

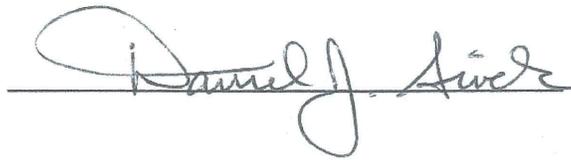
**ADAPTING THE EUROPEAN  
FOREST KINDERGARTEN MODEL TO URBAN AREAS**

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Master of Science in Environmental Education and Interpretation**

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A handwritten signature in cursive script, reading "Daniel J. Sivek", is written over a horizontal line.

Approved by graduate advisor, Daniel J. Sivek, Ph.D.

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## **Chapter 1: Introduction**

### **Research Question**

This research will investigate and describe the ways in which the European forest kindergarten model may be adapted to urban areas in the United States and Canada.

### **Problem**

The objective of this proposed project is to determine successful teaching strategies for urban environmental education that connects urban families to their neighborhoods via forest kindergartens on urban public land that may not be manipulated. [Many forest kindergartens are on private property, where warming fires and permanent structures may be built; and others have access to indoor space.]

### ***Sub-problems***

1. Prepare to conduct interviews: Draft informed consent form and interview guide. Conduct research to identify leading urban forest kindergarten facilities; and email surveys to same. Select approximately 25 survey respondents to interview.
2. Interviews: Review forest kindergarten websites prior to conducting interviews. Schedule and conduct interviews. Take notes during interviews.
3. Review and Code Data: Edit interview notes for clarity and code interviews as soon as possible after an interview is completed. Analyze coded data; interpret data results and themes. Recommend successful teaching strategies

for urban forest kindergartens.

4. Identify successful educational strategies for urban environmental education that connects urban families to their neighborhoods via forest kindergartens on urban public land that may not be manipulated.

### **The importance of the problem**

Many urban children are disconnected from nature and their local environments. Nature deficit disorder is a well-known problem, as is the disappearance of free-range parenting. Today's families do not send their children out to play or explore without adult supervision. This creates a monumental issue because for children, unstructured time outdoors can provide important opportunities to take risks, learn from mistakes, become confident and resilient, cooperate, problem solve, use imagination, be creative and learn self-sufficiency and independence. Plus, when children learn about and connect to their local natural world, they grow up more able to see the important relationship between humans and the environment, and the role we could have in protecting the environment. For an expanded discussion on the importance of connecting with nature, see Chapter 2.

Forest kindergartens in Europe have been widely studied and proven to strongly support students' academic, physical, social and emotional development. Plus, attending forest kindergarten helps develop a love for nature, which may lead to becoming a responsible citizen. Unfortunately, it is a struggle to get urban children outdoors, increase their comfort level in nature and teach them how to interact with and connect to their local natural environment. By design, forest kindergartens are inquiry-based, providing students with greater opportunity for child-led exploration and discoveries.

Literature supports the idea that successful urban environmental education

programs build upon prior experiences and are locally relevant. This is the foundation that leads students to feel capable of creating local change; so it is very important for young children to make this connection. However, urban students, in particular, face many challenges when connecting to nature. The introduction of forest kindergartens to urban areas will provide an opportunity for urban children and families to overcome these hurdles and view their local natural environments differently.

Besides conducting a literature review for best practices for forest kindergartens and their adaptations to urban areas, several forest kindergarten practitioners will be interviewed to share their strategies for engaging and connecting urban students and their families to local natural areas via their urban forest kindergarten programs.

### **The Limitations**

1. The interviews will be limited to less than thirty participants.
2. The interviewees will be selected from formal schools and non-formal environmental education facilities in urban areas.
3. Results are generalizable only to the population being sampled.

### **Definition of Terms**

Forest Kindergartens: early childhood schools “distinguished by their commitment to total nature immersion, child-driven flow learning, emergent curriculum and inquiry-based teaching style” (defined by Cedarsong Nature School).

Urban: “Urban” is defined as characteristic of a crowded city or major metropolitan area.

Urban environmental education:

Urban environmental education is the study of the built, as well as the natural environments of a local, metropolitan area, including the impact humans have upon the environment. The goal is to produce responsible citizens to create or maintain sustainable cities.

“Urban environmental education is a unique subdivision of environmental education because it happens in urban areas, with a diverse urban population, and deals with urban environmental systems and issues. Though all functions of “natural” ecosystems also occur in cities, humans, as the dominant organism, exert tremendous influence on the ecological processes of urban environments and make them unique ecosystems” (Frank, Zamm, Benenson, Fialkowski, & Hollweg, 1994).

### **Assumptions**

1. It is possible to identify urban environmental educators with specific experience and expertise in connecting urban students to their local environments.
2. Experienced forest kindergarten practitioners will agree to be interviewed and recorded.
3. The interviewees will be available in the winter and spring of 2015-16 for in person or telephone interviews.

4. The required budget will be minimal.

## **Chapter 2: Literature Review**

### **What is Forest Kindergarten?**

Kindergarten means “children’s garden” in German. It began in the 1800s, based on the concept that a good deal of children’s play was done outdoors in nature and it led to learning (Sobel, 2014). That concept has nearly disappeared from modern kindergarten. The forest kindergarten movement seeks to bring it back.

The foundation of forest kindergarten is for children to have regular and repeated access to one natural space, connecting to their local natural environments. Children build a relationship with the land and each other while playing and learning in nature (Carruthers Den Hoed, 2014). Forest kindergartens encourage exploration by utilizing children’s natural curiosity.

