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Without Walls: A Case Study of Nature Year

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Abstract

Interest in outdoor education programs has grown in the United States. At the same time, the child-centered, natural, and experiential learning is often contrasted with the current regimented and solely academic-focused curriculum in schools. As parents (often middle-upper class, highly educated, and environmentally conscious) seek alternative options to support their children's learning (or the lack thereof) in schools, more are looking to outdoor education programs. However, outdoor education is described as a "black box"—not only producing outcomes that are difficult to measure but without much insight to how these outcomes come about. Due to the highly individualized nature of outdoor education, it is important to focus on evaluating program philosophy, strengths, and weakness on an individual level. This approach is used for NatureYear, an outdoor education program only in its 2nd year, located in New Haven, CT. First, I interviewed a subset of parents who enrolled their children in NatureYear in the 2017-18 school year and examined their reasons for doing so. Many parents expressed dissatisfaction with their child's learning experiences at school and a desire for authentic learning at NatureYear. Then, I investigated specific NatureYear program components, drawn from the Parent Handbook. NatureYear emphasizes child agency, while balancing teacher guidance and support. Lastly, I examine NatureYear outcomes, focusing on the parent-child, parent-teacher, teacher-child, and child-child relationships.

Introduction

“...all the things that they could be potentially learning in nature that...you can’t necessarily measure or quantify, like creative thinking, or problem-solving, or risk-taking—all of these behaviors that are really important for development, I was shocked that the school wasn’t more interested in that...” – A Parent at NatureYear

This statement from a parent involved in NatureYear, an outdoor education program located in New Haven, CT, not only depicts a firm belief in the benefits of the program, but also portrays the complicated nature in measuring program outcomes. That is, parents (and teachers) have reason to believe that children are benefiting from NatureYear, however, the mechanisms that produce the outcomes are not always easily understood and clearly delineated. One result of this situation, what some researchers call “the black box” model of outdoor programs (Finney & Moos, 1992), may be that a limited number of parents and school administrators are interested and invested in outdoor education programs. As NatureYear is only in its 2nd year of programming, understanding *why* the outdoor education program works begins with understanding *how* it works. This knowledge will hopefully aid those involved with NatureYear in sharing the experience with other parents and possibly gain more support from other stakeholders and school administrators.

NatureYear is an outdoor education program serving children ages 5-12, housed at Common Ground High School in New Haven, CT. The program draws in children who are curious, who enjoy the outdoors, and who thrive in environments emphasizing ownership (“About the NatureYear Program,” 2017). Children are accepted into the

program by application. Once enrolled, they spend one day a week, 9am-2pm, entirely outdoors engaged in teacher-led and child-led activities. Examples of child-led activities included a free-time period where each child contributed an idea for an activity. The students then decided what they wanted to participate in. Teachers would supervise and facilitate where needed. Group discussions in between activities served as a time for the group to reflect about their experiences. During the rest of the week, these children participated in their regular schooling.

A total of 114 children were enrolled in the NatureYear program during the 2017-18 school year. Twenty percent of the students enrolled in the 2017-18 were homeschooled. Of the 80% of children in public school, 54% attended New Haven Public Schools. Other districts include Guilford, Hamden, Bethany, Woodbridge, Wallingford, North Haven, Cheshire, and Darien. Enrollment for a school year costs \$2,500 per child. Twenty-three percent of students received some amount of financial aid to attend the program. Of the students enrolled, 38% percent of students were female and 62% were male. Sixty-eight percent of students are Caucasian, 9% are African American, 3% are Asian, 3% are Latino, and 17% are other or biracial (“About the NatureYear Program”, 2017; personal communication, April 18, 2018).

At the heart of this project was an examination of the interplay between the outdoor environment and children’s learning experiences. From my previous conversations with a parent enrolled in the program, many parents entered the program after frustrating experiences with their current school system in hopes of a more enriching and beneficial schooling experience for their child. Often times, these parents had children with needs that were not met in the typical school environment, for instance

children who have attention-deficit hyperactivity disorder (ADHD) or autism. Other times, parents noticed how restless their kids are when they come home from school and are saddened by the lack of time dedicated to recess. While working at a behavioral treatment program for children with ADHD, I learned that many patients experienced difficulty in schools. Upon hearing that a number of parents who had children with ADHD attended NatureYear and loved it, I was interested in understanding what about NatureYear and the outdoor environment in general was so special for these children. Previous literature has suggested benefits of outdoor education, such as improved attentional functioning, promotion of positive behavior, and academic gains for children with ADHD and emotional and behavioral difficulties (Fox & Avramidis, 2003; Taylor, Kuo, & Sullivan, 2001). However, the mechanisms by which these outcomes occur is still not clearly defined (Hough Mackenzie, Son, & Hollenhorst, 2014). As outdoor education programs are often very individualized, each programs' desired outcomes and measurement of outcomes is also bound to be individualized. For instance, programs may differ in philosophy, components, or populations served. Thus, it is imperative that programs are examined and contextualized at an individual level.

