested, teachers can create OLEs involving elements of the outdoor spaces available on the campus which emphasize the unit/lesson being taught in class by providing students with one or more of the following: an opportunity for real-world observation, the chance to utilize skills and concepts, and/or a stimulating experience (Bunting, 2006).

Lack of administrator and/or district support for outdoor learning is a difficult barrier for teachers to overcome (Dyment, 2005; Ernst, 2007; Ernst, 2012; Rickinson et al., 2004). According to Powers (as cited in Ernst, 2012), teachers must feel supported by their administrators (e.g., department supervisors, principals) before they attempt to implement something new. Ernst (2012) stressed the crucial nature of administrator support of the use of OLEs because those who support outdoor learning help their teachers overcome the barriers they may feel exist (e.g., applying for funding, assisting with paperwork).

Barrier 5: Professional Expectations

Rickinson et al. (2004) and Dymont (2005) identified a wide range of barriers that indirectly limit the implementation of outdoor learning, such as large class sizes, bell schedules, and workplace climates. A participant in Dymont (2005) reported that labor strikes in her district made it difficult to include creative teaching opportunities as the school days became extremely regimented to stabilize the impacts of the strike. This participant elaborated that the sense of unrest caused by the strike made teachers fear that any nontraditional teaching elements would draw unwanted attention (Dymont, 2005).

Rouse (2016) identified parental support as another professional expectation barrier. In this study, parents were pleased with the green space added to the school grounds and wanted the children to use it daily, especially during warmer months. Unfortunately, the parents did not seem to understand that learning was occurring during these sessions. One parent said that she witnessed her child exploring the outdoor classroom and trying new skills, but it was different than what she had observed in the past when the children had manufactured equipment (e.g., trucks, bicycles) and a traditional recess period. Rouse (2016) also found that parents were well aware of the activities and learning occurring during the indoor sessions and were familiar with the curriculum. Additionally, while parents appreciated and expected OLEs, the way in which the sessions correlated to the curriculum or indoor lessons was not clear. Maynard and Waters (2007) also found that parents expected the correlation to curriculum standards for all activities to be documented.

Theoretical Framework

The theoretical framework is an integral part of the research process because it connects the researcher with the existing literature related to the problem and it further justifies the significance of the study (Lederman & Lederman, 2015). Effective professional development, teacher belief, and situated learning theories are integrated to form the theoretical framework for this study. The commonality among these theories that allows for their successful integration is that they assert that learning, specifically learning that can change beliefs, is situated in activity (Clark & Hollingsworth, 2002; Richardson, 2003; Thacker, 2015). Elements from these theories provide the foundation for this study as teacher beliefs are investigated through a professional development workshop.

Effective Professional Development Design

Professional development is considered essential to teacher effectiveness in the classroom (Banack, 2015; Clarke & Hollingsworth, 2002). In order for educators to want to use OLEs and also feel comfortable and confident doing so, a similar emphasis on professional development is needed (Banack, 2015; Ernst, 2013). However, Ernst (2013) warns that it is necessary to determine if professional development opportunities are needed to change teacher beliefs about OLEs or simply to increase their content and skill knowledge. According to Ernst (2013), if the professional development is not targeted at either beliefs or skills, then it will not result in the increased likelihood of teacher implementation of OLEs.

Clark and Hollingsworth (2002) define professional development as an opportunity for growth and learning to find greater fulfillment in one's practice.

Unfortunately, not all professional development opportunities are created equal, which means that the level of their effectiveness varies, most often as a result of their design (Darling-Hammond, Hyler, & Gardner, 2017; Thacker, 2015; Steiner, 2004). Darling-Hammond, Hyler, and Gardner (2017) identify seven characteristics of effective professional development for teachers: (1) focused on content; (2) incorporates active learning; (3) allows for peer collaboration; (4) uses models and/or modeling; (5) offers expert/professional support; (6) incorporates reflexive activities; (7) provided over a sustained period.

Professional development programs focused on repairing inadequacies as opposed to helping teachers find greater fulfillment in teaching are ineffective at producing any change in teacher beliefs or behavior because participants often feel as if their skills are being questioned or attacked (Clarke & Hollingsworth, 2002). Clarke and Hollingsworth presented a model to assist in the development of positively perceived professional development opportunities through four change domains: (1) external, (2) practice, (3) personal, and (4) consequence. Although the model is presented in a diamond shape, Clarke and Hollingsworth (2002) note that there is no single path to be taken and that each of the domains can (and should) be interconnected through action and reflection.

The *external* domain of this model contains new information or stimuli, most commonly in-service training programs (Clarke & Hollingsworth, 2002). The *practice* domain contains teacher experimentation, typically manipulating the skills or activity from the training program to fit his or her classroom. The *personal* domain contains the teacher's knowledge, beliefs, and attitudes. The *consequence* domain contains the salient outcomes produced by the teacher's implementation of an activity or skill that he or she

then uses to draw conclusions about its usefulness. The model can be used as an analytical tool to categorize teacher change data, as a predictive tool to show the possibility of particular change sequences, and as an interrogatory tool to help administrators frame theoretical and practical questions concerning teacher change and professional development (Clarke & Hollingsworth, 2002).

Young (2016) proposed that if professional development is designed not only to showcase a new device or technique, but to also allow the teacher to individually practice, there will be a positive impact on their beliefs regarding use of the new material. Torkar (2015) supports Young's (2016) assertion, stating that factual knowledge alone has little impact on increasing positive attitudes toward animals that may pose a threat to humans. Teachers' ability to practice and/or interact with new, intimidating material is essential to teachers using this new material in the classroom (Young, 2016). As Torkar (2015) claimed, direct contact with animals or the natural environment may increase positive attitudes beyond those elements with which the person had direct contact. Further, Torkar (2015) states that physical contact with animals perceived as scary or creepy reduces those perceptions and may foster appreciation.

However, Berman and Davis-Berman (2005) warn us that activities in which participants are taken too far outside of their comfort zones rarely have positive impacts and may even increase negative feelings toward an activity or concept. According to Torkar (2015), teachers may be perpetuating fear in their students or hindering the students' understanding of the natural world by not including the use of live animals or natural elements into their curriculum. Laronde and Parr (2006) continued this argument, claiming that participation in outdoor-education training courses can help preservice

teachers recognize their own subjectivities and the importance of possibly being uncomfortable to better connect with their future students.

Preservice education, the initial professional development opportunity, is designed to cement both teacher beliefs and the skills and content knowledge that a new teacher needs to begin a successful teaching career (Messengale et al., 2015). Therefore, it is crucial to include elements in these courses that will prepare future teachers to provide students with OLEs. Unfortunately, Flower, McKenna, and Haring (2017) found that roughly 87% of the teacher certification programs investigated for the study relied on the use of universal methods (e.g., rules, routines, and parent communication) for classroom management in both general and special education certification programs. Barely half (52%) reported that information was provided regarding reductive strategies (e.g., classroom/seating arrangement, effective instructions, pace of activities, choice of activities) (Flower et al., 2017). Without proper training, teachers felt unprepared to prevent or manage disruptive behavior during traditional indoor lessons (Flower et al., 2017), which increases the likelihood that teachers will be hesitant to venture outside the safety of the classroom walls (Leggett & Newman, 2017). Behavior problems in the classroom (indoor or outdoor) have been linked to low levels of student achievement and low levels of teacher self-efficacy (Flower et al., 2017), thus perpetuating the lack of confidence that teachers need to successfully implement OLEs (Dyment, 2005; Rickinson et al., 2004; Rouse, 2016).

According to Messengale et al. (2014), personalizing preservice education increases its effectiveness. One way they assert that this can be accomplished is by making the required skills and content relevant to a student's personal interests as they

found that previous course content was not recalled by many students because it was not specifically addressed in a manner that the student considered personally relevant. In addition, requiring students to choose personally meaningful causes for advocacy activities in the study provided students with a sense of empowerment that may have helped transform their ideas about advocacy. As students became personally engaged in advocacy activities, their beliefs and understandings of advocacy shifted. Activities that connect theory to practice, such as requiring students to choose causes, are more likely to change preservice teachers' beliefs and impact their behavior or practice upon entering the field (Massengale et al., 2014).

Harte (2013) suggests including the Universal Design for Learning in preservice education and/or professional development to help teachers implement OLEs. The Universal Design for Learning is an outline that helps educators eliminate barriers while simultaneously providing support to challenge students academically (Harte, 2013). This approach encourages teacher's flexibility to accommodate for the variety of students' needs. It is not meant to be a "one size fits all" approach, but it is one that fosters an environment in which students can learn and express themselves in a variety of ways versus requiring teachers to be reactive to students' needs (Harte, 2013).

The strategy presented in Harte (2013) has three essential components. (1) Teachers should present multiple means of engagement so that students care about the things they learn and believe there is a purpose. One manner to do this with outdoor learning is to bring both familiar and unfamiliar natural objects into the classroom and allow the student to observe, investigate, and even manipulate these objects before taking the students outside. (2) Teachers should provide sufficient representation of the concept

so that students can understand the material in a manner that is relevant to them. This can be achieved in outdoor learning by utilizing outdoor spaces on the school's campus (even hard-scaped or urban environments) rather than traveling to parks or nature centers. (3) Teachers should provide multiple means of expression, which means that students should be afforded various ways to communicate the things they have learned. This can be achieved by teachers having their students create a story or picture highlighting the outdoor learning experience (Harte, 2013).

Banack (2015) recommends that educational leaders take a three-pronged approach to implementing widespread outdoor learning initiatives through professional development. The first is to use evidence-based research to develop staff knowledge and shape the desired practice. Second, leaders should locate community resources to increase available components and locations for implementing OLEs. Finally, educational leaders and professional organizations offering specialized certifications and curriculum assistance should be connected (Banack, 2015).

Banack (2015) further suggests that educational leaders should spend varying amounts of time outside and should go outside throughout the day to understand when, where, and how teachers are currently using the school's outdoor spaces as understanding the current uses can help administrators plan and develop the most appropriate professional development opportunities. However, Banack (2015) asserts that educational leaders should introduce this shift to the prioritization of outdoor learning slowly, beginning by modeling the desired practices and behaviors before asking others to change. This could even mean changing their personal priorities and behaviors, such as

cycling to school instead of driving, because this demonstrates environmental awareness and the administrator's commitment to being outside (Banack, 2015).

A significant implication from Ernst's (2013) study is that early childhood educators already believe in the importance of outdoor learning and environmental education, which means that professional development should not be focused on this aspect of the issue of teachers not providing outdoor learning opportunities. This study (Ernst, 2013) indicates that teachers' resistance to implementing OLEs is a perceived lack of space or time, which is corroborated by Bourtotzoglou et al. (2016). Therefore, professional development should be focused on the identification of suitable outdoor learning spaces and ways to quickly prepare students and materials so that there is minimal disruption when using OLEs (Ernst, 2013).

Teacher Beliefs

Beliefs can be either implicit or explicit, but both impact the behavior and practices of teachers as well as influence teachers' expectations of their students (Kraker-Pauw, van Wesel, Verwijmeren, Denessen, & Krabbendam, 2016). Ernst (2013) and Nghia (2017) propose that teacher beliefs can be formed through personal experiences and education. A narrative case study (Eick, 2012) was focused on a third-grade teacher who regularly uses OLEs, highlighting the role of personal experiences in the development of teacher beliefs. The teacher's childhood experiences included living on a farm and exploring the woods, to which she attributed her early love of science, and these experiences were integral to her beliefs regarding her students being taken outside (Eick, 2012). The teacher in this case study (Eick, 2012) did not view her use of the school's

green space as a separate or additional lesson, but the information taught both outside and inside the classroom was fundamentally linked.

Similarly, D'Amato and Krasny (2011) conducted a qualitative study with an interpretive approach to better understand outdoor learning from the perspective of individuals who had experienced participation in a particular program. They found that being outdoors for an extended period of time made participants feel isolated from their usual relationships and routines, thus giving them the opportunity to engage in new behaviors that many of them expected to maintain after the experience (D'Amato & Krasny, 2011). Participants believed the following course elements had the greatest impact on their beliefs and/or behaviors: (1) being in the wilderness; (2) isolation from their typical lifestyle; (3) forming bonds with other participants; and (4) overcoming the challenges of the course experience. While most participants had access to natural areas before the course, being submerged in the wilderness was a new experience that they believed spurred personal growth (D'Amato & Krasny, 2011). Even though it may not be possible for teachers to provide their students with this same type of experience, teachers' participation in such programs is thought to positively impact their beliefs and behaviors with regard to later implementation of OLEs (Torkar, 2015).