Activities vary daily, depending on the landscape, climate, season, presence or evidence of animals, tools and “loose parts” (moveable materials, like sticks and rocks, used for imaginative play), ideas introduced by the educator, children in attendance, and—most importantly—interests of the child(ren). The outdoor environment becomes a learning lab. Children are free to interact with each other while they discover, investigate, create and problem solve. A child may decide to work independently or collaboratively. Through experiential, play-, place- and inquiry-based learning, educators optimize the unique investigative opportunities that unfold each day (Carruthers Den Hoed, 2014).

### **The Value of Play**

Forest kindergarten educators understand the value and importance of play and strongly encourage it. Though some adults comment that children are “just playing” at a

forest kindergarten, in reality, they are busily building skills across many developmental domains. Learning through “play” fosters communication and cooperation, promotes creativity and develops imaginative thinking. It also helps children develop stamina, self-confidence, gross and fine motor skills, a more positive outlook and a greater ability to set and achieve goals. Forest kindergarten educators appreciate a child’s sense of awe and wonder for the natural world (Peterson, 2013; Wiedel-Lubinski, 2014).

### **History of Forest Kindergarten**

Forest kindergartens began in the early 1900s. Since 1950, the movement grew exponentially in European countries, especially Sweden, Denmark, Germany, Switzerland, and the United Kingdom (Peterson, 2013).

European forest kindergartens (“Waldkindergartens” in German) and most preschools in the United States are vastly different from each other. Forest kindergartens usually have no indoor classroom or school building. Class meets outdoors and spends the entire time in nature. Learning takes place directly in nature. Though “kindergarten” in the United States is for 5 year old children, European forest kindergarten classes commonly have a mix of children ages three through seven. Young students look up to and imitate the older children. Similarly, the older students enjoy acting as role models and helpers for the younger children. Moderate risk-taking is encouraged and appreciated. Educators rarely intervene during play. Children are given many opportunities to problem-solve and socialize without adult interference. In forest kindergarten, learning is accomplished without formal structured lessons. The educator’s role is observer and facilitator, not a direct instructor intent on teaching a tightly scripted curriculum (Peterson, 2013; Wiedel-Lubinski, 2014).

Variations of the “forest kindergarten” model are gaining in popularity in the United States, predominantly in urban and suburban areas. They are known under an assortment of names, such as “forest school” and “nature school,” that are as varied as the methods for dividing class time between indoor and outdoor locations. Although many schools use “forest” in the title, they creatively use whatever outdoor space is nearby, including farms, gardens, urban parks, fields and vacant lots.

### **Logistical Obstacles**

Three major obstacles to nature play are lack of appropriate clothing, lack of access to natural areas and safety or liability concerns (Ernst, 2012; Peterson, 2013).

As the proverb states, “There is no such thing as bad weather, only inappropriate clothing.” Dressing for the weather often is the deciding factor between a child having a fantastic time exploring or becoming cold and miserable (Ernst, 2012; Sobel, 2014). Wearing clothes that can get wet and muddy encourages immersive play and exploration. This may be especially challenging in an urban area, where people are more separate from the natural environment (Sobel, 2014) and not everyone is able to afford rain or snow gear. With proper gear and an educator’s guidance, students learn that every change in season and weather pattern brings new opportunities to explore.

An outdoor location near indoor facilities will expedite transitions between indoor and outdoor portions of the school day. By increasing awareness and access (or perceived access) to natural areas, more children will benefit from this type of learning. Particularly for providers serving children of lower socio-economic status, the benefits of outdoor play in natural settings are not always identified; and outdoor play is limited to a playground (Ernst, 2012).

When an urban forest kindergarten chooses to have classes only in outdoor locations, with no indoor space, a few additional challenges present themselves:

1. Staying warm outdoors without building a camp fire or a permanent shelter;
2. Going to the bathroom outside, and toilet training young children;
3. Glass, litter, dog waste and vagrants in public spaces;
4. Teachers will carry all supplies, snacks, extra clothes, etc. (Carruthers Den Hoed, 2014; Sobel, 2014; M. Byron, personal communication, September 12, 2014).

Lastly, it is ridiculously common for an outdoor school to encounter difficulty in obtaining liability insurance (Ernst, 2012; Peterson 2013i). Licensing requirements, which include regulations governing indoor space and facilities are stringent. Therefore, many nature preschools are affiliated with environmental organizations, such as nature centers or local parks. By using the organization's indoor classrooms as a home base and having access to the bathrooms, the state requirements for having a school are met (Wiedel-Lubinski, 2014).

### **Need for Forest Kindergartens in Urban Areas**

#### **Fear and Discomfort**

Due to rapid urbanization and the global shift against and away from nature, many people, especially as children, lost their historic abilities to enjoy, play in and survive in nature (McKinney, 2012). Especially for urban individuals with limited exposure to natural environments, their interpretations are learned from indirect sources such as

television shows, horror movies, amusement parks and zoos (Bixler, Carlisle, Hammitt, & Floyd, 1994; Bixler & Floyd, 1997). Rumors and hearsay keep alive urban legends of children disappearing or being hurt, so parents develop a fear sending their children outdoors in nature (Blakely, 1994).

The extent to which urban students are uncomfortable and afraid in natural areas is shocking. A survey of interpreters at forty-eight urban outdoor learning centers in the eastern United States and Canada listed discomforts and fears communicated by students. The most common fear was of snakes (listed by 87% of interpreters), followed by insects (79%), then nonindigenous animals (73%). Fear of plants and getting lost tied for 4<sup>th</sup> and 5<sup>th</sup> (56%). The high ranking of “getting lost” was quite surprising, given student programs are led by a center interpreter and students are accompanied by classmates, teachers and parent chaperones. Next on the list was dirt or mud, including the fear of getting dirty or sitting on the ground (48%), then spiders (44%).