Literature Review

Despite the opening of the first nature-based program at the New Canaan Nature Center in Connecticut in 1967, growth in nature-based or outdoor education programs did not emerge until the 1990s and early 21st century (Larimore, 2016). Forest kindergartens had been popular in Europe during the 1950s, where children spend 80-90% of school time outdoors and engage in hands on learning in the woodlands (Bailie, 2014). The rise in forest kindergartens in the United States is often credited to Richard Louv after he

published his book, *The Last Child in the Woods*, in 2005, that decried the “nature-deficit disorder” affecting children (“History of Forest Schools, 2017). Outdoor education program approaches often contrast with the typical, “adult-run” model of instruction where adults “fill” children up with knowledge and children are seen as passive recipients rather than active learners (Rogoff, 1994). Students in outdoor education programs are encouraged to roam freely in order to explore nature. Lesson plans are often structured around student experiences that just happened, and teachers often prefer to take a hands-off approach, intervening only when necessary (Woodhouse & Knapp, 2000). The term outdoor education has grown to encompass many definitions. For instance, Patti Bailie, a leading expert in nature-based preschool programs, described these programs as 1) containing a nature-focused curriculum, that 2) connects children to the natural world in order to development appreciation for the outdoors, and 3) uses high-quality practices from both early childhood education and environmental education (Bailie, 2012). For the purpose of this essay, this definition of outdoor education will be used.

Some outdoor education programs attempt to address what Richard Louv, author of *Last Child in the Woods*, refers to as “nature-deficit disorder,” or the restlessness and attention deficits that may be due to the growing gap between humans and nature (Louv, 2008). According to Louv, ever since the 1970s, the physical and academic structures of schools has “turned inward” and consequently away from nature, recess, and the outdoors (Louv, 2009). Additionally, as teachers experience increasing pressure to teach more reading, writing, and math skills to younger and younger students, classrooms begin to include more and more time sitting down (Hanscom, 2016). The increased emphasis on

mastering cognitive skills, along with the decline of play, point to the importance of understanding how outdoor education programs can shape students' learning experiences.

The decline of play has been documented in a study conducted by the University of Michigan, examining how children from 1981 to 1997 spent their time. Not only were children found to play less in 1997 but they also appeared to have less free time for self-chosen activities (Gray, 2011). Children were shown to spend more time (8 hours a day) on the internet rather than in physical activities (Hanscom, 2016; Louv, 2008). Although 81% of mothers cited computers as a reason why their children play indoors, most mothers admitted restricting their children's play themselves, often citing safety as one of their concerns (Gray, 2011). As children are spending less time outdoors, parents and teachers play an important role in encouraging or discouraging this time.

In addition, students are overscheduled, spending more time in extracurricular activities and sports (Louv, 2008). Organized sports do not allow for freely chosen play, as they require increasing amounts of time commitment, which begins at earlier and earlier ages (Hanscom, 2016). The University of Michigan study also showed a 18% increase in time spent in school and a 145% increase in time spent completing schoolwork at home (Gray, 2011). With the increased use of technology, heightened safety concerns, and greater emphasis on school performance, it is no wonder that fewer and fewer children are engaging in play. A major component of outdoor education programs is child-centered play, that is, self-directed and intrinsically motivated engagement with the processes of the world (Rogers & Sawyers, 1988). In outdoor education, children are not only provided with necessary time to play, but they also are in charge of this time. As the interest in outdoor education grows, there is a growing need to

critically examine and evaluate the effects of these nature-based programs on children's engagement with school through play.

One significant challenge in outdoor education is measuring learning outcomes. In order to measure learning outcomes of outdoor education programs, it is important to identify the learning theories behind these programs. The theoretical underpinnings of many nature-based programs are based on Kolb's theory of experiential learning. According to Kolb, experiential learning should be distinguished from cognitive learning, which values cognitive skills over affective skills, and behavioral learning, which disregards one's subjective experience in learning (Kolb, 2014). In addition, experiential learning involves active engagement with, as the name suggests, one's experience. Learning is a cyclical process involving experience, reflection, thoughts, and actions (Kolb, 2014; Houge Mackenzie, Son, & Hollenhorst, 2014). Kolb's model was highly influenced by Lewin, Dewey, and Piaget. The Lewinian component of experiential learning theory (ELT) involves concrete and personal experience as the focus of learning. Additionally, feedback processes are crucial for learning (Kolb, 2014).

These ideas are rooted in the social progressive ideas of education, notably led by thinkers such as Dewey, Vygotsky, and Piaget. Dewey contributed the developmental nature of learning, emphasizing a child's own ability to observe the surrounding conditions, retain knowledge of similar past situations, and make a judgement based on what is currently observed and what is recalled (Dewey, 2007; Quay & Seaman, 2013). Finally, Piaget presented the important notion that learning is a process in which ideas are formed and reformed through experience. The teacher responds to a child's own interests, as the child is a social being, integrated within society. In addition, students should be

allowed to choose their own forms of study as most learning comes from the student herself (Langford, 2004). Notably, learning is a transaction between a person and their environment (Kolb, 2014). Outdoor education philosophies and outcomes are heavily shaped by learning theories such as those previously mentioned. However, attempts to quantify learning outcomes have been limited.

More generally, outdoor education outcomes have focused on variables such as self-regulation, promotion of self-confidence and cognitive development, and promotion of imaginative play (Cooper, 2015). The most recent meta-analysis about outdoor education program outcomes also indicated an increase in the perception of personal qualities and capacities such as self-concept, locus of control, as well as improved academic performance (Neill, 2002). The methodologies of studies examining program effectiveness were not the same, thus, rendering it more difficult to compare student outcomes. In addition, James Neill, in his meta-analysis, warned against “the comfort of average results.” That is, some outdoor education programs could be performing better than depicted in meta-analyses, while others could be performing worse. Given the fairly recent surge of interest in outdoor education programs, it is imperative that generalization not overshadow individual program differences. Outdoor education programs vary by underlying program philosophy, location, facilities, and staff. Even within a program, some program factors may be beneficial for students while others may not. Thus, examining and evaluating programs on an individual level is extremely important.