These findings (D'Amato & Krasny, 2011) supported findings by Cassidy, Streen, Wright, and Watson (2015), who asserted that even seasoned educators could benefit from participating in outdoor experiential learning activities. Cassidy et al. (2015) used a qualitative study design in which subjects participated in an outdoor learning program and responded to open-ended survey questions afterward. One participant stated that he "loved matching a topic area with a physical activity" (Cassidy et al., 2015, p. 31) and

that pairing a textbook concept with the ability to experience it helped him emphasize its context and connection of the topic to the real world. Cassidy et al. (2015) suggest that this experience provided the teachers with a renewed understanding of the ways that their students learn and process information.

Zhu (2013) continued this argument by declaring that learning and teaching are reciprocal processes. According to Zhu (2013), teachers who understand their own thinking style as well as the styles of their students are better able to make necessary adjustments to their interactions with students, thus facilitating greater student learning and performance. In this quantitative study, Zhu (2013) administered a Likert-type scale questionnaire to 325 secondary students and 146 teachers from two schools in China, finding that students preferred the thinking styles of *liberal* and *judicial* while teachers preferred a *hierarchical* thinking style. This means that these students were more creative and free-thinking than their teachers, who tend to favor tradition. However, both the teachers and students favored cooperative interaction over admonishing behavior (Zhu, 2013). Stan and Humberstone (2011) similarly found that students tend to lose interest in an activity when they perceive the teacher to be scolding instead of supportive and that they will rely on cues from the teacher instead of making their own decisions. These findings are important to note because it indicates that actions from the teacher during OLEs can potentially minimize the previously identified benefits of OLEs, specifically critical thinking and leadership (Burdette & Whitaker, 2005; Harun & Salamuddin, 2013)

Rahman, Shujaat, and Iqbal (2015) agreed that teachers' perceptions of their roles and their beliefs concerning teaching and learning have a strong impact on student success. Not only do teachers' beliefs shape their teaching styles, but they also influence

the manner in which their students approach learning. Unfortunately, they found that in many ways, teachers' beliefs do not align with their practices. Rahman et al. (2015) reports that nearly 90% of the teachers in this quantitative study considered comprehension and production as significant aspects of learning, but only half of those teachers actually emphasized such aspects in practice. Similarly, nearly all teachers in the study reported group work as essential to increasing student competence, yet only 41% of these teachers allowed group work in their classrooms. Further, over 90% of these teachers considered instructional materials (e.g., worksheets and tangible activities) important, but only 25% were observed using such materials in practice. Conversely, few teachers believed that grammar and pronunciation were important, yet the majority of them emphasized these aspects in practice (Rahman et al., 2015). These findings corroborate the assertion (Ernst, 2013) that many teachers believe outdoor learning and environmental education are important in instruction, yet they do not implement such curricular components.

Nghia (2017) contradicts Rahman et al. (2015), claiming that there is an indirect correlation between teacher beliefs and behavior. This study (Nghia, 2017) reported positive teacher beliefs regarding the importance of teaching generic skills if the teacher also believed these skills were essential to the students gaining employment upon completion of school. Nghia (2017) also found that if a teacher believed generic skills were beneficial to his or her own career, then he or she also believed that it was important to include such content in coursework for students. This seems to support Bourtotzoglou et al. (2016), who noted that teachers were only willing to include water quality activities in their curriculum if they personally felt that conservation and environmental quality

were important issues. However, Nghia (2017) revealed that it was not only teachers who had to see the benefits of skills to include these in his or her practice, but the institution's leadership must also value the inclusion of certain skills and/or content or it would be difficult for teachers to implement the activity.

Situated Learning Theory

Situated learning theory, as first proposed by Lave and Wenger (1991), emphasizes the environment (social and physical) and its interaction with a person (his or her beliefs and behaviors) for learning and a change in behavior to occur (Brinck & Tanggaard, 2016). According to situated learning theory, a person does not learn simply by being part of a group, but rather by actively participating in the social practices of the group and with the artifacts or facets of the physical environment (Brinck & Tanggaard, 2016; Lave & Wenger, 1991). Adapting to situations in this manner also causes the person to consciously think about his or her decisions and/or behaviors (Williams, 2017).

Leaman and Flanagan (2013) rooted their study of authentic role-play as a means for teacher education in situated learning theory. This study (Leaman & Flanagan, 2013) cited previous research that current field experience practices for preservice teachers simply encouraged them to act like their classroom teacher(s) rather than learning how to think critically and form the decision-making patterns necessary for becoming an effective teacher. Leaman and Flanagan (2013) assigned participants roles as either fifth-grade students (some asked to display certain learning or behavioral characteristics) or the teacher to create an authentic role-playing experience. These roles were alternated through the course of the study so that all participants were able to experience the teacher role (Leaman & Flanagan, 2013). Leaman and Flanagan (2013) found that Authentic

Role-Playing as Situated Learning was successful in showcasing the intricacies of the higher-order thinking and decision-making required in the classroom.

Thacker (2017) used situated learning as the theoretical framework for research investigating the ways in which high school social studies teachers engage in professional learning. Specifically, Thacker (2017) explored the formal and informal learning occurring within the community of practice identified as the social studies department. Wenger (as cited in Thacker, 2017) suggests that learning through belonging to and interacting with a community as well as through action are essential components to situated learning theory. Thacker (2017) found that participants favored formal professional development opportunities that they believed to be relevant to their classroom contexts, but favored informal professional learning opportunities that provided knowledge for their own needs and/or interests, or those of their students. These findings support the use of situated learning theory in professional development as teachers preferred opportunities where their learning was embedded in and directly applicable to their work (Thacker, 2017).

Conclusion

John Dewey claimed that the foundation for everything in life is established by a person's experiences, meaning that those things a person learns from an experience will influence how he or she interprets, reacts to, or creates future experiences (Thornburn & Allison, 2017). Although new experiences are often related to previous experiences, Dewey noted that new experiences should be different enough so as to create a dissonance, causing the student to question the things they already know and the things they need to be learn (Thornburn & Allison, 2017). In *Experience and Education*, Dewey

(1938) does stipulate that not all experiences are educative: “No experience is educative that does not tend both to knowledge of more facts and entertaining of more ideas and to a better, a more orderly, arrangement of them” (p. 82). Dewey believed that educative experiences are relatable to the “real world” and allow a student to apply the knowledge gained from one experience to a new (or future) situation (Thornburn & Allison, 2017). Thus, Dewey is often credited with the concept of “learn by doing,” which is the basis for modern OLEs (Ernst, 2012; Rouse, 2016).

Providing outdoor learning opportunities has been shown to positively impact students’ cognitive function, motor skill development, social and personal skill development, and environmental stewardship, and outdoor learning has a stronger effect on students in special education (Burdette & Whitaker, 2005; Jacobi-Vessels, 2013; Rickinson et al., 2004; Maynard & Waters, 2007; Wirth & Rosenow, 2012). Teaching and learning beyond the classroom walls not only provides the opportunity for students to engage all of their senses while participating in OLEs, but it also affords them the opportunity to physically (and easily) remove themselves from situations that might otherwise escalate into disruptive behavior (Maynard & Waters, 2007). Being outside allows students to construct context and personal meaning for concepts presented during traditional classroom lessons (Wirth & Rosenow, 2012), and it has been shown to positively impact student achievement on standardized testing (Soh & Meerah, 2013).

Despite research indicating that OLEs are beneficial to student development (Dyment, 2005; Ernst, 2007), teachers remain reluctant to use them. Rickinson et al. (2004) and Dyment (2005) identified multiple barriers to the implementation of outdoor learning that can be condensed into several categories: fear, lack of confidence, school

requirements, shortage of resources, and professional expectations. Building on previous research, I used an action research approach to (1) explore the barriers perceived by teachers at the study site to prevent them from implementing outdoor learning, (2) discover teachers' inspiration for including these activities, and (3) determine if a professional development program can positively impact the participating teachers' use of OLEs.

Identifying the elements of planning and implementing OLEs that cause these teachers to disregard the benefits of outdoor learning will enable school administrators to provide better, more focused training opportunities to meet teachers' needs. Likewise, understanding teachers' motivation to use OLEs will support the development of future professional development opportunities so that time can be adequately devoted to the perceived challenges being overcome as opposed to simply attempts to spark inspiration. It is the researcher's opinion that if teachers become more comfortable and secure with the planning and implementation of outdoor learning experiences, they will consequently be less hesitant utilizing such activities, thus making them more likely to include OLEs in their curricular and instructional planning.

CHAPTER 3 RESEARCH DESIGN AND METHODS

The purpose of this action research study was to gain a deeper and more thorough understanding of the beliefs about outdoor learning experiences (OLEs) held by teachers in my context (a public school system in coastal Georgia). After spending 16 years working in the field of outdoor environmental education, I have seen the opportunities for students to engage in OLEs dwindle over time. Factors that contribute to fewer opportunities for OLEs were found to include district and school level policies, as well as teacher beliefs about OLEs. For this study, teacher beliefs about OLEs were framed as the problem of practice based on my experiences seeing how teachers' hesitance toward engaging their students and themselves in OLEs (Rickinson et al., 2004) is contributing to the problem. Viewing the problem from this perspective provided me with an accessible point on which I might be able to impact the situation. My planning and implementation of this study drew on frameworks and theories related to effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (Organization for Economic Cooperation and Development, 2009), and situated learning (Lave and Wenger, 1991). These theories were integrated to provide a unique theoretical framework specifically designed for this study. Based on this perspective regarding the problem, the following research questions guided this study; (1) What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom

instruction? (2) What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs?

This chapter will first present a rich description of the context, the participants, the process by which participants were selected, and my positionality as the practitioner-researcher. This is followed by a thorough discussion of the research design and the procedures that were followed to collect and analyze the data generated during the study. This discussion will provide details about the professional development workshop and the decisions that led to using this experience as a phenomenon that could provide a unique opportunity for data collection about teacher beliefs related to OLEs. The chapter concludes with a description of the interview questions, methods of data collection and analysis, as well as the tools used for this aspect of the study.

Study Context

This study was conducted in a public school system in coastal Georgia with 58 schools (elementary through high school) and a total enrollment of 36,436 (State of Georgia, 2019). Currently, the school system has a rating of “D” (66.9%), according to the College and Career Ready Performance Index (CCRPI), and students in the district consistently perform below the state average in all subject areas (State of Georgia, 2019). Prior to the 2018–2019 school year, the Board of Education for this school system received significant backlash from parents for their policy that allows teachers to withhold unstructured break time, which teachers are encouraged to hold outdoors, for academic instruction in grades prekindergarten through 5 (Meyer, 2019).

During the 2019 Georgia General Assembly, a bill was passed in both the Senate and the House of Representatives that mandated outdoor time for all elementary students

in public schools, but this bill was later vetoed by the governor, who stated that there was no “meaningful justification” for such activities (Downey, 2019). Although the type of OLEs that are the focus of this study are not synonymous with unstructured break time, there is a misconception that learning does not occur during outdoor time, which makes these recent controversies worth noting.

The Study Participants

The teachers participating in the current study were selected via purposive sampling. I was aware of these teachers’ interest in OLEs, but I had not previously provided these teachers with OLE support in their classrooms. Participation was solicited through direct e-mail and personal conversations, and there was an eligibility requirement that teacher participants must be currently teaching in the school system. One concern pertaining to the use of purposive sampling is that the researcher is using his or her own judgment to select participants, but this is accepted in phenomenological studies where understanding a specific experience is desired and a random sample may not produce participants with that experience (Creswell, 2009).

Purposive sampling resulted in a homogenous participant group in terms of standard demographic indicators; however, it is indicative of the teacher population in the area (State of Georgia, 2019). Of the seven participants, six are female and one is male, all are White, and all are considered middle class. However, participants’ ages ranged from 30 to 64 years, and the number of years that they had been teaching ranged from 2 to 34 years. The sample size of seven is supported by Creswell’s (2009) assertion that six to ten participants is appropriate for phenomenological qualitative studies. Disclosing as much of the participants’ demographic information as possible helps alleviate quality

concerns regarding the sample and illuminate differences that might otherwise not be identified (Frankel, Wallen, & Hyan, 2015). This information is presented in Chapter 4 in the form of participant vignettes as part of the data analysis.