Personal comfort, such as being too hot or cold, walking too much, or having no access to bathrooms, was another concern (35%) (Bixler et al., 1994; Simmons, 1994; Wals, 1994; Dillon et al., 2006; Aaron & Witt, 2011). People are so accustomed to and dependent upon indoor comforts and cleanliness, like climate-controlled buildings and constant access to hand washing facilities, that when nature falls outside this narrow comfort zone, it causes some to withdraw (Simmons, 1994; Bixler & Floyd, 1997).

Another unexpected result of the study was the strong emotion of disgust in regarding natural objects (35%) (Bixler et al., 1994). Students with a high ‘disgust sensitivity’ prefer, and possibly initially require, activities that do not require touching soils, worms, insects, dead or decaying vegetation, reptiles or amphibians (Bixler et al.,

1994; Bixler & Floyd, 1997; Bixler & Floyd, 1999; Dillon et al., 2006).

These sensitivities and fears are barriers to enjoying nature and learning outdoors (Dillon et al., 2006). The growing preference for indoor recreation and manicured outdoor areas relate to these negative perceptions of nature (Bixler & Floyd, 1997; Dillon et al., 2006).

### **Access to Nature**

Because of fears for personal well-being, students in low-income areas may have restricted access to their local neighborhoods (Fisman, 2005). With no feeling of community safety, children spend lots of time indoors, and use the outdoors only to get from one place to another (Wals, 1994). Children's perceptions of their environments and influenced by socioeconomic factors (Kalvaitis & Monhardt, 2012). Crime, violence and the anticipation of dangerous people "hanging out" or hiding behind trees, create an extremely uncomfortable relationship with being outdoors in nature (Wals, 1994). Students fear traveling beyond the play areas immediately surrounding their apartment buildings (Chawla & Salcadori, 2003). Children are afraid of the wildness of the deep woods (Simmons, 1994). Urban children are frightened of not being able to escape or hide from danger in unfamiliar natural settings (Wals, 1994). Predictably, teachers and family members forbid these natural places, even though many fears are not viable, based on hearsay or the portrayal of nature on television (Wals, 1994; Chawla & Salcadori, 2003). Children feel they are powerless with no control over the environment (Chawla & Salcadori, 2003). Without feeling secure, children do not build an awareness and sensitivity to the natural world around them. They cannot feel ownership over that place

or a desire to improve it, unless they feel connected to it (Fisman, 2005).

### **Unfamiliarity with Local Environment**

For urban students, studying their local natural environments may not be as simple as it sounds. With the majority of the population living in urban environments, experiences in natural areas often are limited due to the lack of green spaces (Bruyere, Wesson, & Teel, 2012). Also, urban children come from diverse cultural backgrounds, and rather than having knowledge of their local environments, they are familiar with the homeland of their ancestors and family (Huss, 2007; Powell, 2009). Urban children do not believe there is much they can do to improve their environments as they are extremely unaware of the importance of their own urban ecosystems (Barnett, Vaughn, Strauss, & Cotter, 2011). It is important for older students to comprehend how their local urban environments relate to the natural world and the global environment (Frank, Zamm, Benenson, Fialkowski, & Hollweg, 1994).

### **Summary**

Since many urban students do not know how to interact with or connect to their local natural environment, forest kindergartens would help develop that foundation. Becoming comfortable in natural areas is pivotal on many levels. It strengthens positive environmental attitudes and is developmentally important for children. Playing and exploring in nature as a child enhances all the senses, which boosts creativity, imaginative play and intellectual development. Plus, it leads to higher test scores and more involvement in school (White, 2004; Louv, 2008; Beatley, 2011). Nature also promotes recovering from illness and reduces the stress of urban life (Bixler & Floyd,

1997; White, 2004; Beatley, 2011). Spending time in nature has been proven to reduce the effects of autism and attention deficit hyperactivity disorder (Beatley, 2011).

Young children build emotional attachments to what is familiar and comfortable. A vast body of literature indicates that sustained contact with a place is what best cultivates environmental knowledge and concern. This creates environmental awareness, a precursor to action (Fisman, 2005). With regular and positive experiences in local natural areas, children learn to respect and care for the environment, develop a sense of stewardship, and create a connection to where they live (White, 2004; Fisman, 2005; Moffett, 2006; Beatley, 2011).

Urban forest kindergartens are the seeds from which all this may grow.

## **Chapter 3: Methodology**

### **The Data**

Data for this research project will be gathered through semi-structured qualitative interviews of approximately twenty-five forest kindergarten practitioners in formal and non-formal settings.

Also, written data will be gathered from websites of participant interviewees, to support, clarify and document successful forest kindergarten programs.

### **The Research Methodology**

Approval from the IRB will be requested and granted prior to conducting interviews.

A review of forest kindergarten resources and websites will be conducted to identify urban forest kindergartens and very experienced forest kindergarten practitioners. Based on the review, emails will be sent to selected facilities describing this project and requesting a volunteer for an in depth interview to discuss successful strategies, as well as areas that may require improvement.

A list of interview questions will be constructed based on the themes discovered in a literature review and collaboration with an advisor. Interviews will be informal and semi-structured, to ensure that interviewees stay focused, while providing a venue for personal expression and stories. Interviews will be conducted individually, either in person or via telephone. The interviewer will take notes of the interviews and edit them for clarity.