Previous literature focuses on certain learning theories and outcomes associated with outdoor education. Due to the individualized nature of outdoor education programs, a one-size-fits all approach to program evaluation would not be helpful. However, close

analysis in the form of a case study would be more fitting to examine a program like NatureYear. While only in its second year of programming, parents are already noticing the mark it is making in their children's lives. This is evident in parents' willingness to interview (15+ parents responded to my initial email asking for participants, 3 responded within the first minute). However, in informal conversations, both parents and Rebecca, the program director, mentioned the difficulty in justifying the program and program outcomes. These outcomes are difficult to measure, but they know they exist. In light of this situation, I would like to provide an outsider's perspective about possible trends underlying outdoor education at NatureYear based on observations, close reading of the Parent Handbook, and interviews with parents, teachers, and the director. By doing so, I hope to contribute insight for future researchers, teachers, and parents who might want to better understand the NatureYear experience in particular, as well as outdoor education programs in general.

Upon speaking with Rebecca, the program director, I learned that previous efforts to evaluate pre- and post-program lacked contextualization, as the surveys used measured outcomes such as changes in children's health and eating habits, which were not applicable to children's learning experiences. "Without knowing the program itself, it is hard to suggest methods of evaluation," Rebecca emphasized. In line with previous research on outdoor education, much of the evaluation of student outcomes was from teachers' personal, individual observations. In addition, Rebecca also emphasized that she and her team were committed to documenting individual students' experiences, rather than assessing standard outcomes of student learning. Such statements already shed light on the theoretical foundations of the program. Of course, as I am focusing only on

NatureYear, the generalizability of my results is limited. However, my goal with this project was to clearly describe the theoretical basis of NatureYear so that other programs with similar, program philosophies may use this case study as a helpful comparison. Additionally, this work can be used to further suggest components of the NatureYear program to evaluate empirically.

Research Questions

This project examined a few research questions involving the Nature Year program. Firstly, what was the program philosophy of Nature Year? What were the theoretical underpinnings for the program's operations? These questions were answered from preliminary analysis of the NatureYear website, Parent Handbook, and from conversations with the director during the development of this project. Next, what did parents and teachers say about their perceptions of the mission and effects of the program? How did their individual roles contribute to their understandings of the effects of the program? Did these reports match up with the program's philosophy? Lastly, were there specific examples of these effects from observations of the program?

Due to the non-experimental nature of this project, I did not try to draw any causal relationships between certain factors and outcomes of the program. I did, however, try to provide a method of contextualizing the NatureYear experience and its observed outcomes in hopes that future initiatives can be taken to examine the types of causal relationships that do exist.

Methodology

Due to the individualized nature of outdoor education programs, researchers are calling for a better method of evaluating student outcomes (Neill, 1997). Given that the NatureYear program was fairly new¹ at the start of this project and evaluative measures would be helpful in understanding possible program outcomes, I chose to conduct close reading of the Parent Handbook, semi-structured interviews, and non-participant observations. With the growth of outdoor learning programs in the 21st century also came an increased interest in student outcomes (Bailie, 2014). Such interest comes at a time when the decline of play is becoming more evident; efforts should be made to not only to better understand the importance of play, but also to better understand its role in outdoor environments (Louv, 2008).

I conducted close reading of the NatureYear handbook to better understand the philosophy of NatureYear. The handbook was analyzed to examine the values that are important to the NatureYear program and the reasoning behind the structure of NatureYear. In addition, I was informed through informal conversations with the director, Rebecca Holcombe and with teachers about other important factors staff members considered while participating in NatureYear. In addition, I compared the codes derived from the handbook to the codes derived from my observational notes.

I conducted a total of 10 semi-structured interviews to provide teacher, parent, and director perspectives of NatureYear. On average, interviews with teachers, parents, and Rebecca lasted 30 minutes. After asking Rebecca to allow me to introduce myself and my project to the current teachers of NatureYear, I asked teachers individually if they would be willing to participate in further interviews with me to better understand their

¹ NatureYear was launched in Fall 2016.

individual perspectives of the program. Three teacher interviews were conducted either at an all-day monthly staff meeting or at a time more convenient for the teacher. An additional follow-up interview was conducted with one of the teachers to expand on her previous response. Interviews with teachers provided insight as to how teachers envisioned their role in NatureYear as well as their role in implementing program philosophies. After asking the program director to provide my contact information to parents, I contacted parents who were willing to be contacted by me to schedule interviews. A total of 7 parent interviews were conducted during the months of February and March. Interviews with parents were used to provide insight on motivations for enrolling their child(ren) into NatureYear, as well as reflections on the effects of NatureYear on their child(ren). Semi-structured interviews were flexible in order to focus on the “participant’s narrative as it is unfolding,” which is important given I was unfamiliar with teachers’ and parents’ experiences of NatureYear (Galletta, 2013). For examples of interview questions, see the appendix.

Lastly, an interview was conducted with Rebecca, the program director, to better understand the development of NatureYear. The semi-structured aspect of the interviews was chosen to allow all participants to express their own views about the program in as few or as many words as they feel fitting. Additional care was taken to ask open-ended follow up questions, in order to not bias participant answers (Weiss, 1995). Open-ended follow up questions included “You previously mentioned...could you tell me a little bit more about that?” or “What are examples you’ve seen about (previously mentioned statement)?” Formal, verbal consent was obtained before interviews to protect the confidentiality of interviewees and ensure them of their rights pertaining to the interview.