Researcher Positionality

It is important to disclose that my positionality is that of an outsider as defined by Herr and Anderson (2015) in the current study. While I have met all of the participants either through working with their colleagues or through volunteer activities, I am not a permanent staff member in the school system and have not worked directly with any of the participants. However, as Efron and Ravid (2013) state, I am an outsider who is “intimately involved and familiar with the context” (p. 4) of the problem, since I have worked with teachers in this school system for several years and have witnessed the lack of OLE opportunities granted to their students.

I have worked in the field of outdoor and environmental education for approximately 16 years, and therefore I bring my own beliefs about OLEs to this research project. I believe that outdoor learning is an important, yet overlooked instructional tool because I have witnessed the benefits of outdoor learning and am familiar with the relevant research; however, I recognize that as an outsider I may have a different perspective of the problem from those on the inside, which led me to conduct the current study.

Research Design and Strategy

The goal of this study is to better understand teachers’ beliefs regarding planning and implementing OLEs for their students and to investigate whether a particular style of professional development has any impact on these beliefs, ultimately resulting in teachers

being more likely to engage their students in OLEs. As teachers' beliefs can be influenced by geography and other environmental factors, an action research approach was selected with the intent of this design producing knowledge that is useful and immediately applicable at the study site (Efron & Ravid, 2013).

Action research is often used to address social justice issues (Efron & Ravid, 2013), and I believe that increasing the use of OLEs has the potential to improve social justice issues in the study site area. First, the lack of OLEs in schools not considered "affluent" can be called a social injustice. Outdoor learning being stigmatized as "elitist" is based on the assumption that pristine natural environments must be available for a lesson to be successful and that such environments are not typically accessible to urban students (Rose & Paisley, 2012). The public school system in which the teachers participating in this study work serves a population where 41% of the students are considered to be economically disadvantaged and 61% of the schools in the district are designated as Title I schools (State of Georgia, 2019). Further, students with special needs (another marginalized group) have shown great improvement in cognitive function and social skill development following participation in outdoor learning activities, yet these students are rarely granted such opportunities (Jacobi-Vessels, 2013). The State of Georgia (2019) reports that 11% of students in the school system served by the teachers participating in this study have at least one documented learning disability. Based on the literature reviewed in Chapter 2, I believe that increasing the frequency of use of OLEs will help to alleviate some of the social injustices endured by these marginalized groups (economically disadvantaged and special needs students).

To discover the myriad of aspects of the identified problem of practice I used a qualitative action research study design and a phenomenological approach to investigate how teachers feel about planning and implementing OLEs. One benefit of this design is that it allows for an in-depth description of the participants' lived experiences with OLEs while acknowledging that each participant may perceive his/her experience differently from other participants (Nicholls, 2009). According to Creswell (2009), key components of qualitative design are that the research is conducted in a natural setting, the research focus is the participant experience and/or perception, and the data is descriptive in nature rather than numerical. Action research capitalizes on these characteristics as researchers are encouraged to study a problem identified in their lives and/or practice in their natural setting (Efron & Ravid, 2013). Another distinction of qualitative research is that the researcher can be the primary instrument for data collection (either through interviews or observations) (Creswell, 2009).

Using a phenomenological approach allows for the different ways that the phenomenon (experience, event, etc.) of interest is perceived by the participants (Lam, 2016) to be developed into a rich description. The description generated through the lens of the participants helps to better understand the phenomenon (Hays & Wood, 2011) as Lam (2016) elaborates that, "people act in accordance with the phenomenon as they see it" (p.149).

Historical Review of the Methodology

Creswell (2009) describes qualitative research as an avenue to help a researcher better understand and interpret the ways individuals or groups perceive an issue. One of the essential underlying philosophies of the qualitative paradigm is the belief that there

are multiple realities (Nicholls, 2009). An example of this philosophy can be seen by examining a sock: When ascribing to the idea of multiple realities, the sock can be seen as a covering for the foot, but it can also be seen as a puppet, a mitten, a sack to collect marbles, or many other things—each of which is valid and acceptable as reality according to an individual’s interpretation or perception (Giorgi, 1997). Building on this philosophy of multiple realities, the underlying ontology can be identified as that of the nominalist (Neuman, 2011), who believes that a person’s idea of reality is based on his or her own lens or method of interpretation, which essentially means that reality is subjective.

The qualitative paradigm’s epistemology can be seen as the attempt to acknowledge and develop our interpretations of particular people in particular situations (Neuman, 2011). In qualitative studies, a researcher aims to gain a better understanding of human social and behavioral issues, which lends to small samples and a lack of generalizability to ensure that the complexity of the issue is maintained and understood (Marshall, 1996). In this paradigm, the researcher makes observations, interprets those observations, and then reflects on the interpretation to produce a report (Neuman, 2011). While the epistemology rooted in the qualitative paradigm does not fully embrace the positivist objective scientific method, elements of the scientific method can be seen in the observation, interpretation, and reflection process (Creswell, 2009).

Multiple methodologies are utilized in the qualitative paradigm, including case study, ethnography, grounded theory, and phenomenology (Creswell, 2009). Phenomenology was selected for this study because in its simplest form, the goal is to describe the lived experience of an individual or group of individuals through their own expression (Creswell, 2009). This approach aligns with the research question guiding the

current inquiry into the ways a professional development workshop based in situated learning theory impacts participants' beliefs regarding OLEs.

The phenomenological approach has been used extensively in educational research as it was originally developed from Ference Marton's studies of learning at the University of Gothenburg (Lam, 2016). Phenomenology's epistemology is clearly aligned with interpretivism (Nicholls, 2009). Nicholls (2009) states that, "Interpretivists view the objectivity of the world as a subjectively lived phenomenon" (p. 530). The resulting description is created when an interpretivist studies the experience from various aspects, including participants' perceptions, emotions, desires, actions, thoughts, and social interactions (Giorgi, 1997). As Nicholls (2009) further states, when using a phenomenological approach, a researcher must conduct an "exhaustive exploration into the meaning the participant in the study gives to particular facets of reality" (p. 588).

Study Design

The construct examined in this investigative action research study is teacher beliefs regarding OLEs. Data related to teacher beliefs were collected via (1) interviews collected either in-person or through electronic communication/e-mail both prior to and following workshop participation, (2) group reflexive sessions during the workshop, and (3) researcher observations during the workshop.

For the current investigation, a professional development workshop was created to provide a data collection opportunity situated in the phenomenon of interest – outdoor learning. Prior to attending the professional development workshop, participants completed an interview either face-to-face with the researcher or electronically using Google Docs, a file-sharing program that allows real-time edits by multiple parties.

Participants were allowed to choose their preferred interview method. Mertler (2017) highlights that e-mailed or electronic interviews have multiple benefits: (1) they do not have to be transcribed later, and (2) they remove the discomfort many people feel when a recording device is present. During the interview, teachers' past experiences with and current thoughts or feelings about OLEs were discussed.

The professional development workshop began with participants engaging in researcher-led OLEs as students. As observations were made while the participants engaged in the activity and followed instructions, they were recorded by hand. Activities were selected from the *Project WILD*© and *Project Learning Tree*© curriculum guides based on the grade level and content areas of which the participating teachers teach. This aspect of the workshop aligns with situated learning theory as the teachers were able to learn about outdoor learning in a participatory environment (Brinck & Tanggaard, 2016) and provides the active learning environment identified by Darling-Hammond, Hyler, and Gardner (2017) as an essential component of effective professional development for teachers. This section of the workshop concluded with the researcher leading a debriefing discussion in which participants shared their perceptions of engaging in the activity as students and the ways they thought they could implement the OLE at their school.

In the next portion of the professional development workshop, the researcher led a brainstorming session focused on ways to include OLEs in all content areas. The participants were then tasked with developing an OLE for their content area with the assistance of their peers and the researcher, too, if needed, although the researcher's primary task during this session was to make and record observations. These aspects of

the workshop are also aligned with situated learning theory as participants developed these OLEs through collaboration with their peers (Brinck & Tanggaard, 2016).

The professional development workshop concluded with a reflective session for participants to share their thoughts and/or feelings regarding outdoor learning with their peers and the researcher. Darling-Hammond, Hyler, and Gardner (2017) assert that effective professional development for teachers should incorporate reflexive activities. Participants were asked to use the lesson that they designed in the workshop with their students while the researcher observed. After implementing their OLE, participants were interviewed either in-person or via electronic mail to discuss their new thoughts and/or feelings regarding OLEs.

Although often selected due to convenience, “one and done” single-day professional development workshops are not typically considered successful in changing teachers’ practices (Steiner, 2004). Cohen and Hill (2001) assert that these offerings are often designed to impart specific ideas, techniques, and/or materials rather than promote active learning. However, Kennedy (as cited in Steiner, 2004) claims that extending the duration of professional development programs is not enough to ensure their effectiveness. Professional development opportunities that emphasize both content knowledge and the ways students can best learn the content matter are most successful; however, adequately addressing both of these components typically requires a program that lasts longer than one day (Steiner, 2004).

Darling-Hammond, Hyler, and Gardner (2017) identify seven characteristics of effective professional development for teachers: (1) focused on content, (2) incorporates active learning, (3) allows for peer collaboration, (4) uses models and/or modeling, (5)

offers expert/professional support, (6) incorporates reflexive activities, and (7) provided over a sustained period. The teachers participating in the study expressed their concerns of time constraints due to previously scheduled in-service trainings, which minimized their available time for the study; therefore, measures were taken to increase the efficacy of a single-day professional development workshop. I met with each of the participants prior to the workshop to discuss the aspects of using OLEs that they found most challenging. This helped me design the workshop so that we could maximize our limited time together by focusing on the most relevant content (Darling-Hammond, Hyler, & Gardner, 2017) and participants did not feel that they were simply being handed a lesson plan and materials (Cohen & Hill, 2001), but rather they felt that they were gaining content knowledge and applicable methods for sharing that knowledge with their students (Darling-Hammond, Hyler, & Gardner, 2017; Steiner, 2004). Following the workshop, I maintained contact with the participants to help them prepare to deliver the OLE they developed during the workshop, and then I conducted a final interview after their implementation of the OLE. Maintaining communication with the participants regarding their use of OLEs allowed the duration of the professional development opportunity to extend beyond the time spent in the workshop as well as continued the support provided from an outdoor learning professional, which was identified by Darling-Hammond, Hyler, and Gardner (2017) as an important characteristic of effective professional development for teachers.

Research quality is of great concern because if the aspects of the study do not meet high standards of quality, then study results may be dismissed. One way to ensure research quality is to address the selection of the study population as a thorough

discussion of the selection process should include the specific location, demographic group, and/or any pertinent biases (Creswell & Plano Clark, 2018). This is especially important in action research where purposive sampling is often used and it must be clear that the researcher did not employ personal contacts/friends to merely prove his or her position. In this study, it is imperative to identify all of the defining characteristics of the study subjects (without exposing their identities) because the participants are my current or potential colleagues, and it could possibly be assumed that they were selected only to support my research. Sharing these defining characteristics of the participants makes the study more transparent and also showcases the differences between the participants and myself that might not otherwise be identified (Feldman, 2007).

Another way to ensure research quality is to thoroughly describe the study procedures. While some steps may seem intuitive, it is important to note all steps so that readers may follow the process and so that the study is transparent (Creswell & Plano Clark, 2018). Action research and phenomenology can both possibly relate to researcher bias because of a researcher's intimate relationship with the problem being studied. To address this quality issue, I disclosed my feelings, perceptions, and experiences regarding outdoor learning to help frame my study because as Glesne (2006) states, "subjectivity, once recognized, can be monitored for more trustworthy research; however, subjectivity, in itself, can contribute to research" (p. 119).

Data Collection, Instruments, and Tools

Qualitative data were collected using in-person and electronic interviews and researcher observations (Mertler, 2017). Mertler (2007) suggests that when collecting qualitative data, semi-structured interviews are the best collection tool because they allow

the researcher the flexibility to pursue information specific to each participant and each situation. Inherent to the phenomenological design is its emergent nature; therefore, semi-structured interviews were used prior to and following the professional development workshop. Several base questions (Appendix A) were developed as a foundation for the interviews, and potential follow-up questions to elicit further detail were also developed as suggested by Mertler (2007). It is important to note that while all participants were asked the base questions, not all participants were asked the follow-up questions, and some participants were asked questions that emerged from their answers to other questions so that phenomenology was fully embraced (Creswell, 2009). All questions asked during interviews were aligned with the research questions and the theoretical framework.