After the interviews, concepts will be identified. Then, the concepts will be separated by categories. These will be examined to develop meaningful themes. Finally,

the significance of the themes will be interpreted and conclusions will be drawn and documented in the research project summary.

### **The Specific Projected Treatment of Each Sub-problem**

The following four items are the results for the sub-problem “Prepare to Conduct Interviews.”

1. The IRB expedited its review and granted approval to conduct interviews. Informed consent form was drafted, reviewed by advisor and approved.
2. After reviewing literature, a list of interview questions was created and approved by advisor.
3. Research was conducted to identify leading forest kindergartens and facilities with similar outdoor early childhood programs. After researching the facilities, I identified 30 forest kindergarten programs, requests for interviews were emailed to same, keeping in mind the need to include a wide variety of regions, specialties and types of programs.
4. Responses from facilities were reviewed and positive responses to participate in interviews were selected, again considering the need to include a wide variety of regions, specialties and types of programs.

The following six items are the results for the sub-problem “Interviews.”

1. In-person interviews were scheduled for participants in New York City. Telephone interviews were scheduled for participants in other regions of the United States; and an interview via Skype was scheduled

for a participant in Canada. Informed consent forms were transmitted and signatures of participants were obtained.

2. Participants' websites were reviewed prior to conducting interviews, to gather initial data and ensure interview time was spent most efficiently.

3. Be respectful of time commitments and last minute schedule changes of interview participants. Conduct interviews efficiently, politely and graciously.

4. Take written notes of interviews.

5. Thank interviewee at conclusion of interview. Request permission to contact for follow up or clarification. Offer to send interviewee the final project summary.

6. Revise list of interview questions after first one or two interviews, if necessary.

The following five items are the results for the sub-problem "Review and Code Data."

1. Edit interview notes for clarity as soon as possible after an interview is completed. (Mar. to Apr. 2016, 70 hours)

2. Review and code data gathered via interviews as soon as possible after an interview is conducted. Based on methods learned in a qualitative research course at University of Wisconsin Stevens Point, data will be coded based on main concepts and categories in interview questions. Additional concepts and categories will be added to revise the data coding process as

more interviews are processed. (Mar. to Apr. 2016, 50 hours)

3. Review and code data gathered via interviewees' websites. (Mar. to Apr. 2016, same as above)

4. Analyze coded data; interpret data results and themes. (Apr. to May. 2016, 30 hours)

5. Make conclusions about results of interviews. (May. 2016, 20 hours)

Identify successful educational strategies for urban environmental education that connects urban families to their neighborhoods via forest kindergartens on urban public land that may not be manipulated.

1. Conduct additional research of recently published material. (June 2016, 10 hours)

2. Make recommendations for successful strategies. (June 2016, 70 hours)

## **Chapter 4: Results**

Results of the first three subproblems are covered in Chapter 3, as they are related to research methods. Those subproblems are 1) Prepare to conduct interviews, 2) Interviews, and 3) Review and Code Data.

### **Results for Subproblem 4**

Subproblem 4 is to identify successful educational strategies for urban environmental education that connect urban families to their neighborhoods via forest kindergartens on urban public land that may not be manipulated.

Of the twenty-four people interviewed, ten (42%) work in programs that are outside all the time, regardless of the weather; and one spends seventy-five percent of its time outside, regardless of the weather. Eleven (46%) are outdoors less than half of the time, either depending on the weather or splitting their program time with a traditional indoor school experience. The last two are outdoors for one day or less per week.

### **Challenges and Strategies to Address Them From School Perspective**

#### ***Licensing and insurance***

More than half of the programs participating in this research project are not licensed. Several cited that licenses are available only for programs with indoor facilities, or ones that meet more than a certain number of hours per day. To meet “inspection regulations, we can’t have a climbing structure higher than 30 inches.” Licensing agencies focus on square footage, furniture, and safety; they have an “aversion to risk, and lots of rules.” One shared that, because of regulations regarding risk, a school was “cited for having a rose bush because of its thorns and was not allowed to mix soil and water for mud and leave it standing. One had to write letter about taking hikes outside the

play area. “Following those types of regulations would change forest school a lot! We wouldn’t be allowed to climb trees, be near water or walk in bare feet.”

“Childcare licensing departments are aware of forest schools, but not knowledgeable. One licensor told a practitioner “We know they’re doing good work, but there needs to be a way to license, regulate, ensure safety, and keep track of them.”

Several experienced practitioners are working to “form an association to create best practices and standard operation guidelines” for forest schools. Many are attempting to help their states’ licensing organizations to understand their types of programs; with the end goal being able to obtain a license. In the meantime, several practitioners intentionally follow or exceed “the same requirements as licensed facilities, regarding regulations for student to teacher ratio, teacher training, policy & procedures, safety, emergency procedures, etc.”

### ***Training***

Training is a challenge, according to many practitioners. Early childhood educators receive only a little training before starting in a classroom.” Some state regulations require only 12 units of early childhood education, then you can teach 12 children by yourself.”

One practitioner warned, “If there’s a gap in knowledge, if you do not understand the land you’re working on, and you can’t ID hazards and danger, you could endanger yourself and your students.” Early childhood education includes no nature training, “you have to blend someone who understands early childhood education and is a naturalist.”

“Teacher training requirements will happen if forest school regulations happen,” an experienced practitioner stated. One hopes “more training programs look at nature-

based preschools in an intentional way. They need to show ‘here’s how to use nature for science or literacy development.’”