A total of 7 observations took place from 9am-2pm at NatureYear. Five observations at NatureYear took place on Fridays from February through March. Two observations took place on Monday and Wednesday during the month of March to observe the other two “Maples” (5-6-year-old) groups. Observations included those of classroom activities that occurred, instructional techniques, as well as methods for handling behavioral issues. I noted daily characteristics such as the weather, group sizes and activity sequences in an effort to contextualize my observations as much as possible. In addition, my own thoughts were written separately from the observations in an attempt to keep my observation notes unbiased. Right after my observations, I recorded field notes in which I reflected on my personal experience and thoughts on the events of the day. In addition to observations, I conducted a reading of teachers’ past daily reports on individual students after the first few observation sessions, so as to not influence my initial observations. I removed identifiers from both the observation and interview data. I used NVivo 12, a qualitative research tool to code data from my interviews, the Parent Handbook, and my observations. Data analysis involved the “grounded theory” approach to develop categories, properties, and hypotheses from the data (Charmaz & Belgrave, 2007).

Results

Family Background & School Experiences

All names below are pseudonyms. In order to best protect the identities of participants, some individual details may or may not have been changed. Nineteen parents expressed initial interest in being interviewed. Due factors such as scheduling

constraints and lack of response after follow-up, 7 out of the 19 were interviewed. Of those interviewed, 2 parents (Amy and Trey) had more than one child enrolled at Nature Year. Six of the 7 parents (Amy, Steve, Emily, Karen, Trey, Lisa) had children enrolled in the Oaks program (ages 5-12). One parent (Rachel) has her child homeschooled. Almost all parents interviewed (5 out of the 7) heard about Nature Year through previous connections to Common Ground high school. Some parents knew teachers at Common Ground, others had sent their children to summer camps and Common Ground, and others were connected to Common Ground through mailing lists and home school groups. Parents interviewed resided in towns ranging from 0-30 miles outside of New Haven with most families living within 10 miles of New Haven. When asked about the demographics of their town with respect to the NatureYear population, parents answers included “primarily White,” “wealthy,” to “similar to the NatureYear population.” Several parents were aware that the population of parents interested in NatureYear tended to be highly educated White families. They also recognized NatureYear’s initiatives for more diversity within the program and also personally expressed a desire for increased access to NatureYear (Amy, personal communication, March 15, 2018; Steve, personal communication, March 18, 2018; Karen, personal communication, March 22, 2018; Lisa, personal communication, March 23, 2018).

Dissatisfaction with Schooling

All parents interviewed, not including Rachel (who homeschooled), expressed dissatisfaction with their child’s schooling system. These dissatisfactions were both academic and non-academic in nature. Parents alluded to lack of experiential scientific learning—that is, learning science through hands-on activities rather than passively

listening to the lesson (Lewis & Williams, 1994; Kolb, 2014). Lisa described the lack of “science...environmental or ecology based learning” and “opportunity for kids to problem solve and engage in experiential learning together” in schools as reasons why the NatureYear program was appealing. Another parent, Emily, mentioned limited “nature-based learning, or nature-inspired learning” at school. While parents touched on concerns about the quality of science education within their schools, the majority of parental concerns were in regards to non-academic aspects of schooling.

Several parents mentioned dissatisfaction with available recess and outdoors time. Lisa mentioned her child feeling frustrated that outdoor time was limited to 15 minutes. Additionally, outdoor time was limited by weather (“[My child] has to stay on the blacktop because it's too muddy or snowy” – Steve) or by student behavior (“[the teacher] takes away the outdoor time if they don't follow the rules well enough” – Karen). Taking away recess corresponded with another parents belief that schools have become too regimented.

“It's still a public school experience meaning that its very regimented, there's a lot of rules...you still have to march in line, down the hall...the classical notions of punishment and reward are still very strong in the public school structure and organization.” – Amy

These concerns aligned with previous literature indicating a strong decrease in time spent outdoors in schools. They also indicated a lack of valuing extended free time for children, even though the benefits of such time is numerous (Fox & Avramidis, 2003; Taylor, Kuo, & Sullivan, 2001; Kenny, 2013; Louv, 2008).

Although school is intended to be a place where children not only learn skills, but also hone them, parents expressed concern about the lack of opportunity to develop important skills.

“[At school] there isn’t a whole lot of opportunity for [my child] to be and feel successful and there’s not a whole lot of opportunity for him to demonstrate the things he is good at, which are super hands on...engineering...[building], spatial relations...there is not opportunity for that.” – Lisa

“My child is really verbal and is really good at math and is really creative and I know in order for her to really develop these skills...she has got to be able to self-direct and imagine what she wants for herself. And the traditional school environment doesn’t actually dedicate a lot of *time* to developing that.” – Karen, *italics mine*

Karen alluded to an important factor in school: time. Due to a rise in accountability efforts within schools, many schools began focusing earlier and earlier on test scores. Not surprisingly, recess was often the first activity cut in order to improve academics (Bassok, Latham, & Rorem, 2016). However, the parents interviewed did not seem particularly satisfied with this increased emphasis on academics:

“She switches classes all the time and I don’t think any teacher would be able to see [that she has difficulty socializing]...teachers at school just look at her academics and they don’t really look at that stuff.” – Trey, about his oldest child

“I mean he’s still doing fine academically at public school...the public school situation for him has been more challenging this year and we’re seeing all this behavioral stuff...I don’t think he feels as nurtured or safe honestly in the classroom with the other students or the teachers...” – Emily

“When you go in for a regular school [parent-teacher conference], they’re super short and really rushed...it’s just always “here’s the last writing project she did,

writing is great, her reading is great, math scores are really high"...and we have to push and say, "Does she have friends?" "Does she play with other children?" "Is she polite?" "Is she kind to people?" "Does she seem happy when she's here?"" – Karen

While these children generally seem to be doing well academically (some even exceeding their peers), parents felt that schools were not paying attention to their childrens' non-academic needs. Some needs included help with self-regulation or social interactions.