Observations, an additional data source to complement the interview data (Mills, 2007), occurred both during the workshop and during the subsequent participants' OLE implementation. Mills (2007) asserts that researcher observations are vital for developing appropriate follow-up questions during interviews as well as enabling data triangulation as participants may inadvertently omit information during interviews. Observations were recorded using the "bump" strategy described by Mills (2007), who states that "in action research projects these 'bumps' might be unexpected [participant] responses to a new curriculum or teaching strategy" (p. 61). Using this observational strategy, I approached the professional development workshop environment as flat and only recorded the "bumps," or the unexpected sights and comments from the activities. This is consistent with the unstructured observation style presented by Mertler (2017) that allows the

research-practitioner flexibility to attend to participants as needed while simultaneously taking notes.

Research Procedure

Approval from the Institutional Review Board was procured prior to initiating the research procedures detailed herein. Participation for this study was solicited through email and personal conversations with teachers in the school system of study. Teachers interested in participating in the professional development workshop were asked to express their interest one month prior to the date of the workshop. Informed consent documents and study details (including time commitment beyond the workshop) were provided to those who expressed interest. In-person interviews were then scheduled for those who wished to participate, or electronic interviews, to be completed before attending the professional development workshop, were sent using Google Docs®.

The electronic interview contained the same base questions used for the face-to-face interviews. Face-to-face interviews granted opportunities for immediate clarification, if necessary; however, the real-time editing and comment capabilities of Google Docs® served a similar function (i.e., allowing for clarification and/or additional details to be provided when needed). A benefit of using electronic interviews is that participants are often uncomfortable being video or audio recorded; electronic interviews remove that discomfort, further encouraging participants to share in greater detail (Mills, 2007). However, a benefit of face-to-face interviews is that participants are not responsible for recording or transcribing their thoughts—they simply voice their answers—which prompts those who are comfortable being recorded to share in more depth (Mills, 2007). Pseudonyms were assigned, regardless of the interview style, to protect participants’

confidentiality as some of the participants expressed concern regarding information disclosure, especially in light of the recent controversy about the school board's decision to allow teachers to withhold outdoor time for academic instruction (Meyer, 2019).

Participants then attended a researcher-led half-day (six hours in length) OLE professional development workshop. This program began with participants engaging in OLEs as if they were the students and the researcher was the teacher, and activities were selected from *Project WILD*© and *Project Learning Tree*© curriculum guides. These activities were executed exactly as presented in the manuals, but following each activity, I recommended modifications with which I was familiar. While participants were engaged in the activities, I recorded observations about their perceived comfort levels and any comments I overheard or that were directed to me pertaining to the OLE, situated learning (Lave & Wenger, 1991), teacher beliefs, or workshop design (Darling-Hammond, Hyler, & Gardner, 2017). This section of the workshop concluded with the researcher leading a debriefing discussion in which participants shared their perceptions of engaging in the activity as students and the ways they thought they could implement the OLE at their school.

In the next portion of the program, participants were introduced to resources for planning and funding OLEs. First, they were given 10 minutes to look through the *Project WET* ©, *Project WILD*©, and *Project Learning Tree*© curriculum guides from which their previous activities came so that they could see the resource for themselves. To further showcase the versatility of the prefabricated OLE lesson plan collections, I led a scavenger hunt using the curriculum guide books. To do this, I would announce an important aspect of an activity and then have participants find an activity in the

curriculum guide that matched that criteria. Characteristics used in the scavenger hunt included middle school social studies activity, elementary language arts activity, 30 minutes or less activity, high school writing activity, activity requiring materials brought from home, time lapse activity/activity needing monitoring over multiple days, and 60-minute activity.

Next, participants worked in small groups (social studies, English/Language Arts, and elementary teachers in one group; science teachers in another group) to select topics and plan an associated OLE that they believed they could implement at their respective schools. The members of each group documented their progression from brainstorming to final lesson development with hand-written notes. This documentation served two purposes: the participants now have a tangible record of their progression to assist with future OLE lesson development, and the researcher also has a record of their progression for data collection purposes. I was available to provide guidance during this process, but my primary responsibility during this portion of the workshop was making and recording observations using the “bump” method as previously discussed. This section of the workshop concluded with the researcher and the other group members serving as students while each group implemented their lesson as a trial run for their OLE.

The professional development workshop culminated in a reflexive group session in which participants, as a group, discussed the changes (if any) in their thoughts and feelings regarding OLE as a result of their participation in the professional development workshop. Participants also provided feedback on the OLEs used at the beginning of the program and those they developed in efforts to improve the activities that they planned to

implement at their respective schools. This session was recorded and later transcribed so that I could actively participate in the discussion.

Participants were asked to implement their own OLE within one month following their participation in the professional development workshop—either the OLE they designed during the program or one of their own inspiration. To assist with the participants’ OLE planning and implementation as well as increase the perceived duration of the professional development experience, I maintained e-mail contact with the participants following the workshop, answering their questions and providing guidance as necessary. I was also able to observe these OLEs in schools where permission and access was granted by the administration. All participating teachers, regardless of whether or not they were able to implement an OLE in the required timeframe, participated in a follow-up interview (either face-to-face or electronic) to share any thoughts or feelings concerning OLEs that were not previously addressed and allow them to debrief after implementing their first OLE (if applicable).

Data Analysis

Recordings from the face-to-face interviews and reflexive group session were transcribed prior to analysis. This was accomplished by listening to the audio recordings and then typing out what was heard, scrubbing for vocal pauses (uh, um, etc.). Participants reviewed the transcripts and electronic interviews prior to data analysis to decrease the chances for data quality concerns. A modified version of the *Stevick-Colazzi-Keen* method was used for data analysis. Creswell (2007) asserts that this six-step process yields the “most practical and useful” (p. 159) analysis of phenomenological data. This process includes the following steps:

1. Describe previous researcher experiences with outdoor learning. This step allows the researcher to disclose any biases or preconceptions, thus opening capability to focus solely on the participants' lived experiences and not the researcher's interpretation (Moustakas, 1994).
2. Use the narratives created from personal interviews or the self-report survey responses to develop a list of significant statements.
3. Group the significant statements into themes.
4. Write a textural description of participants' experiences throughout the study (professional development opportunity and implementation of their own outdoor learning activity). Provide specific examples from participants' narratives.
5. Write a structural description of how participants' beliefs and behaviors regarding outdoor learning were impacted as a result of their experience. Give specific concern for setting and context (Creswell, 2007).
6. Write a composite description of participants' experiences that integrates the textural and structural descriptions to provide a description of what happened and how it happened, or the essence of the experience (Moustakas, 1994).

Quality criteria is addressed by disclosing researcher bias and preconceptions before any data are analyzed (Creswell, 2007). This allows readers to understand the researcher's position and helps the researcher to put his or her personal feelings aside and approach the data with increased neutrality (Moustakas, 1994). Participants were asked to review transcripts from interviews and reflexive group sessions to ensure accuracy as participant verification is crucial in establishing credibility.

Summary

The OLE professional development workshop component used in the current study was designed so that participants would have an opportunity to share their knowledge and feelings with each other and experience new learning environments (situated learning theory). During this workshop, I led the teachers in a selection of OLEs; they were in the role of the students. Following the OLEs, participants reflected on and shared their thoughts about these particular experiences and any of their previous experiences with OLEs. Then, participants collaboratively developed an outdoor learning activity rooted in their content area to be later implemented at their school. The workshop concluded with a reflexive group session to address any lasting concerns and challenges regarding outdoor learning.

A qualitative action research study with a phenomenological approach was selected to explore the ways a professional development workshop anchored in situated learning theory (Lave & Wenger, 1991) would impact teacher beliefs regarding OLEs. Phenomenology allowed data to be obtained from the participants' experiences via their own expression, and the data were then analyzed to show the impact of the professional development workshop. Interviews and reflexive group sessions were used to explore teacher beliefs, and researcher observations were used to triangulate the data. The descriptions and themes that emerged from the interview and reflexive group session transcripts coupled with that of the researcher observations produced triangulated information regarding teachers' feelings about creating and using outdoor learning experiences for their students.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

The focus of this action research study was to gain a deeper and more thorough understanding of the beliefs about outdoor learning experiences (OLEs) held by teachers in my context. Drawing on my assertion that an immersive, outdoor professional development experience for teachers can lead to positive changes in teacher beliefs about OLEs, I designed an OLE experience for teachers that offered me a unique opportunity to capture the thoughts and beliefs of these teachers as they were immersed in an authentic OLE. The research questions driving this inquiry are: (1) What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom instruction? (2) What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs?

Spending time outdoors is essential to the proper development of youth's cognitive functions, it also provides youth with a real-world context for concepts introduced in the classroom, and it enhances their interpersonal skills, such as leadership (Jacobi-Vessels, 2013; Wirth & Rosenow, 2012); however, teachers report that there are multiple barriers that prohibit their implementation of OLEs (Rickinson et al., 2004; Dymont, 2005). To adequately assist teachers in including such activities, it is vital to identify the aspects of implementing OLEs that cause their reluctance.

Multiple data sources were used as a means of triangulation to improve the credibility of the study results. Prior to the professional development workshop,

participants scheduled one-on-one interviews with the researcher; in the event that a mutually convenient face-to-face interview time could not be reached, the same interview questions were provided to the participant via Google Docs. This procedure was repeated following the professional development workshop. Interview responses were one data source. During the workshop, I recorded observation notes and facilitated group reflexive sessions, both of which were later transcribed and served as additional sources of data.

The professional development workshop was designed to provide a data collection opportunity situated in an outdoor learning experience for teachers. The workshop was developed as a six-hour course offered on a student holiday/teacher work day. In the opening session of the workshop, I was in the role of the teacher and the participating teachers were in the role of students in selected OLEs provided in the *Project WILD*© and *Project Learning Tree*© curriculum guides. These lessons showcased the availability of prefabricated lesson plans as well as the ways the outdoors can be used to teach concepts from all content areas, not just science. Following these activities, participants were asked to share their thoughts regarding these and other OLEs with which they had experience as part of a group reflexive session. Participants then explored currently available resources to aid in the development and/or implementation of OLEs through a scavenger hunt activity. This activity again served to showcase the availability of lesson plans for OLEs in all content areas that require minimal additional planning on the part of teachers. Next, participants collaborated to develop an OLE in their own content areas to later be implemented at their respective schools. Each group presented their OLE to the remainder of the participants with the OLE developers in the role of the teacher and the remaining participants and the researcher in the role of the

students. The workshop concluded with a group reflexive session to address any lasting concerns and challenges regarding outdoor learning.

This chapter will introduce the participants and provide rich, descriptive narratives essential to phenomenology. The data herein were analyzed using Moustakas's (1994) modification to the *Stevick-Colazzi-Keen* analysis method framed by the theories of effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (OECD, 2009), and situated learning (Lave and Wenger, 1991) that drove this study. This analysis method allows themes to emerge from the data that are ultimately synthesized into an essence of the participants' experiences.

Participant Vignettes

I knew the teachers who participated in this study either through environmental-based volunteer work in the community or through other teachers in their school; however, I had never provided any of the participants' students with OLEs or supported these teachers to provide such experiences. Because of my familiarity with these teachers, I knew that each of them had some interest in providing their students with more OLEs, but they were currently hesitant to try. Purposively selecting participants in this manner is accepted in phenomenological research as the goal is to understand a specific experience, making it crucial that participants actually *have* the experience that the researcher seeks to understand. Study participants are introduced in the vignettes that follow, which begin the research narrative. Pseudonyms are used to protect participants' confidentiality as guaranteed in the research protocol.

Participant 1: Angie

I met Angie through one of her colleagues when she was teaching middle school social studies and I was contracted to work with the science teacher on her team.

Although I worked in her school four years ago, I remember her willingness to fill in if we needed assistance during a field trip. She told me during her preworkshop interview that her interest in OLEs is sparked by her own desire to “get out of the building” as the only window in her classroom faces another building, which makes it seem as if the window is not even there. Angie taught middle school social studies for seven years, but she moved to a high school U.S. History position three years ago because the new school was closer to her home. She shared that the administration at her high school requires proof that going outdoors is necessary for a lesson; consequently, only the agriculture classes are permitted to go outside on a regular basis. However, this is similar to her own experiences as a student as Angie recalled going outside solely for extracurricular/sports activities and occasional field trips.

Participant 2: Annie

Annie began her 31-year teaching career as a speech/language pathologist (SLP), working in both middle and high schools in Tennessee and Georgia. However, her personal interest in biology and earth science pushed her to try something new rather than retire; she has spent the last five years as a middle school earth science teacher. She told me that her parents encouraged her to spend a lot of time outdoors when she was young, and she laughed as she lamented that it was a different time back then without the mobile devices and simulators. Even still, she said that going outdoors for learning was not widely done in her days as a student, but that there was one elementary school teacher

whose OLEs made lasting impacts on her that influenced the way she teaches today. Annie says that as an SLP, she collaborated with other teachers on OLEs because she believed they helped students *experience* the concept, which she felt that she was more “in tune” with because of her role as an SLP.