Another practitioner trains teachers on “three topics: safety, fun, respect.”

On the other hand, at least one practitioner trained in Canada with an organization from Europe. “The training was very extensive. You need an early childhood education background; you learn knots, tools, and fire building. You do online coursework, reflect on your own practice, and research the benefits of nature and forest kindergartens (United Nations’ Rights of the Child, risk, benefits to special needs students, etc.). You study dangers, create a safety plan and a procedure manual. Plus, there is lots of education about how to dress and stay warm.”

### **Challenge and strategies to address them from family perspective**

#### ***Weather and mud***

“American culture generally is not comfortable outdoors; broadly speaking we don’t have happiness with winter.” One practitioner noted, “Some parents think being outside “causes” children to get sick, a cold or flu; and “one mom worried about the cold, and her child is the last to come in.” Others say, “We still have families that don’t come in the rain.” “Parents are hesitant to go out in the rain; but if an adult is excited to go they’ll follow them anywhere.” Many recognize that, “It takes a lot of effort from families. They need to say ‘Yeah! You’re going out to play in the rain!’ not ‘oh, I know it sucks.’” Another recalled, “Many parents afraid winter is too cold for kids. Winter weather is biggest concern. You don’t have to stay indoors all winter!”

Many practitioners stated that, “nature experience was not in parents’ culture,” and “some parents never spent time outdoors as kids.” Four practitioners specifically stated, “Some parents don’t like being outside but they know it’s important, so they enroll their children in outdoor school with the opinion, “you do it with them.” “Parents really love that we are getting students outside when they wouldn’t think of going outdoors.” Some parents want it to be like when they were children growing up outside. At one forest kindergarten program, “Half of families do not have yards; but they value being outside from their own childhood experiences.”

Several programs do not take their students out long if it’s cold outside. At one forest school, “When a child is improperly dressed and cold, the child becomes an indoor helper.”

When it’s hazardous, kids are in bad temper because of the weather, or kids are not properly dressed, we spend less time outdoors.

License guidelines for appropriate temperatures to be outdoors are unique to each state and region, In some regions, “most schools don’t go out when it’s below 39 degrees.” When it snows or it’s cold, parents don’t like it. They think children suffer when it’s 39 degrees, and say, “I like forest school, but why do you still have to go out?” In another region, the class goes outdoors as long as the temperature is between 0-100 degrees. While in other regions, “it can be -12 degrees in the morning for weeks, with snow so deep you cannot see children over the snow next to the shoveled paths,” and the children still go outside.

At professional trainings to help teachers use nature in their schools, the concerns teachers voice most frequently are their own comfort, mainly with weather and mud, and

that the “Kids do not have proper clothes.” Nearly all practitioners felt families had the same challenges. Parents ask how to dress their child. Practitioners spend lots of time educating about how to dress and stay warm. Parent and family support is necessary. One practitioner may write a blog about preparing for weather to start the school year, and to provide informational resources on hazards (ticks and lyme disease). Lots of warnings are given to prospective families that their children will get dirty. Current parents tell prospects they’ll do laundry & tick checks every day. A big issue for parents is the amount of laundry (muddy, wet, dirty clothes); they’re sold on the research of the benefits, but it’s not practical. At several schools, parents “complained the first few times they picked up their children and exclaimed, ‘what happened today? Why are you muddy/wet?’” One boy had a “new nanny who nagged the boy about going in the mud pit, “You’re going to get dirty!” The boy replied, ‘this is what [school] is all about! It’s for getting dirty and having fun!’”

Outdoor gear is essential. Every program interviewed sends information to parents on how to dress their children for cold and rain- it’s very necessary. One practitioner noted that, when parents helped or observed, “Several parents didn’t dress properly. When standing still, they get cold faster than kids who are constantly moving.” Another added that, “Parents come two times a month for field days. Eventually all parents purchased rain pants. They all had raincoats initially, but not pants.”

Some children were never outdoors; so it’s transformative because kids are not used to touching dirt. A few children do not want to get dirty, or occasionally, a child does not want to get his or her shoes dirty. Others noted that “some don’t like the feel of wet mud on their hands or when mud dries on their hands until they’ve been exposed to it

a few times,” But “if 1 kid goes in the mud, others follow.” Sometimes, practitioners need to “educate parents to step back, let kids climb trees, go in mud, and touch bugs.” Also, kids are used to a groomed yard and play equipment. Five practitioners noted children and/or parents asking, “What do we do without [plastic] toys and playground equipment?” “Do you give them something to do [when they are outside]?” Some kids are unsure about having “different rules at home and at school- are they really allowed to climb trees and get dirty?”

One facility “mostly gets European families because they (parents) are more used to being outside.” In another area, many families of Swedish heritage want kids to go out in all weather. A practitioner got a complaint from a Norwegian man: “Why are you closed?” (There was a snowstorm.)

### ***Risk and safety***

There is a “misconception that it is dangerous,” said one practitioner about outdoor unstructured play. Another noted the challenge in expanding her programs to lead “Forest Fridays” classes for public schools because the school administrators are afraid of risk. Another challenge is that “parents grew up in “perceived greater danger” time and haven’t grown up outdoors.” Some parents visit and are surprised to see children climb high in trees. Parents need to be educated to step back, let kids climb trees, go in mud, and touch bugs.