"I know [my daughter] tends to get...she just feels emotions really strongly and she's like that so sometimes she gets really upset when she feels emotions but also tends to feel emotions pretty strongly and purely..." – Karen

"I think she struggles a bit with social interactions because of sensory stuff. She tends to be controlling which I think is an adaptive thing. She needs to have control over what is around her but this comes across as bossy to other kids." – Trey

However, the school environment was either not equipped to address these challenges:

"He would be upset in the classroom about something going on and would go out into the hallway. At the beginning of the year, he would try to run out of the building and they had to stop him and physically bring him back up. He's not doing that anymore but he'll still often times leave the classroom. They have a [room] he can go to if he is upset but he has to get permission you know? But he's so upset that he's having trouble communicating with his teachers." – Emily

or was directly connected to these challenges:

"At school you have to be quote unquote perfect...you have to get an A+ on the math test and if you don't, you do horrible on the report card, and if you do bad on the report card, your parents get mad. *Looks at parent* Well. Okay. Some parents" -Steve's child (8) who joined the interview

“I think there [is a] movement starting that parents are realizing very young children don’t need...academics pushed on them...[parents] feel like their kids are stressed out when they’re only in 2nd grade and...something is not right with that.”

– Trey

“[It] was extremely hard to watch him go from a preschool where he was happy and delighted and successful and didn’t want to go home at the end of the day to going to a school where he was literally crying and begging to not go to school.”

– Lisa

Alternatively, even when their children seemed to fit well within the school environment, parents knew that was not the full picture. Previously, Steve had mentioned his child witnessing kids who can’t sit still in his class and asking “why are they [teachers] always mad? Obviously so-and-so can’t sit still because he is a kid.” Later Steve tells me his child does not want to get in trouble at school, so much so, that “when he gets home, he is like BLAHHHH and can’t hold it in anymore.” Similarly, another parent acknowledged although her child could fit into the academically pressured environment, she felt that her child deserved more.

“[Child] is the kind of kid who will be really successful in school like when the stakes are higher and she is in an environment where she knows the expectation. She can sit still, she is really academically minded, she gets a lot of pleasure out of academic activities. She is a total rule follower, she really likes doing the right thing so she has all these characteristics of a really successful school child, but at the same time, I want a lot more for her than that and I want her to not spend as much time and energy doing what people are telling her to do.” – Karen

Thus, although parents mentioned a dissatisfaction with academics and the lack of science curriculum in schools, they expressed more of a dissatisfaction with how schools have (or rather have not) responded to their children’s non-academic needs. Whether it be

because of lack of time or resources to address these issues, the common sentiment from parents was that their children were unhappy within the school setting (Lisa, personal communication, March 23, 2018; Steve, personal communication, March 18, 2018; Trey, personal communication, March 23, 2018). Parents felt their children did not have the opportunity to engage in meaningful learning (Lisa, personal communication, March 23, 2018; Karen, personal communication, March 22, 2018). Instead schools simply focused on test scores and academics (Karen, personal communication, March 22, 2018; Trey, personal communication, March 23, 2018). The schools did not notice or express concern over other needs such as the need for free time, or the need to feel safe (Emily, personal communication, March 18, 2018). Although schools were focused on academics, which the schools felt was most important, parents were dissatisfied. To put it plainly, schools did not know their children beyond their academic scores.

When asked what parents hoped their children would experience as participants of Nature Year, it is not surprising that parents expressed hopes related to challenges their children face at school. Several parents mentioned a desire for their children to engage with the outdoors:

“[One of 3 things that were appealing about the Nature Year program] was being outdoors more, having the opportunity to be outdoors more during the day” – Amy

“We just wanted her to have time outdoors and just have that experience of interacting with the natural environment” – Karen

Outside of more outdoors time, parents also desired more unstructured time for their children:

“We also wanted her to have unstructured, self-directed time which is something that is not a big thing in schools but is really important for people’s development. The development of curiosity, the development of creativity and also the development of focus and self-direction which are really important for being happy [and successful] as an adult.” – Karen

Instead of the typical, structured environment, Lisa wanted her children to engage with “real problem solving where they are failing and then trying again and having to figure things out.” Adults would serve as “their partners and guides” but the children would be “doing the bulk of the work” (personal communication, March 23, 2018). Similarly, Amy expressed a desire for her children to “learn by doing” and by “figuring things out by themselves on their own” (personal communication, March 15, 2018). Ultimately, this ability to explore was connected to children’s own confidence, something other parents mentioned their children did not feel in the typical school environment (Lisa, personal communication, March 23, 2018; Rachel, personal communication, March 23, 2018).

“What we want is for our children to develop their own internal conversation and their own confidence in their ability to learn because I think it's that confidence [that allows children] to be able to learn about it and figure it out if given the space and time.” – Rachel

It was with these hopes in mind that these parents applied to NatureYear.