Participant 3: Becky

When I met Becky, I thought she was the quintessential elementary school teacher. She exhibited a calm, soft-spoken demeanor and was always smiling, so I knew she was approachable. Becky has taught elementary school for 10 years and has mainly taught in Grade 3. She teaches in all content areas and says that she loves to find ways to connect concepts across the various areas to help the students master the concept. She helps organize an annual overnight field trip to an “environmental camp” that is roughly two hours away, which she claims the students and teachers all love and enjoy. However, she admits that she does not incorporate many OLEs in her day-to-day teaching because OLE design does not come easily to her. She explains that as a student, her only experience with OLE was through field trips similar to the one she helps organize, and while she enjoyed it overall, she also found some parts of it intimidating.

Participant 4: Evan

Evan is the youngest study participant, but he has worked in the school system for nearly 10 years. As a high school student, he fell in love with drums and percussion while in the high school marching band. Once he went to college, he did not want to give up that aspect of his life, but the school he was attending did not have a band program. This prompted him to volunteer with his former high school’s drumline, and he did such a great job that the band director encouraged him to think about education as a career

choice. While trying to make a decision about this, he got a paraprofessional position at the school so that he could spend more time with the drumline. However, despite his love for drums, the other aspects of music education were simply not for him. Yet he realized that he loved talking about history and religion as much as he did drums. Evan decided to pursue a teaching certificate in social studies and has been teaching middle school social studies for the last two years. His experience with outdoor learning is primarily related to marching band, but Evan strongly feels that all content areas can make use of outdoor spaces for learning purposes because, as he recognized through band, concepts are acoustically and spatially different when transferred outdoors.

Participant 5: Jessie

Jessie and I met through volunteer work with our local 4-H club. Jessie grew up in a rural area in northern Georgia where her father was the county's extension agent. This meant that by default, she was going to participate in 4-H activities—whether she was interested or not—but she grew to love her time in the fields and barns where these activities were held. Jessie followed her mother's footsteps and became a teacher, but her enjoyment of being outside, stemming from experiences with her father's 4-H programs, lingers in her mind as she plans activities for her students. She teaches high school English/Language Arts (ELA) and uses time outdoors to spark writing ideas or work on specific topics, such as imagery or alliteration, but she has difficulty getting her students to appreciate outdoor time as much as she does.

Participant 6: Maria

Completing her 34th year of teaching this year, Maria is the most experienced among study participants, and she has taught high school math and science in Florida and

Georgia. Maria shared that she did not recall participating in any outdoor learning as a student and that she did not feel the need to include it in her own teaching at the beginning of her career. However, when she moved to her current school 12 years ago, the landscape around the school inspired her to take some of her lessons outside. Maria mentioned a canal that runs alongside the campus that she was able to incorporate into lessons on watersheds, the water cycle, insect life cycles, and elementary chemistry. She also mentioned that she regrets not being able to use the outdoor spaces at her school more. Maria further worried that if her students did not do well on local standardized tests—even with her experience—then she would be forced to attend mandatory teacher trainings over the summer.

Participant 7: Reina

Reina took a nontraditional path to teaching. She was initially interested in wildlife biology and had an internship at Disney's Animal Kingdom. During her internship, she shared facts and answered questions about the animals at the park, and these interactions helped her recognize that there were benefits in informal education. This led Reina to change her career goals. She spent seven years working at nature centers before returning to school to pursue formal classroom teaching. When asked her reasons for transitioning to the traditional classroom, she shared that while she enjoyed the unique aspects of the nature center, she felt like she was repeating a script day after day rather than building on concepts and deepening the knowledge of those she was instructing. She is now a high school science teacher, teaching biology, chemistry, and environmental science over the last three years. However, despite her background working at nature centers, she says that it is difficult to use most of those activities and

lessons because they were designed specifically for the animals and habitats at the nature centers at which she had worked.

Data Presentation

Data were analyzed using a modified version of the *Stevick-Colazzi-Keen* method. Moustakas's (1994) modification of this method allows the researcher to amass a complete description of a participant's experience with the phenomenon, using the participant's own words. Creswell (2007) asserts that this six-step process yields the "most practical and useful" (p. 159) analysis of phenomenological data.

Epoche

The first step in this analysis process is for researchers to bracket themselves out of the study by disclosing their experiences related to the phenomenon of study (Lam, 2016; Creswell, 2007). To best accomplish this, I answered the same interview questions asked of the study participants. Answering these questions prompted me to deeply consider any personal biases that could potentially impact the study. Written expression of my own experiences with and perceptions of outdoor learning metaphorically removed my prejudices so that I could review the data I had collected to let the description of the phenomenon emerge organically rather than attempt to place the data in predetermined categories (Lam, 2016). This step is often referred to as *epoche*, derived from the Greek word for *refraining from judgment* (Moerer-Urdahl & Creswell, 2004), and it allows a researcher to focus exclusively on the way the participants perceive the phenomenon (Lam, 2016).

Significant Statements

Next, I reviewed interview and group reflexive session transcripts to generate a list of significant statements. Moustakas (1994) calls this step *horizontalization*. This study is framed by effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (OECD, 2009), and situated learning (Lave and Wenger, 1991) theories, which were used to aid in the identification of significant statements within the transcripts. Table 4.1 shows a purposefully selected excerpt of the 56 significant statements identified from the transcripts. It is important to note that while these statements (Table 4.1, Table 4.2, and Appendix B) represent the participants' stated words, some may have been subjectively extrapolated from the transcript to maintain their significance when removed from their context. The statements in Table 4.1 are organized to assist the reader, but the original significant statements (presented in Appendix B) are not grouped or ordered, as consistent with this step of the data analysis.

Table 4.1

Selected Significant Statements

Teacher Belief	Significant Statements
Prior to the workshop	“[A challenge I face is] lessons have to be tied into state standards for learning.” “There is just more planning that is involved and sometimes with my limited time I have to choose between grading and calling parents or planning and setting up a one-day activity.” “I am willing to do the extra work...but disruptive students prevent me from sharing nature with interested students...”

Following the workshop	<p>“Many students were much more engaged when we did activities outside of the classroom.”</p> <p>“The less I have to do in terms of set-up, the more appealing...”</p> <p>“I think there could be [adequate space on campus for outdoor learning], but teachers’ attitudes toward its use would have to change.”</p> <p>“I wish that outdoor learning was more normalized.”</p>
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Theme Development

The next step in the data analysis process was to remove those statements that do not fully relate to the topic as well as any duplications (Moerer-Urdahl & Creswell, 2004). The remaining significant statements are then grouped into themes, or meaning units (Moerer-Urdahl & Creswell, 2004). Three themes that emerged from this analysis, (1) interest, (2) time, and (3) support, are presented in Table 4.2 with statements of evidence.

Table 4.2

Themes and Evidence

Theme	Evidence in Participants’ Statements
Interest	<p>“Students who are interested in learning would enable me to have outdoor experiences...”</p> <p>“I would love to have more opportunities to go outside...”</p> <p>“Many students were much more engaged when we did activities outside of the classroom.”</p> <p>“Personal interest inspires me to include outdoor learning activities.”</p> <p>“I am willing to do the extra work...but disruptive students prevent me from sharing nature with interested students...”</p>

Time	<p>“...it is hard to get materials outside, do anything meaningful with the time you have outside, and get back in the building and everything put out of the way before the next class...”</p> <p>“...moving high schoolers from Point A to Point B is like herding cats, it’s a time suck...”</p> <p>“The less I have to do in terms of set-up, the more appealing...”</p> <p>“...I have to choose between grading and calling parents or planning and setting up the activity.”</p> <p>“Sometimes we just don’t have the time to spend on a lesson that we can teach in 30 minutes [inside].”</p>
Support	<p>“Schools need to be designed to be integrated into the natural environment...”</p> <p>“...teacher’s attitudes toward [outdoor learning] would have to change.”</p> <p>“I wish that outdoor learning was more normalized.”</p> <p>“...an institutional tendency in most systems that makes outdoor classes appear odd...”</p> <p>“...[outdoor learning is] inconvenient in the eyes of administration.”</p>

Theme 1: Interest. The two facets of this theme are *teacher interest in outdoor learning* and *student interest in outdoor learning*. Although only one of the seven participants currently includes OLEs with any regularity as part of her instruction, all of the participants disclosed that they were interested in including more. Annie, the one participant who uses OLEs, shared that her interest in outdoor learning was sparked as a student:

Very little teaching was going on outside of the classroom in my day; however, I do remember an elementary teacher that I had who firmly believed we needed air and sunshine to learn. She would take us outside for reading time as often as possible. I have fond memories of enjoying my latest library book sitting in the edge of a hayfield next to the playground area. Of course, she would also make time outside a learning experience by pointing out our local flora and fauna. To this day when I see a grasshopper, I think of her and all she taught us about its life cycle.

Annie mimics the actions of this favorite teacher by taking her own students outside to study clouds, rocks, water conservation, and other natural elements presented in the textbook content. She also feels that her students are more engaged when she takes them outside for activities as opposed to the students staying in the classroom. Similarly, Maria has constructed a vegetable garden outside her classroom that students volunteer to help with, and some of her students volunteer to assist with monthly water quality testing and reporting through Georgia's Adopt-A-Stream citizen science project. Maria instituted both of these opportunities for outdoor learning based on her students' interest.

Jessie, an ELA teacher, shared that her personal interest in being outdoors motivates her to take her students outside. She stated that "the growing need for awareness and action regarding the natural world, such as deforestation and climate change, motivate me to get my students outside so that they too have a vested interest in the outdoors." However, she reports that her high school students are not interested in being outside and often complain about the sun being too hot or the presence of bugs, rather than focus on their writing or reading activity. Reina also reported that perceived bad weather on the part of students would dampen their interest in her activities, stating that "...if it is too hot, too cold, too humid, or too buggy, my students complain and totally miss the point of the lesson."

The participants agree that while they have interest in outdoor learning, if their students are not interested, it discourages them from including OLEs in their curriculum and instruction Maria stated:

I am willing to do the extra work on my part to design and set up outdoor learning activities, but when disruptive behavior prevents me from completing the activity with the students who are interested, it's just not worth it for me anymore.

Theme 2: Time. In a review of the OLE literature (Rickinson et al., 2004), time was indicated as a considerable barrier to teachers' use. The teachers in the current study corroborate those findings as most of the interviews and group reflexive sessions were centered on the time associated with outdoor learning. All participants admitted that time was a challenge for them in some way when considering using OLEs. Becky, the only elementary school teacher in the study, felt that time was the one challenge that completely prohibited her from using OLEs more:

We are expected to teach 36 weeks' worth of content in about 32 weeks of time due to testing that occurs about 4 weeks before school ends. When you take away snow days and other interruptions, the time is even more crunched. Sometimes we just don't have the time to spend on a lesson that we can teach in 30 minutes [inside]. A lot of outdoor learning activities take more than 30 minutes, by the time you transition outside, set up rules, explain and implement, it takes longer than just a discussion in class.

Maria echoed this sentiment stating:

With only a few minutes between classes, and often teaching different courses throughout the day, it is hard to get materials outside, do anything meaningful with the time you have to be outside and get back in the building with everything put out of the way before the next class arrives and needs your attention.

Reina agreed that moving students from the classroom to the outdoor location is time-consuming—even if it would normally only take three minutes to make the journey—and moving an entire class takes longer. Reina added that it can be time-consuming to keep students' attention while explaining activity rules or instructions, and then, there may not be as much time as is necessary to complete the activity.

The time needed to conduct an activity outdoors was not the only time-related challenge identified by study participants. Planning OLEs took more time than planning traditional lessons. As Reina expressed, "there is just more planning that is involved and sometimes with my limited time I have to choose between grading and calling parents or

planning and setting up a one-day activity.” Maria and Becky added that beyond planning for the activity itself, plans must be made for students who are unable to participate. Maria mentioned that when taking students on off-site field trips, it is necessary to have lesson plans for the students not attending the trip so that the substitute could keep those students on task. Becky asserted that even with on-site outdoor learning, if a student was absent, it was difficult to reteach the activity, requiring the teacher to develop adequate make-up work. However, she conceded that if ready-made lesson plans or resources were provided, she would engage in OLEs more often.