Five practitioners interviewed believed that “kids learn to manage risks” and “find their own level of appropriate risk taking.” Children take more risks outdoors. “When children climb trees, we trust them to determine how high to climb on their own. They have to feel it as they go. That stays with them more than a set of rules.” At a forest

school, “kids have to let an adult know they want to climb and then get a spotter. We go over ice safety every day” when the creek or pond is frozen. In an urban park, a practitioner talks a lot “about risks in the forest: dogs, poison oak, etc. The children are aware of outdoor space.”

“A friend with 6 daycares couldn’t believe parents from my class let their children go outdoors and get dirty, wet, bruised, and need a band-aid or 2. I promise parents all these things will happen! “

### *Academics*

There is more focus on academic at traditional, or regular schools. Nearly half of the practitioners interviewed said that parents’ focus on academics was a challenge. “United States still needs ‘academics.’” It’s a “ready for kindergarten” culture. “Parents think learning should be with a pen and paper at a desk.”

One practitioner noted that the “academic part must be very intentional when outdoors.” Another stated that when outdoors, they “still need opportunities for text, math, art, books and literacy.” A third person added that the “academic part is a challenge as requirements become more strict for kindergarten.” “Parents expect kindergarten readiness: shapes, numbers, colors, know how to write names and use scissors. We must get them ready.”

Some parents enroll children in nature preschools because it includes nature and academics. Many forest school practitioners believe less academic push is better; but it is a challenge for students’ parents agree. “Affluent families want to know that this type of learning (play) supports academic learning.”

A few practitioners “use a camera to document children’s experiences, to inform parents why play is important and to share what they’re doing and the variety of play, show where each child is on his/her own continuum, and document growth and development, because we are professionals.”

Others interviewed countered that they prefer to “meets kids where they are and not push them academically.” One stated that a “focus on character is more important than academics.” Many place more value and emphasis on social and emotional learning, curiosity, exploration, taking risks, and soft skills that support academic skills. Another believes that learning “to stop and listen, be in small group, and be aware of surroundings” are of primary importance.

## **Chapter 5: Conclusions and Recommendations**

### **Conclusions and recommendations for practitioners of urban environmental education**

Based on data gathered during interviews, it may be concluded that providing urban environmental education that connects urban families to their neighborhoods via forest kindergartens on urban public land that may not be manipulated is no small task. Despite the anticipated ease of creating a program that requires no indoor space and that promotes free exploration with minimal resources, many obstacles arise. The practitioners interviewed offered several feasible solutions.

#### **Terms and History**

##### ***Conclusions***

The first discovery while conducting interviews of twenty-four practitioners offering a wide selection of early childhood education classes with outdoor components was that the terms used to describe these programs do not have standard definitions. For a historical world perspective, European “forest kindergarten,” along with the “nature preschool” movement in the United States, are the 2 roots from which the current movements grow. In the United States, the phrase forest kindergarten routinely transformed into “forest school” and “nature school,” perhaps because of the confusion over the European understanding of the word “kindergarten” to be appropriate for children from three to six or seven years of age.

### *Forest kindergarten*

In 1892, the Swedish friluftsfraemjandet promoted life outdoors. That inspired the first forest preschools in Sweden and Denmark in the 1950s, and in Scandinavia in the 1960s. In 1968, the first Waldkindergarten, opened in Germany (Sobel, 2016).

Here is the Wikipedia definition of forest kindergarten:

“a type of preschool education for children between the ages of 3 and 6 that is held almost exclusively outdoors. Whatever the weather, children are encouraged to play, explore and learn in a forest of natural environment. The adult supervisors are meant to assist rather than lead” (Sobel, 2016).

Since 1980, the popularity of waldkindergartens increased substantially in Europe. In 1993, the German government recognized them as a legitimate form of preschool, making them eligible for state subsidies. This significantly reduces tuition costs for German families (Sobel, 2016).

As the popularity of the European model of forest kindergarten spread throughout Europe, so did its evolution. According to the Scotland Forestry Commission, these are the key features of forest kindergarten:

1. uses local woodland (or other natural area, such as a beach, meadow, pond) preferably within walking distance;
2. regular, frequent contact in the same setting over a significant period of time (meaning daily, weekly, fort-nightly visits to natural areas all year round in almost all weathers);

3. provides child-centered time to explore using multiple senses and intelligences, child-led and adult supported;
4. provides a low pupil-to-adult ratio; helps children to appreciate, understand and care for our natural heritage;
5. provides a real world context for all learning- firsthand experiences (Sobel, 2016).

Some forest kindergarten programs around the world maintain the historic priority of spending 80 to 90 percent of their time outside in natural habitats. In the Scottish version, note that regular visits to a natural space are made daily, weekly, or fort-nightly, in “almost” all weather. In the United States, connecting children with nature is gaining in popularity through forest kindergartens in public schools. The school students regularly spend time outside, perhaps a part of every day, or once a week, such as a Vermont school’s “Forest Fridays” program (Sobel, 2016). Others advertise as a forest school, even when the outdoor time is less than 20 percent of their week.

### *Nature preschool*

In 1967, the first nature preschool opened in the United States. This was during a time of increasing environmental concern, and when nature centers offered early childhood “mommy and me” programs (Sobel, 2016). Since the 1990s, the spread of these programs is significant, but not equal to the growth of forest kindergartens in Europe.

These licensed preschools are housed in nature centers with diverse habitats. Nature is integrated into all typical indoor preschool learning centers and activities. These programs have unique access to extraordinary resources, including naturalist programs

(often with live animals), and collections of artifacts. Children have unstructured time with nature that includes group hikes and unstructured outdoor free play. Baillie

### ***Recommendations***

Based on the conclusions stated above, it is recommended that forest kindergartens

1. Use a natural area, but not necessarily a forest, to promote urban forest kindergartens in urban locations. Urban parks, community gardens, churchyards, and other spaces qualify.
2. Create a website, brochure, introduction to prospective parents, etc., that is very clear about the type of program you offer, how long the class will be outdoors and how your day is spent.
3. Be truthful with parents of enrolled children about when, for how long and under what conditions class will venture outdoors.