Program Components

Aside from logistic information about schedule, clothing, and tuition policies, the Parent Handbook provided important information about the role of teachers, the beliefs about children and learning, and the outlining of boundaries (see Figure 1). As outlined in the handbook, an authentic learning experience is one that is “flexible depending on the

weather, child interest, or what is happening in the forest or on site at any given time.”

The intended outcome of allowing children to have extensive time playing, exploring, and experiencing risk is development of self-confidence and independence. While children choose their own activities during “kid-led activity time,” this independence is to be balanced by teachers’ watchfulness and guidance (“NatureYear Parent Handbook 2017-2018”).



Figure 1. Model of Nature Year program created from analysis of the 2017-18 Parent Handbook.

The goal of NatureYear is “to allow reasonable risk taking, balanced with watchfulness for true safety hazards.” Teachers do so by “redirecting play that crosses physical or emotional safety boundaries,” “defining throwing zones when needed,” and teaching and reminding children of safety precautions. Teachers lead and guide daily activities, such as morning/afternoon discussion or “Brother and Sister Tree Time,” where everyone takes time to sit and observe the surroundings. Although teachers may have an idea of a

specific activity for the day, the activities can be changed through children's interests. Teachers also guide children in their social skills and relationships, especially when conflict may arise. Teachers are to use strategies to manage inappropriate behavior such as redirection, reminders, verbal interventions, and consequences appropriate to the behavior (for instance, taking away an object). Teachers ask children to step away from the group only after other behavioral interventions have been attempted ("NatureYear Parent Handbook 2017-2018").

Considering the program components outlined above, it is apparent that teachers and children must navigate shifting levels of autonomy and boundary setting throughout the day. Children are highly supported in their own exploration and play, but this freedom is also marked by teachers' watchfulness and intervention when necessary (as determined by the teacher). In contrast, children at school may not be afforded as many opportunities to self-direct their own learning experience, however, the boundaries (as limiting as they are) are clearly outlined. Whether or not this type of environment—one in which children and teachers must constantly navigate shifts in boundaries—is helpful for all children is an open question. This is a question to explore through examining NatureYear's program outcomes.

Outcomes

The outcomes of NatureYear can be examined by looking at the effects on relationships: parent-child, parent-teacher, teacher-child, and child-child. As you may notice, not every effect was necessarily captured precisely under one category as the outcomes under one category may overlap with those of another. In addition, not all

NatureYear outcomes were relational, take for example the ability to identify a birch tree (personal communication, February 16, 2018). However, I have chosen to focus on the outcomes through the theme of relationships since it was apparent in both parent and teacher interviews.

Parent-Child

Communication. The parent-child relationship was enhanced in a number of ways. Several parents mentioned the ease at which they have conversations with their children about NatureYear activities due to the almost immediate end of day notes written by teachers. These updates mentioned the activities of the day and provide a “talking point” or “hook,” which was helpful to guide conversations with an otherwise tired child (Emily, personal communication, March 18, 2018; Lisa, personal communication, March 23, 2018; Steve, personal communication, March 18, 2018). In other words, parents were given a tool to better communicate about the experiences their children have at NatureYear and this communication happened as soon as the children get home from the program.

Trust. In addition, some parents shared an increased trust in their children’s abilities to lead hikes, whittle, cut food, or make and tend fires at home (Emily, personal communication, March 18, 2018; Lisa, personal communication, March 23, 2018; Steve, personal communication, March 18, 2018, Trey, personal communication, March 23, 2018).

Connections to NatureYear. While some skills learned at NatureYear were able to directly transfer to the home environment, importantly, parents were able to draw on NatureYear experiences to boost child morale.

“[My spouse] and I have this parallel experience to show him he’s good at things...so when he is doing his math worksheet and is frustrated, we can start to draw on, “well when you and your friends built that footbridge and you had to measure and that’s why it’s important”, so you know we can bring in those experiences and its impactful for him.” –Lisa

“I can make relationship to what she [has done], “You know, you slid down hills at NatureYear and ripped your snow pants–this is just with skis on.” and I think her resilience is stronger if that makes sense.” –Steve

As children experienced challenges at NatureYear and parents learned about these experiences, parents drew on those experiences to encourage their children in other tough circumstances. Not only did the child’s outdoor experiences at NatureYear expand into the home environment, but parents also could draw on the confidence associated with those experiences as well. Consequently, in addition to the transfer of skills such as fire tending or whittling, NatureYear provided parents with tools to communicate with their children about their experience as well as to draw on NatureYear experiences in challenging situations. In this way, parents were constantly making connections between the NatureYear experience and home.

Parent-Teacher

Communication. In a similar way, parent-teacher relations were deepened through the quality of communication and an enhanced sense of trust. Steve recalled a time when his child and another child were involved in imaginary play that “became real” and led to

his child being pushed and hurting himself. Not only was Steve notified about the incident itself, but also about how the group stopped and had a “round circle” conversation about the incident which led into the next week. To Steve, this starkly contrasted what occurs in school where,

“...that kid would have gotten in trouble, [my child] would have gone to the nurse, and nobody would have ever talked about it again. They would have gone to maybe the counselor, *but it wouldn't have been the whole community saying, “Wow that took it too far.” (italics, mine)*

Trust. The ongoing communication, especially about concerns, resulted in a deep sense of trust between parents and teachers. This allowed parents to be open about their own concerns about their children. Emily found herself coming to NatureYear teachers for advice when her child began experiencing difficulties at school.