Finally, if OLEs cannot be implemented at the time that it is covered in the classroom, then the lesson is seen to take time away from mandatory content. Angie, a history teacher, stated:

I would love to have more opportunities to go outside, but we are required to have proof that it is relevant to our teaching material and it’s difficult to find time in the school year to do it without losing time on the schedule we have to teach.

Jessie agreed that this was a significant challenge because she had to submit her lesson plans to ensure that her lessons were aligned with the education standards. If there is inclement weather on the day an OLE is planned, then the teacher is forced to move to the next lesson/topic. Going back—even the next day—to the concept that was to be taught outdoors may confuse the students or even appear to be a deviation from the mandated curriculum guide to administrators. This means that the OLE is likely eliminated, and that planning time has been wasted. Maria expressed similar sentiment, by stating that she had “to restrict my lessons to the curriculum which prescribed what the students needed to know for the end of course test. And if they did not do well on this test, I had to go to additional teacher training.”

Theme 3: Support. The participants in this study felt that students, teachers, administrators, and parents should all be more supportive of OLEs. Researchers (Ernst, 2012; Rickinson et al., 2004) have established that support from administration is integral to teachers' use of outdoor learning, but study participants believe that support extends beyond school administrators. According to Evan, "there is an institutional tendency in most [school] systems that makes outdoor classes appear odd, and usually inconvenient." He elaborated that it wasn't just administrators that questioned his desire to conduct class outside, but fellow teachers and students as well. Evan expressed that "outdoor learning should be more common in every subject, but particularly within the sciences, history, and social sciences."

Reina also shared that she "wished outdoor learning was more normalized, especially for the kids in elementary school," but that the current culture of education made that difficult. She theorized that, "perhaps since today's children aren't encouraged to go outside during their free time at home, they don't realize that they are missing out on outdoor time at school either. It's hard to miss what you never had." She believes that this lack of exposure to the outdoors at home and in earlier school years may be the reasons for her current high school students complaining about certain outdoor elements (e.g., sun, wind, bugs), despite the friendliness of the weather on the day that she takes them outside. However, she did say that once her students actually get involved in OLEs, they appear to enjoy themselves and stop complaining.

Study participants feel that all school stakeholders have a role in changing the culture of education to include more OLEs. Maria shared her beliefs about outdoor learning being better supported in the culture of education:

I think that just getting outdoors needs to be an integral part of the school day beginning in kindergarten and continuing through college – just getting kids outdoors to experience what ‘outside’ is. Schools need to be designed to be integrated into the natural environment with native plants, water features, and food sources for animals—even if this space needs to be an interior courtyard for safety.

General Findings

Textural Description

The next step in the data analysis process was to create a textural description, or “what” was experienced by the study participants (Moustakas, 1994). As part of the workshop, each participant engaged in three fully planned OLEs (i.e., materials list, learning objectives, correlation to state educational standards, activity procedures, assessment, worksheets and/or other pertinent templates all provided) as if they were students and the researcher was the teacher and a resource scavenger hunt led by the researcher from the following curriculum guide books: *Project WET*©, *Project WILD*©, and *Project Learning Tree*©. Angie, Annie, Becky, Evan, and Jessie were previously unaware of these resources, to which Becky even questioned the reasons that these resources were not more widely promoted. Angie and Evan, both history teachers, were amazed, as they skimmed through the guide books, that there were so many history and social studies concepts covered in these activities. Evan stated:

I would love to have access to outdoor historical exhibits and sites, where students could explore the locations discussed in class, but the lessons in these books can help me bring those sites, or at least important components of those sites, to our school. Rather than try to visit Native American mounds or rock effigies, I can help my students recreate those on our site so they not only get to “see” the historical item, but they may also gain an appreciation for its construction.

As part of the workshop, participants also had the opportunity to develop their own OLE based on one of their current lesson plans. During this exercise, Becky

admitted that starting with a current lesson plan did eliminate some of the planning time, and she recognized that some of her lessons could easily be transported “as is” to an outdoor classroom. Jessie elaborated that, “simply adding the term ‘outdoor’ in front of my key term when Googling for lesson plan ideas was so easy, yet something I had never thought to do,” even when purposefully planning OLEs in the past.

Structural Description

The structural description step in the data analysis process allows the researcher to describe the “how” of the phenomenon experienced by the participants; in other words, in what context did the participants have this experience (Moerer-Urdahl & Creswell, 2004)? All of the participants have previously experienced OLEs in some manner, whether as a student or a teacher, but not all had implemented such an activity prior to attending the professional development workshop offered in this study.

The participants also all experienced the OLE professional development workshop as certified teachers currently practicing in a public school system. Two of the participants are high school science teachers with biology backgrounds although one teaches chemistry and one teaches biology. Despite being science teachers with interest in outdoor learning, by their own admission, these two were no more likely to incorporate OLEs into their lessons than the other study participants. However, these two were the most adamant in acknowledging that the culture of education needs to embrace outdoor learning as a normal teaching practice in order for its use to increase. Reina stated that her school has “a front lawn that is relatively well shaded that could be used for outdoor learning, but teacher’s attitudes toward its use would have to change” to make it a viable option for OLEs.

Composite Description

In this step, the significant statements, emergent themes, textural description, and structural description are synthesized to form a composite description, or the essence of the experience (Moerer-Urdahl & Creswell, 2004). Through collecting the participants' subjective experiences with outdoor learning, it is apparent that the essence of the participants' experience is the stigmatization of outdoor learning as not part of normal educational practice. Part of this stigma is obvious in the teachers' reported lack of support from students, parents, other teachers, and administrators when attempting to implement OLEs. However, the perception of time is also factored into this stigma because during the closing group reflexive session the participants proposed that if outdoor learning was considered normal in educational culture, then time spent planning for or implementing such activities would not be considered "extra time," but rather just "time" needed for a lesson and no different than planning any other lessons.

The negative stigmatization of outdoor learning experiences has contributed to OLEs being an unnecessary pedagogical approach and therefore have been largely removed from use. This makes it difficult for teachers and students alike to become more interested in OLEs. It should be noted that this essence statement can only reflect a specific time, place, and experience of the individuals participating in this study (Moerer-Urdahl & Creswell, 2004).

Analysis of Data Based on Research Question

The first research question guiding the current inquiry was: What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom instruction? Through pre- and post-workshop interviews and group reflexive sessions

during the workshop, the participants indicated that they believe there is some benefit to including OLEs, but that they often face more challenges than the benefit is worth when considering the implementation of OLEs.

Both the teacher's interest and the students' interest emerged as one of the driving motivators for teachers' use of OLEs. Annie became interested in outdoor learning as a student when one of her teachers took her students outside and use artifacts found in nature to create teachable moments. The current practice in education of mandating curriculum guides and/or timelines prohibits the spontaneous teaching that Annie experienced as a child; however, familiarizing herself with the outdoor spaces at her school still enabled her to take her students on similar discovery walks that correlate with the necessary content. Annie shared her hopes that these experiences will spark her students' interest in nature the way they did for her.

Maria's high school students were interested in OLEs in which they could see that their work makes a difference. For example, her students can see, day after day, the changes in the small vegetable garden she has outside her classroom to which they volunteer to tend, and they recognize the effects of their watering and weeding, especially over extended holiday weekends when they are not there to view the garden. Another example Maria provided is related to the state-developed Adopt-A-Stream program in which volunteers test the water quality of local streams on a monthly basis and submit the data to the state's online database. She said that her students will "play 'rock-paper-scissors' to determine who gets to enter the data each month because they all want to be the individual to share the data." Seeing this level of student interest in OLEs motivates Maria to include them in her lesson planning.

A unanimous response by the study participants was the significant challenge of time, which worked against their use of OLEs; however, participants did not necessarily agree the ways time negatively impacted their use of OLEs. Some participants expressed that completing outdoor activities took more time than completing similar activities in the classroom. Becky, Maria, and Reina expressed concern that getting both the materials and the students outside to prepare for the activity, completing the activity, and then returning to the classroom was a time-consuming endeavor that often took longer than the time allotted for a class period. Having to account for this time constraint, their OLEs felt rushed, which increased their stress levels and decreased their enjoyment. Additionally, participants voiced concerns about the time required to plan OLEs because it simply took them longer to plan such activities. Reina lamented that having to balance lesson planning with grading and contacting parents often left her with less time than she wanted to plan lessons; therefore, she had no time to devote to develop an OLE and secure the necessary resources. Angie and Becky both commented that in addition to planning the actual OLE, make-up activities must also be planned for absent students, meaning that they needed time to plan at least two or more activities for a single OLE.

A final challenge presented by Evan, Maria, and Reina is that the current culture of education does not support the use of OLEs. They shared that there is no expectation from students, parents, fellow teachers, or administrators to include outdoor learning in the standard curriculum. Evan expressed that at his school, outdoor learning is considered “inconvenient” by all of the stakeholders, noting that neither students nor parents want the student’s clothes to get dirty, the teachers don’t want to sacrifice the extra time needed to set up the activity, and the administrators fear the liability associated with

student injuries or allergic reactions. He felt that when compounded, those obstacles eliminate outdoor learning as a viable option. Participants agreed that buy-in from all stakeholders is necessary to the increased use of OLEs at their school, despite the benefits acknowledged in the literature (Harte, 2013; Jacobi-Vessels, 2013; Gray & Martin, 2012; Wirth & Rosenow, 2012).

The second research question driving the current inquiry was: What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs? Researcher observations, pre- and post-workshop interviews, and group reflexive sessions during the workshop served as data collection tools to answer this research question.

After participating in the professional development workshop, the teachers acknowledged that there were more resources available to assist them with the planning and development of OLEs than they had originally believed. Becky appreciated the curriculum guides used as examples during the workshop because they not only contained instructions for the activity, but also options for possible assessment opportunities and correlations to the state educational standards, which significantly eased the time and effort needed for planning on her part. However, Jessie pointed out that even though she now knows where to look for ideas for OLEs, that until she became more familiar with the resources and the intricacies of implementing OLEs at her school (the best route for getting students outside, timing her OLEs so that they did not interfere with other uses of the outdoor space, acquiring any additional materials, etc.) that it would not meaningfully reduce the time needed for her to plan OLEs.

Providing content to students in nontraditional ways is another motivator identified in the current study and a well-documented benefit to outdoor learning (Gray & Martin, 2012; Wirth & Rosenow, 2012). Jessie believes that offering OLEs “increases your ‘tool kit’, so to speak, about finding new ways to engage students to learn.” She explained that her work with special needs students made her more cognizant of the students’ need for multiple modes of information acquisition; and that while weather conditions were a challenge she could not overcome at times to go outside, her experience in the workshop inspired her to consider ways that she could bring elements of the outdoors inside to provide for additional modes of learning. A similar sentiment was shared by Annie, who stated that “when you experience a concept versus read about it, you will retain that information longer and be far more able to connect that new learning to other learned concepts.” Annie shared that her students were more engaged in activities done outside as compared to those done in the classroom. Angie shared that she had never considered the possibility that taking a lesson outside provides an additional context that helps students better construct meanings for concepts until she participated in the sample OLEs during the workshop and experienced her own construction of parallels between the activity and textbook concepts.

Summary

For purposes of data analysis, a modified version of the *Stevick-Colazzi-Keen* method was used in this qualitative study with a phenomenological approach. This systematic data analysis method helps a researcher balance objective (what happened) and subjective (how it happened) approaches to knowledge, resulting from the shared experience (Moerer-Urdahl & Creswell, 2004). Three themes emerged during data

analysis: interest, time, and support. Analysis of these themes highlighted the essence of the study experience being that outdoor learning activities are not considered to be a normalized component of the current educational culture.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this action research study is to explore teacher beliefs regarding outdoor learning experiences (OLEs) in my context and how those beliefs are impacted by professional development opportunities based on situated learning theory as a means for providing targeted support to help teachers engage their students in OLEs more frequently. Personal experiences throughout 16 years of work in outdoor environmental education led to the identification of a problem of practice that there is a lack of opportunities for students to engage in OLEs due to teachers' hesitance toward engaging their students and themselves in OLEs (Rickinson et al., 2004). The initial wondering (Dana, 2013) that prompted this study was, "How do teachers feel about including OLEs as part of the curriculum for their content or specialization area?" which then led to the more specific research questions driving the study: (1) What beliefs do teachers from my context have regarding the value and use of OLEs in their classroom instruction? (2) What impact does a one-day, immersive, outdoor professional development learning experience have on teacher beliefs about OLEs? Effective professional development (Darling-Hammond, Hyler, & Gardner, 2017), teacher beliefs (OECD, 2009), and situated learning (Lave and Wenger, 1991) theories provide the theoretical framework for this study as they assert that learning, specifically learning that can change beliefs, is situated in activity (Clark & Hollingsworth, 2002; Richardson, 2003; Thacker, 2015).