### **Logistics**

#### ***Conclusions***

It may be concluded that storage space is important to the success of forest kindergartens. Several practitioners worked cooperatively with their local Parks Departments to obtain permission to maintain a shed or structure in the park, to store spare clothes, drinking water, food (snacks and/or lunch) and supplies (magnifying glasses, digging tools, etc.). Other leaders carry most of the gear for their classes. Some require children to wear backpacks with an extra set of dry clothes, water bottle and a snack or lunch. A few transport their supplies via a “class wagon.”

It may be concluded that toileting needs are an important aspect of successful forest kindergartens. Again working with their local Parks Departments, a small number of programs received authorization to maintain lockable porta-pottys just for their groups to use. Other solutions to nonexistent or “sketchy” park bathrooms are to carry a small portable toilet that uses a grocery bag for waste disposal and to allow “nature pees” behind a bush or on a tree. One practitioner carries a “bathroom bag” with wipes; and when the child is finished, she picks up the waste and soiled wipes with the Ziploc bag, then seals it for disposal.

It may be concluded that a “leave no trace” philosophy is important to the success of forest kindergartens. Practitioners responsibly require the deconstruction of everything children build, except for tiny hidden fairy houses, in order to restore the park or public land back to it’s pre-class state.

### ***Recommendations***

Based on the conclusions stated above, it is recommended that forest kindergartens

1. Consider how best to store equipment and supplies. Items typically needed for a forest kindergarten class are extra dry clothes, drinking water, food (snacks and/or lunch), first aid kit, emergency contact list, and cell phone. *See* Appendix B for a list of additional supplies. Depending on the amount of items for a typical class, this could be through maintaining a shed or structure in the park to store spare clothes, drinking water, food (snacks and/or lunch) and supplies (magnifying glasses, digging tools, containers, etc.). Other leaders carry most of the gear for their classes. Some require

children to wear backpacks with an extra set of dry clothes, water bottle and a snack or lunch. A few transport their supplies via a “class wagon.”

2. Plan for toileting needs. Options include taking a “nature pee” outside, carrying a “bathroom bag” with wipes and a Ziploc bag to contain waste and soiled wipes when going to the bathroom outside, carrying a portable potty that uses a plastic bag for waste disposal or obtaining park authorization to maintain lockable porta-pottys just for the group to use.

3. Take care of the public space used for class. Besides not leaving any permanent evidence of your presence, one recommendation is to look “for work that is useful to the park, such as maintaining an area.” In many urban parks, park staff promptly removes loose parts (fallen tree limbs, branches, and other moveable materials) that are perfect for forest kindergarten classes. “It’s an intentional thing.” Perhaps park staff would allow a class to gather and use these materials before cleaning the area.

4. Children do as much authentic work outdoors as possible; preparing food for snacks is a great example, and an “antidote for the stressful, overscheduled time we live in.” If your class learns to use knives, another great park activity is whittling sticks.

## **Safety and risk**

### *Conclusions*

It may be concluded that classes need to be very aware of what is going on around them. Urban public parks serve multiple uses. Be alert for bike riders and dog walkers on park paths.

It may be concluded that when children find litter, glass or dog poop, an often-repeated instruction is, “Don’t touch it, it’s germy.”

It may be concluded that several practitioners follow regular school licensing regulations to the extent possible, including practicing emergency drills and creating evacuation procedures.

It may be concluded that making a safety plan is part of forest school training.

We encounter different modes of risk taking in forest kindergarten: exploring heights (climbing trees, walking on logs or large rocks), experiencing high speeds (running, sledding), handling tools (trowels, knives, hammers, saws), being near natural elements (fire, water), stranger danger (woods and parks are public space), and experiencing emotional struggles. Allowing children to take risks is not encouraged frequently in the United States because it is scary for parents and often not socially accepted, particularly in schools and on the playgrounds. Constant supervision of our children is the new standard. Without children having a chance to prove their abilities, parents cannot accurately gauge a child’s level of competence. This makes typical forest kindergarten risks overwhelming and unsettling for parents. They want to help and support their children, and remain involved in their children’s lives. Therefore, parents often intervene too eagerly and hinder their child’s chance for growth (Sobel, 2016).

It may be concluded that best practices require developmentally appropriate activities, environmental learning and literacy as more forest kindergartens emerge in the United States. The expectation is for practitioners to have skills and experience in both early childhood education and environmental education (Sobel, 2016).

### ***Recommendations***

Based on the conclusions stated above, it is recommended that forest kindergartens

1. Instruct children and model how to stand still when off leash dogs approach, and blow their emergency whistles for help if they feel uncomfortable. If a stranger approaches, “let the teacher do the talking.”
2. Provide a long rope or special “walking stick” for all students to hold while entering and exiting busy public areas, like urban parks. This will keep the group together and out of the way of bicycles and dog walkers.
3. To minimize undesirable contact with dog poop, broken glass or other items you may encounter in public space, perform a weekly or daily pre-class safety inspection of common areas. Remind children not to pick up glass if it is not safe for them to do so.
4. Make a safety plan and practice what to do in an emergency, such as teacher injury or getting lost. All practitioners reported that the most important items they always carry are an emergency contact list, cell phone or radio and a first aid kit. One practitioner instructs children in her outdoor class that if anything happens to her, they “form circle around me and use my cell phone to call 911.”
5. Ideally, employ a minimum of two teachers per small class. Hire very qualified people, as there are more risks outdoors, and therefore, more safety considerations. Another option is to create a rotating schedule for a parent helper to volunteer for each class.