“We were getting a lot of calls from school about problems with behavior and I was wondering should I pull him out of school...I was able to speak to the NatureYear staff about it and ask, “What are you observing?” “Are you having the same issues there?” There’s plenty of space for conversation, to get feedback from them, and to ask questions.”

NatureYear teachers were approachable enough to for a parent to ask these questions. They have shown that they are invested in the children and want to know these concerns. Parents *really* trusted the NatureYear teachers. In regards to where this deep sense of trust might come from, Rachel and Lisa touched on the teachers’ relationships with their children.

“What made me trust them was that *they really respect the kids as people* and they treat them as people....to really understand why there are social norms, why

we are kind to one another and not enforce sort of unnecessary rules.” – Rachel,
italics, mine

“The teachers experience with the kids is really different, really awesome, and their communication with us is really great. *They know the kids*, like we were blown away with how well they know the kids and know our kids...and can tell us, like what they’re doing, if there’s ever a concern...” – Lisa, *italics, mine*

Thus, the ongoing communication not just about daily activities, but about ongoing concerns or events gave parents a sense of trust in the NatureYear teachers. Parents come to teachers with additional concerns, which one can infer would deepen their sense of trust even more. Additionally, parents felt that the teachers treated their children as people, people who they know *really* well, which also garnered a deep sense of trust between parents and teachers.

Teacher-Child

Knowledge of Child. As alluded to previously, parents got the sense that teachers knew their children well, and saw their child as a “whole person” (Karen, personal communication, March 22, 2018). Teachers knew which difficulties children face at home and school (which by assumption was reinforced by parents’ willingness to confide in the teachers). Teachers were also aware of children's behavioral tendencies well enough to communicate individual goals.

“I really love how it’s so clear in the notes that they’re really paying attention to her as a whole person and they make comments about how she was having trouble working through frustration and did a good job at it one day and was really struggling another day or just commenting on how well she played with someone else.” – Karen

“Yeah I don’t know school is more of a black box. We get lots of updates from the NatureYear staff which I really appreciate and I have a really good sense of what they’re working on with her and what she’s doing there...I have less of an understanding / insight into those things at her normal school.” – Emily

The quality of communication parents received at NatureYear greatly contrasted with that from their schools, which focused on test scores rather than how their children were functioning at school. Even though parents had mentioned their children struggling with non-academic issues, schools did not seem equip to try to address them. In contrast, NatureYear provided feedback about the “whole child” to parents, not just about activities, but about their child’s successes and struggles.

In addition, parents understood what types of personal skills teachers were working on with their children. Some skills might involve children’s own physical comfort. I observed a child in the Maples group (5-6 year olds) hesitantly climb on her knees across a log while Elaine stood aside and watched her closely. “I’ve got my eyes on you Ariel, you focus on you.” Ariel climbed for a few more steps and then froze as another child came up behind her, wanting to pass. She then exclaimed, “I am going back now!” and slowly made her way around the other child back to a limb area closer to the ground. Elaine later shares that Ariel had fallen before while climbing and was hesitant to do so for a while. “It’s great to see her still out there” Elaine says. As we have seen, an important component of knowing the “whole-child” involved knowing about the child’s concerns, and how the child may feel and respond in difficult situations. Elaine used her knowledge about Ariel to provide feedback and support her. I would expect that later, Elaine shared this observation and accomplishment with Ariel’s parents.

Other goals teachers might focus on involve social interaction between peers, as indicated as a value in the Parent Handbook.

“There’s been a couple of times the teacher has reported back that [my child] has clashed with this one particular child, who also tends to be [controlling] and ways they’ve been able to work it out...and the teacher...has been able to see that subtle thing: she really liked to be in control. So to try to find ways for her to be a part of the group but not be a part of the group, I think is a huge thing for her to learn and they get it.” – Trey, on his oldest child

Since play, especially play with peers, is a big part of the NatureYear experience, teachers have extended opportunity to observe how children interact with others in social settings. Parents noted that teachers over time were then able to notice tendencies that their children had and communicated those tendencies to parents. Over time, teachers could also update parents on the progress of their child in achieving or not achieving goals pertaining to those tendencies. For instance, Elaine expressed observing specific children who were working on social skills with each other:

“There’s a particular pair that’s working out alpha behaviors and listening and speaking up for themselves and working on their sensitivity issues. So they have become friends because they’re working on these opposite skills where they need the other to work it out.”

Elaine could then mention this behavior to parents of the pair and continue to provide feedback about the pair. In this way, teachers kept tabs on individual behaviors and goals for each child, as well as behaviors and goals pertaining to multiple children in social interactions.

This depth of knowledge is important especially when addressing conflict at NatureYear. For instance, if a child were to refuse to join the morning meeting, Mason, another Maples teacher, must consider the child and possible reasons behind the behavior. The behavior could be due to a number of reasons such as not being warm or dry, or a difficult drop off in the morning. What Mason considers most important is “individually figuring out issues and working with [the child]” whether it is to let them sit in the cabin or throw sticks in one direction for a while (Mason, personal communication, March 22, 2018).