To increase the data collection opportunities for this investigative action research study, a professional development workshop focused on OLEs was designed so that participants were situated in the phenomenon of interest during data collection. The workshop gave participants an opportunity to share their knowledge and feelings with each other and experience new learning environments (in accord with situated learning theory). A qualitative approach enabled the collection of data related to the participants' experiences via their own expression, and these data were analyzed to indicate the impact of the professional development workshop.

In this chapter, a summary of the study results will be presented in relation to previously reviewed literature. Results will then be linked to recommendations for future practice. I will also reflect on the process of engaging in this action research and address the changes that I would consider in the future to continue this research. Limitations of the current study are acknowledged in this chapter, and recommendations for future research are also included.

Results Related to Existing Literature

Ernst (2013) and Nghia (2017) assert that the beliefs with which teachers approach their practice can be formed through personal experiences as well as education. The results of this study indicate that teachers who believe in the importance of OLEs form this belief through both experience and education as not all of the participants were afforded the opportunity to engage in OLEs as students. Not only do teachers' beliefs shape the ways they teach, but Rahman et al. (2015) found that those beliefs also influence the manner in which students approach learning.

In the current study, teachers' personal interest and students' interest in the outdoors emerged as the driving belief for motivating teachers to incorporate OLEs in their lesson plans. This is supported by Eick (2012) and Torkar (2015), who found that teachers who have had enjoyable personal or professional experiences outdoors are more inclined to include such elements in their instruction. All of the study participants reported that there was adequate outdoor space on their school campuses for OLEs although some did lament that their fellow teachers may not agree with this. This finding aligned with Eick (2012), who indicated that teachers who regularly implement OLEs do not view their use of the school's outdoor spaces as a separate curricular component, but rather a continuation of teaching fundamentally linked information from the classroom.

A unanimous belief among the participants was that time was a significant challenge when considering the planning and implementation of OLEs. One aspect of this belief is that completing an activity outdoors takes more time than completing a similar activity in the classroom. Some participants expressed concern that getting the materials and students outside to prepare for the activity, to complete the activity, and to get everything and everyone back to the classroom was a time-consuming endeavor, often taking longer than the allotted class time. Accounting for this time constraint, teachers shared that their OLEs felt rushed, and this haste increased stress levels and decreased activity enjoyment. This was supported by Burriss and Burriss (2011), who discussed teachers' beliefs that they must make extra time for OLEs, even those on school grounds.

Participants also shared their belief that planning OLEs took longer than planning indoor lessons. One participant noted that balancing lesson planning with grading and family contact often left her with less time than she wanted to plan her lessons, so she had

no time to devote to developing OLEs and securing the necessary resources. Other participants commented that in addition to planning the actual OLE, make-up activities must be planned for students absent during the outdoor activity, which means that the teacher would need time to plan at least two or more activities for just one OLE.

Bourtotzoglou et al. (2016) support this belief as they found that teachers believed that preparation for outdoor learning created unnecessary clutter in the classroom and interrupted traditional instruction.

Another belief presented in this study is that the current culture of education does not support OLEs. Participants shared that there is no expectation from students, parents, fellow teachers, or administrators to include OLEs as part of the standard curriculum.

One participant expressed that at his school, OLEs are seen as inconvenient by all stakeholders: neither students nor parents want the students' clothes to get dirty, teachers don't want to sacrifice the extra time to prepare the activity, and administrators are afraid of the liability of taking students outdoors in case of injuries or allergic reactions. He felt that those obstacles eliminated outdoor learning as a viable option. Participants agreed that stakeholder buy-in was necessary for OLEs to be used more often at their respective schools. Empirical evidence (Dyment, 2005; Ernst, 2007; Ernst, 2012; Rickinson et al., 2004) indicates that lack of administrator support for outdoor learning significantly limits its use, further noting that administrator support can ease the actual and/or perceived challenges associated with the time, resources, and space needed for outdoor learning. However, findings from this study indicate that this lack of support is only one piece of the puzzle of outdoor learning missing from mainstream curriculum.

There is conflicting research regarding the correlation and/or causation of teachers' beliefs and their practices (Forbes & Zint, 2011; Nghia, 2017; Rahman et al., 2015). Participants in this study reported believing in the usefulness of OLEs and that spending time outdoors is important for learning context beyond the textbook for concepts. However, only one participant reported using OLEs with any regularity prior to participating in this research study. These results are similar to those of Rahman et al. (2015), who found that over 90% of the teachers in their study believed that instructional materials (e.g., worksheets and tangible activities) were important, but only 25% of the participants utilized such materials while teaching.

Recommendations for Practice and Implementation Plan

The essence of teachers' experience with OLEs as identified through a phenomenological lens is that stakeholders do not expect outdoor learning to be part of the normal curriculum. The literature (Dyment, 2005; Ernst, 2007; Ernst, 2012; Rickinson et al., 2004) shows that teachers have reported the lack of administrator support for OLEs; however, participants in this study indicate that outdoor learning is equally unsupported by fellow teachers, parents, and students. This absence of use and encouragement of OLEs from all stakeholders creates a difficult cycle to break as compared to something as simple as teachers' reluctance to use OLEs.

Recommendation 1

Without proper administrative support, teachers are hesitant to introduce new activities and methods into their curriculum (Ernst, 2012). Therefore, the first recommendation resulting from the current study is the development of a series of OLE professional development workshops for administrators. These workshops should include

a session in which administrators are allowed to participate in OLEs as students in efforts to help them understand the ways in which learning occurs during the activity; this approach is substantiated by situated learning theory.

To reverse the stigma that currently clouds outdoor learning, OLE-focused professional development opportunities must address ways to help educators (both administrators and teachers) seek/find greater fulfillment in their craft by using these activities as opposed to making educators feel inadequate or as if their skills are being questioned (Clarke & Hollingsworth, 2002). Young (2016) further supports this approach, claiming that in order for educators to change their beliefs about incorporating a new method or technology, they must first experience the benefits through practice sessions.

The recommended OLE-focused professional development series for administrators would explore ways that administrators can best support and encourage their teachers to implement outdoor activities. Prior to attending this session, school leaders would be asked to spend varying amounts of time outside their school building(s) at random times to understand the current uses of outdoor spaces at their schools (Banack, 2015). Understanding the current uses of outdoor spaces, or lack of use of these spaces, will assist administrators in targeting support for OLEs where their teachers will be most receptive (Banack, 2015).

There are several avenues for increasing administrator support for OLEs—ensuring that there are usable outdoor areas for OLEs, allotting planning time specifically for OLEs, showcasing the value and importance of OLEs to parents and community stakeholders, and securing funding for additional resources— all of which could

encourage teachers to include OLEs in their lessons (Dyment, 2005; Ernst, 2007; Ernst, 2012; Rickinson et al., 2004). Banack (2015) further suggests that administrators should model OLEs during staff meetings and school-led professional development sessions so that their teachers experience their commitment to using outdoor spaces.

Recommendation 2

A second recommendation for practice to help eliminate the issue of outdoor learning not being a normal component of instruction is to seek parental support for OLEs. As evident by the recent controversy in the school system related to recess at this study area, parents in the area want their (young) children to spend time outdoors while at school (Meyer, 2019); however, participants in this study indicated that their students' parents did not appreciate formal lessons that were provided outdoors. This finding is supported by Rouse (2016), who reported that parents praised the addition of an outdoor classroom at the school, yet they did not understand the ways learning could take place in the space. Therefore, it is recommended that teachers better showcase to parents the ways that the OLEs they provide are related to the classroom lessons and the curriculum.

One method to exhibit this to parents is to share photos and videos of the students engaging in OLEs with their parents. Depending on the age of the students, these images could even be captured by the students as a way for the parents (and teachers or other school personnel) to see the activity and associated learning through the eyes of the student. The use of images, specifically video, allows parents to see their children actively engaged and not simply "running around" outside, which would help parents associate learning with the outdoor space (Rouse, 2016). This will also help parents feel as if they understand the outdoor curriculum as much as the indoor curriculum, which

will increase their support for OLEs and lessen their anxiety about their children participating in such activities (Rouse, 2016).

Administrative and parental support for outdoor learning is integral to breaking the cycle of the diminishing use of OLEs in schools. The support from administrators and parents can encourage teachers to include more OLEs in their teaching because they will feel as if they have assistance in overcoming the barriers they may face with OLE implementation (e.g., space, planning time, documentation, funding) (Ernst, 2012). When teachers include more OLEs in their classrooms, this in turn impacts students' expectations for outdoor learning. Currently, teachers in this study reported that high school students are not really interested in OLEs because of previous experiences that are limited and, oftentimes, negative. Increasing the frequency of OLEs throughout all years of schooling can potentially have a positive impact on students' views of and expectations for OLEs.

Recommendation 3

The teachers in this investigative study expressed that they felt the use of OLEs was not considered a normal component of their teaching practice. One recommendation to help develop a sense of normalcy with the use of OLEs would be to incorporate OLEs and planning for OLEs as part of teachers' preservice training. Messengale et al. (2015) state that preservice education is designed to cement teacher beliefs, as well as the skills and content knowledge that one entering the field of education needs in order to begin a successful teaching career. Adding OLEs to the skillset, and perhaps content knowledge too, of aspiring teachers at a point when they can adequately practice increases the

likelihood that they will implement such activities after entering the classroom (Young, 2016).

Recommendation 4

All of the participants in this investigative study stated that there was adequate outdoor space on their school grounds to conduct OLEs, but that their colleagues might not be able to see the same potential. One recommendation to encourage teachers to use the outdoor spaces at their schools would be to designate an area for an outdoor classroom as Burriss and Burriss (2011) and Ernst and Tornabene (2012) assert that it is important for outdoor learning spaces to be well defined. Cost has been identified in the literature review (Chapter 2) as a barrier for using OLEs (Gunn, 2006; Ernst, 2012), but developing a designated outdoor classroom space could be achieved by strategic placement of plantings or other landscaping components (picnic tables, benches, fountains, etc.) for which funding is already allocated.

A benefit of having dedicated outdoor classroom space is that students and teachers have clear expectations of the space (sunny versus shaded, grassy versus sandy, etc.) and understand the boundaries of the location, similar to their experiences inside the school (Ernst & Tornabene, 2012). A second benefit to establishing an outdoor classroom is the ability to store materials commonly used in OLEs at the outdoor location to minimize the need for (and time associated with) transporting materials from the classroom (Burriss & Burriss, 2011). It may not be possible to store all necessary materials for an OLE at the outdoor classroom, but materials that are not needed for classroom activities and that can withstand any potential exposure to weather could be provided an assigned storage location within the outdoor classroom for ease of access.

Recommendation 5

The participants in this investigative study stated, and previous research supports (Burriss & Burriss, 2011; Dymont, 2005), that time was a challenging factor when considering the use of OLEs. A specific issue being that the time spent relocating the students from the indoor classroom to the outdoor learning space reduces the amount of instructional time that the teachers have with the students, and that time is already at a premium according to the participants of this study. One recommendation to address this issue is to turn the travel time into a continuation of the lesson through an active learning strategy such as “walk and talk”. Maugh (2018) states that the teacher starts the walk and talk activity in the classroom by posing a question or discussion prompt to the students that relates to the desired content of the day’s lesson or activity. The students are given a short period for silent thinking about the question or discussion prompt before the teacher asks the students to stand up and pair up for their walk (Maugh, 2018). Along the walk, the partners will share their thoughts, this can be in the form of a true conversation or the teacher might instruct one student to share as many thoughts as s/he can until the teacher tells the other student to share (Maugh, 2018). Using an active learning strategy such as the “walk and talk” transforms the time spent moving from the indoor to the outdoor classroom into instructional time, thus reducing the challenge of losing instructional time.

Reflection

I was not familiar with action research prior to beginning this study. Initially, I questioned the rigor and credibility of this type of research when comparing it to the traditional research methods with which I was familiar; however, Efron and Ravid (2013), Mertler (2017), and Mills (2007) inform us that both credibility and validity are important

in true action research. In fact, many of the same quality indicators are used in both traditional and action research, such as disclosing researcher bias, the participant selection process, and participant demographics (Efron & Ravid, 2013 Mertler, 2017; Mills, 2007). Runt (2007) further emphasizes that action research is desirable in education because it connects practitioners, researchers, and policymakers in ways that are meaningful to all parties; traditional research in education is often considered impractical by practitioners for use in certain particular environments.