6. Children need to take small risks while they are young, in order to learn how to assess and manage far bigger risks later in life. Provide opportunities for children to encounter risks, overcome their fears and grow from the experience. (Sobel, 2016)

## **Comfort**

### ***Conclusions***

It may be concluded that practitioners spend lots of time, resources and effort to educate the community on why it is important to get kids outside, even in an urban setting. They “explain the basics: why kids should play in nature, we must justify what kids learn climbing on a log, etc., and why nature school works.”

It may be concluded that many urban families use the phrase “the nature,” like it’s something separate and far away; but it’s all around us. They ask, “why would you hold class in an urban park with goose poop everywhere?” But that urban class has seen more wildlife than at the school’s rural class locations.

It may be concluded that many practitioners mentioned the arduous search for enthusiastic teachers or naturalists to get kids excited about being outdoors.

### ***Recommendations***

Based on the conclusions stated above, it is recommended that forest kindergartens

1. Get to know your local area. One class uses public park space across the street from a fire station, and low flying airplanes are seen frequently. They celebrate these elements of urban communities because “kids love them” and it is part of connecting children to their local neighborhoods.

“It doesn’t have to be wilderness;” urban natural space has tremendous value, too, no matter the size.

2. Give parents an open invitation to attend class. It creates a warm approachable class atmosphere, enhances family learning and provides an extra set of hands. Parents will understand forest kindergarten better after they see it in action.

3. “Teachers may have to model playing on a boulder and in the tall grass of a natural playscape, before some children will become comfortable enough to practice this form of outdoor play without plastic toys or playground equipment, such as a slide.

4. Hire teachers with experience in early childhood education and a background in environmental education or knowledge of nature. Teachers must be happy being outdoors in all weather and celebrate the discovery of wild creatures, like insects.

### **Recommendation for Further Research**

A few areas that would benefit greatly from additional research relate to the challenges of making forest kindergarten accessible to everyone. A large percentage of families require extended day childcare. Full day outdoor programs are very rare, perhaps nonexistent at this point in time. A few basic logistical concerns would be preparing meals and providing a sufficient and comfortable napping area for all children in all weather, as it would necessitate hauling or storing sleeping mats. Another issue is that “many classes are ludicrously priced.”

Both of these problems lead to enrollment of primarily middle and upper socio-economic families. Children from urban families with lower income, and likely less exposure to nature outdoors are the children most in need of these educational programs. But the cost is too prohibitive and the hours are inadequate. Plus, non-licensed programs often do not qualify for governmental financial assistance.

Therefore, it is recommended that researchers conduct a survey of practitioners, similar to this research project, in which practitioners are asked questions about the following:

1. socio-economic groupings (lower, middle and upper), or neighborhoods/zip codes of enrolled families,
2. whether they offer scholarships,
3. whether governmental subsidies are available, and if so, how families qualify for them,
4. if they have ideas on how to increase the economic diversity of their programs.

Surveys would be an effective method, rather than interviews, since several responses will require gathering data and making estimates.

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(In particular, review chapters 6, 14 and 25.)

## **Appendix A**

### **List of Interview Questions**

1. Are you familiar with the European model of forest kindergarten?
2. What do you like about it/ think is successful?
3. What do you not like about it/ could be improved?
4. What model does your school follow?
5. What do you like about it/ think is successful?
6. What do you not like about it/ could be improved?
7. How much of your school day is spent outside?

8. What activities does a typical class do indoors?
  
9. What activities does a typical class do outdoors?
  
10. How have you adapted that model to an urban environment?
  
11. How have you adapted that model to urban families? (Do you get the “right” families to register? Are they on board initially, or they need convincing?)
  
12. What are the challenges of having a forest kindergarten in an urban area?
  
13. How have you overcome those challenges?
  
14. What concerns or hesitations, if any, have urban parents expressed?
  
15. How did you overcome them?

16. What concerns or hesitations, if any, have students expressed?
  
17. How did you overcome them?
  
18. Did urban students or parents have unique needs you didn't expect? If yes, please describe.
  
19. How did you adapt your program to meet these needs?
  
20. Did you have administrative challenges (insurance, licensing, government regulations) setting up a forest kindergarten in an urban area? If so, please describe.
  
21. How did you overcome them?

22. How did/would you adapt your program to be run in the middle of a city on public park property (with no indoor space, and the requirement to leave outdoor space like you found it- no fire or fort building, etc.)?
  
23. What 1 piece of advice would you give to someone starting an urban forest kindergarten?
  
24. Where do you see this forest kindergarten movement in 10 years?
  
25. What else would you like to add about forest kindergarten?
  
26. What is 1 necessary or favorite item you bring to class?

## Appendix B

### Items Various Practitioners Use in Their Classes

camera

field guides

magnifying glasses

binoculars

digging tools

containers or small pails for water play and gathering natural materials

books

paints

paint brushes

spray bottles

journals

pencils

dry erase board and markers

Sharpies (permanent markers)

chalk

color wheels

snow sleds

extra mittens

hand warmer heat packs

tarp

rope,

knives,

saws,

cloth to mark boundaries of area to explore,

potette (small foldable and portable potty),

plastic bags for wet items and toileting needs,

wipes.