Phenomenology was a natural fit for this project because its design encourages the researcher to be an active participant (Creswell, 2009). A phenomenological design allowed me to develop a rich narrative in which participants' experiences with OLEs was thoroughly explored (Nicholls, 2009, November). Allowing the participants to reflect on their own early outdoor learning experiences helped me uncover the foundations of their beliefs regarding such activities in their own teaching. While I feel that the phenomenological design afforded great insight into the beliefs of teachers in my area regarding OLEs, it would be highly beneficial to follow this study with a case study of one particular class. Similar to phenomenology, case study research is also designed to provide a narrative of a particular phenomenon (Creswell, 2009). Considering both the students and the teacher in the same OLE would be useful to me as I continue to develop OLE lesson plans and professional development opportunities.

The results of this study have a significant impact on my work as an outdoor and environmental education provider because I was able to identify the systemic contempt for OLEs felt by teachers in my area. This means that in order to enhance the services I provide to our local school system, I must not only find ways to highlight the benefits of

OLEs for teachers and administrators, but I must also communicate these benefits to students and their parents. Through this action research project, I realized that there were more pieces missing from this puzzle than I originally believed. Further research, perhaps using focus groups and/or observational studies, with the parents will provide more information to help me to secure their support for the inclusion of OLEs.

Study Limitations

A major limitation of this study is that all participants had expressed interest, at some point or another, in including more OLEs in their instruction. The problem of practice for this study focused on teacher hesitance regarding the use of OLEs, but identified teachers actively avoiding OLEs as the predominant spark for initiating the research project. While some of the participants had previously attempted to provide their students with OLEs, they were currently hesitant to do so on a regular basis despite having some interest in doing so if the potential challenges they faced (e.g., planning and/or implementation time, resources) could be reduced. Further, using participants who already had some interest in OLEs, but were not regularly using such activities, provided a unique opportunity to gain insight into the inner workings of the schools and school system (which I am not privy as an outsider) that could help in the development of future and/or professional development opportunities.

One limitation of the current study is the fact that the professional development opportunity was held on a student holiday where multiple professional development options were available. Thus, some teachers who may have been interested in participating in the OLE workshop could have selected or been assigned to a different professional development option. Further, as this research was conducted as part of an

unfunded doctoral study, the ability of recruiting teachers who were completely resistant to using OLEs was diminished as there was no possibility of providing tangible classroom materials, official certifications, or other compensation for participating in the workshop and associated research study.

Another limitation is that the duration of the professional development experience was constrained by the available time-frame and schedules of the participating teachers and the researcher. However, Kennedy (as cited in Steiner, 2004) claims that extending the duration of professional development programs is not enough to ensure their effectiveness. Professional development opportunities that emphasize multiple characteristics of effective professional development (Darling-Hammond, Hylar, & Gardner, 2017; Steiner, 2004) can still be successful in a short time-frame; however, adequately addressing several of these characteristics typically requires a program that lasts longer than one day (Steiner, 2004). Recognizing the limitation of time available for the traditional workshop component of this research study, I began the conversations about OLEs with each of the participants prior to their attendance at the workshop and continued the conversation and offered support for their OLE implementation following the workshop in an attempt to lengthen the duration of the experience.

Recommendations for Future Research

One direction for future research is to develop and implement a professional development workshop series for administrators (as previously described). This proposed series as a research project would aid in the identification of the tools and/or assistance administrators would need to support their staff. This series may also aid in the

identification of the aspects of outdoor learning that administrators find most and least beneficial for their students.

Another direction for future research is to include all of the teachers at a selected school/study site in the OLE-focused professional development workshop used in this study. As identified in this study, teachers feel that many of their colleagues do not understand the value of OLEs and view such instruction as “going against the norm.” Encouraging the entire teaching staff to participate in a similar workshop or workshop series may positively impact these teachers’ perceptions of outdoor learning at the school.

Conclusion

Educators are responsible for creating quality learning environments that both facilitate the acquisition of knowledge and assist children in facing life’s challenges (Wilhelmsson, 2012). Typically, this is done in a brick-and-mortar classroom with traditional resources (e.g., books, technology); however, learning does not have to be confined to indoor structures. Outdoor spaces can be additional, or enhance current, learning environments by offering unique methods for student development. Despite evidence indicating the value of outdoor learning (Jacobi-Vessels, 2013; Wilhelmsson, 2012), outdoor areas are underutilized and frequently ignored for such purposes.

The essence of teachers’ experiences with outdoor learning in a coastal Georgia public school system, via a phenomenological lens, is that stakeholders do not expect outdoor learning to be part of the normal curriculum. Previous research (Dyment, 2005; Ernst, 2007; Ernst, 2012; Rickinson et al., 2004) found that teachers report the lack of administrator support for OLEs, but participants in this study indicate that support is equally lacking from fellow teachers, parents, and students. This lack of support for

outdoor learning by all stakeholders creates a cycle that is difficult to break when compared with simply overcoming teacher reluctance to integrate OLEs in their instruction. To increase teachers' support for and use of OLEs, professional development workshops can be provided for administrators, and showcasing the actual *learning* aspect of OLEs for parents can lead to change.

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APPENDIX A INTERVIEW QUESTIONS

Inherent to the phenomenological design is the emergent nature of interviews; however, these questions will provide the foundation for the interview pre-workshop:

1. Do you recall participating in outdoor learning activities as a student?
 - a. Did it occur on school grounds or as part of a field trip?
 - b. Do you remember the experience as enjoyable?
2. Have you ever incorporated outdoor learning activities in your curriculum as a teacher?
 - a. Why did you choose to include such elements?
 - b. Did it occur on school grounds or as part of a field trip?
 - c. Was the experience enjoyable for you?
 - d. Do you feel that the experience was enjoyable for your students?
3. What would/does inspire you to include outdoor learning activities?
4. What challenges do you face when implementing outdoor learning activities?
 - a. Do any of these challenges prohibit you from implementing outdoor learning activities?
 - b. How/have you overcome some of these challenges to implement outdoor learning activities?
5. Are you aware of/have you ever used outdoor learning activity curriculum guides such as Project WET, Project WILD, or Project Learning Tree?

6. Do you feel there is adequate outdoor space/facilities on your campus to implement outdoor learning activities?

Inherent to the phenomenological design is the emergent nature of interviews; however, these questions will provide the foundation for the interview post-workshop:

1. Describe your experience at the outdoor learning workshop.
 - a. Were the outdoor learning activities enjoyable for you?
 - b. Do you believe the outdoor learning activities would be enjoyable for your students?
2. Did any workshop components provide inspiration for implementing your own outdoor learning activity with your students?
3. Did any workshop components present challenges similar to those you face for implementing your own outdoor learning activity with your students?
 - a. Did the challenges feel insurmountable?
 - b. Were other participants able to help you address/plan for these challenges?
4. Do you feel there is adequate outdoor space/facilities on your campus to implement outdoor learning activities?
5. Do you feel you have adequate resources to implement outdoor learning activities at your school?
6. Do you feel you have adequate administrative support to implement outdoor learning activities at your school?

APPENDIX B

SIGNIFICANT STATEMENTS

- I don't remember any outdoor learning when I was in school.
- I remember field trips to museums and the symphony
- I've never had the courage to try it [outdoor learning] with just me and 30 ninth graders who weren't fans of biology or following directions.
- Students who are interested in learning and would enable me to have outdoor experiences that were not about managing behavior, but actually learning in nature [make me want to include outdoor activities].
- [One challenge I face is] having to restrict my lessons to the curriculum which students need to know for the end of course test because if they do not do well on the test then I have to go to additional teacher training.
- Off campus field trips are problematic because while you have more time to concentrate on an outdoor experience, you have to do extra planning for your classes who aren't going on the trip so the substitute can keep them busy.
- Student behavior [is a challenge] because I am willing to do the extra work on my part, but when disruptive students prevent me from sharing nature with the few interested students it is just not worth it for me.
- I think that just getting outdoors needs to be an integral part of the school day beginning in kindergarten and continuing through college.

- Schools need to be designed to be integrated in to the natural environment with native plants, water features, and food resources for animals even if this space needs to be an interior courtyard for safety.
- In environmental science [classes] the students have to grow a garden containing a certain diversity of crops and monitor their growth over the school year.
- The Ornithology Club and National Honor Society raised funds to put a solar operated fountain and pond beneath the shade of two large oak trees on campus.
- Most non-science teachers avoid outdoor learning because of large class sizes, trying to move students from Point A to Point B, it is either too hot or too cold, or the exposure to bugs with the potential for allergic reactions.
- The nature path at our elementary school [when I was a student] was nice.
- The sports-based education that occurred outside was very stressful.
- I chose to do [two activities] outside because it gave the students room to move.
- Time management is an issue for me [in implementing outdoor learning activities].
- Lord knows if it is too hot, too cold, too humid, or too buggy my students would complain and totally miss the point of the lesson.
- The less I have to do in terms of set-up makes an activity more appealing, especially when I have over 150 students and am teaching three different subjects throughout the day.
- [A challenge I face is] keeping their attention when explaining the rules or scenario for the activity because you can't do that in the classroom because

they'll forget when you get outside and you'll have wasted more time explaining it twice.

- Students are allergic to everything these days and being in a public school everything is a liability.
- If the weather isn't good then students will focus more on the bad weather than the lesson at hand.
- There is just more planning that is involved and sometimes with my limited time I have to choose between grading and calling parents or planning and setting up a one-day activity.
- I think there could be [adequate space on campus for outdoor learning], but teachers' attitudes toward its use would have to change.
- I wish that outdoor learning was more normalized.
- Other than occasional field trips, outdoor learning is not a regular occurrence at our school.
- I enjoyed it [outdoor learning activities as a student], I may have been intimidated by some of it, but for the most part it was enjoyable.
- Our class goes on a three-day, overnight field trip to an environmental camp.
- If the lesson is impacted by outdoor learning activities then I'm inspired to include it, if not, then it's not worth my time.
- If a student is absent, then it's harder to reteach the activity or to have the student make it up.
- Another challenge is having the resources at hand or the idea [for the activity] on hand.

- We are expected to teach 36 weeks worth of content in about 32 weeks of time due to testing that occurs about four weeks before school ends.
- Sometimes we just don't have the time to spend on a lesson that we can teach in 30 minutes – a lot of outdoor learning activities take much more than 30 minutes.
- The only outdoor learning that happens on a regular basis is with agriculture classes.
- I remember occasionally going outside to read, but I do not remember having entire lessons outside.
- I have taken students outside to read, but it happened more when I taught middle school, as a high school teacher now it is very difficult to find time to take students outside.
- I would love more opportunities to go outside, but we are required to have proof that it is relevant to our teaching material.
- Middle schoolers seemed to enjoy being outside and the freedom of not having to sit at a desk in their classroom.
- Very little teaching was going on outside the classroom in my day; however, I do remember an elementary teacher that I had who firmly believed we needed air and sunshine to learn.
- Many students were much more engaged when we did activities outside the classroom.

- I feel that when you experience a concept versus read about it you will retain that information longer and be far more able to connect that new learning to other learned concepts.
- Knowing that students need multiple modes of learning new information, offering outdoor learning activities increase your tool kit, so to speak, about finding way to engage students to learn.
- [Coming from an SLP background] I was quite adept at modifying and adapting situations so that all could participate.
- I support outdoor learning.
- Students take field trips to [local nature centers].
- I remember planting a tree when I was in elementary school for Earth Day.
- Most outdoor learning experiences for me took place through participation in the county 4-H program.
- I took one or two classes right outside the school [when studying poetry], but the students complained about the heat, the sunshine, and the bugs [so I did not do it again].
- Personal interest and the growing need for awareness and action regarding the natural world with climate change and deforestation [make me want to include outdoor learning activities].
- [A challenge I face is] lessons have to be tied into state standards for learning.
- To my knowledge, other than in physical education classes, students are rarely allowed to have class outside.
- I recall being outside quite often at school.

- I would love to have access to outdoor historical exhibits and sites, where students could explore the locations discussed in class.
- Access and funds are the most significant challenges to getting students outdoors.
- There is an institutional tendency in most systems that makes outdoor classes appear odd, and usually inconvenient in the eyes of the administration.
- If an outdoors class or lesson is seen by administrators at any level as a serious liability, then such class or lesson would not be possible.
- I think outdoor learning should be more common in every subject, but particularly within the sciences, history, and social sciences.