Guided Conflict Resolution. Although there were instances, such the one Mason mentioned, where teachers would directly intervene to address social conflict, for instance, telling a child to go check on another child since “it sounds like you hit him” (personal communication, February 16, 2018), this was not always the case. As a program that values child agency, teachers also deflected to the children when it comes to conflict resolution. In one instance, the older aged group (the Oaks) came up to Elaine to ask that the Maples not take apart the bridge they had built the week prior. Elaine responded, “why don’t you talk to the Maples themselves?” and called the Maples over, simply saying, “the Oaks want to tell you something.” A few Oaks proceeded to explain that they wanted to keep the bridge intact because they had been working on strengthening it and if the Maples were to play in that area, they asked not to change the bridge. The Maples during this whole time listened to their (only slightly older) counterparts, responded with a group “okay” and proceeded to play in another area (personal communication, February 2, 2018). This instance highlighted a rich opportunity for children to 1) communicate how they felt and what they wished to happen and 2)

engage in conflict resolution with peers who are older and younger than them. The teacher's relationship with the children in this situation was that of a guide; Elaine heard what the Oaks wanted and guided them to talk to the Maples themselves.

Again, we observe teachers navigating and balancing direction and guidance as they pertain to the individual child and her personal goals and comfort, as well as in the context of peers navigating social conflict. This was something teachers have to do constantly within the NatureYear setting. June, an Oaks teacher, alluded to the constant thinking behind the decision of whether or not to intervene.

“Last year, there were some kids who were just yelling at each other for a little...and I was watching, I was watching the whole thing. Shouting was a strategy that wasn't effective at that moment...[eventually] I think I just showed myself, showed that I was watching and they figured out what to do...like how to change the behavior. But the takeaway from one of them could be so-and-so shouted at me today and then June didn't do anything about it.”

The challenge June faced with this approach was that “kids are affected by a behavior in a way that they might not be accustomed to because [she is] not stepping in” because these behaviors “may happen more than they might in another setting.” However, the long term goal is “supporting a community that cares about each other and works with each other...and sometimes in the short term it can be disruptive to other peoples' experiences” (June, personal communication, February 20, 2018). To an outsider (like me), this can look like a teacher not addressing an issue at NatureYear. However, June highlighted the balance that teachers were trying to maintain by allowing children to problem-solve with each other but also intervening and guiding when necessary.

Child-Child

Conflict Resolution. As alluded to previously, through the guidance of teachers, child-child relationships at NatureYear were also enhanced. Children engaged in communication skills, learning how to voice their concerns and desires. Children also learned how to actively listen to others' concerns. Together, these children engaged in effective conflict resolution, even with those who are not the same age. During an observation, Aiden and Lucas, two Maples, were engaged in play when Aiden came up to a teacher and mentioned "Lucas slapped my butt" to which Lucas responded, "but Aiden laughed at me!" The teacher then proceeded to tell Aiden to voice his concerns at Lucas and not at her. Lucas yelled "Sorry!!" across the room. I thought that would be the end of the interaction and I wondered whether Lucas truly felt sorry. A few minutes later, Aiden came up to Lucas and said, "I am sorry for laughing at you before." Lucas responded, "It's okay, I am sorry for hitting you" to which Aiden asked, "Do you want to play on the wood chips later?" This later interaction seemed like an authentic exchange of remorse, even if the prior one had not. Importantly, the teacher prompted the interaction, yet the apologies were child-initiated.

Communication. Children also enhanced their child-child interactions through activities and co-discovery. During another observation, Mark, Sonya, August, and Cory were building a ramp using dead tree bark, in order to roll a marble down a log. Ada, another Maples teacher, observed and mentioned the possibility of joining 2 bark pieces to form part of the pathway. August responded, "there's a problem because the marble won't roll in a straight line, we need to have borders on both sides." Mark and Cory then proceeded to find pieces of bark that could be used. Meanwhile, Sonya, in realizing that there was nothing to catch the marble once it rolled over the bark, brought over a basket

and placed it at the end of the pathway. This experience allowed for effective communication between teachers and children, as well as between children and other children. The group continued with this activity for almost an hour before heading over to morning meeting. In both the social conflict and co-discovery situations, children had time to deeply engage with the situation at hand. They were not rushing into another activity. Teachers did not hover over the children to make sure they followed through. Teachers in both situations acted as guides and this allowed for deep relationships between children to form through enhanced conflict resolution, communication, and cooperation.

The value of time and space to engage with both scientific and social situations was noticed by both parents and teachers alike.

“I feel like the environment is just one where there’s room, there’s a lot of room for actual genuine collaboration, whereas I know at school, [my child] does interact with other kids as part of learning but it's mostly helping them do something or doing something all at the same time, *they’re not actually collaborating*, whereas last week she actually collaborated with other kids and built a shelter. They all contributed to the shelter and they had ideas about how it should be made and why it would work better this way and I think that’s a super important life skill to be developing and one I think NatureYear does a good job at.” – Karen, parent, *italics mine*

“I think NatureYear really does [provide] the children with time to work on projects. They have *time across a couple of weeks*, there’s just *free time for them to be doing whatever it is they’re doing*.” – Rachel, parent, *italics mine*

“[In this environment] children can reflect, so like, say, the example I mentioned, the cooperative play lesson, you know I’m an alpha, I’m learning how to cooperative play...I can go and run and climb a tree when I’m feeling super

frustrated because nobody is listening to me you know? [Hong: Mhm] And I'm like "ughh, I let all this energy out" and I'm like "Oh right, nobody's listening to me because I'm trying to tell everyone what to do." It allows that *space and time* and physical process you can actually digest or *internalize what you're trying to do.*" – Elaine, Maples teacher, *italics mine*

"An outburst of anger is such a different experience in the outdoor classroom as it is in the tiny little classroom with walls and windows. I think it impacts the other students a lot less. I've seen students totally willing to let a kid break down and cry and work it out in this way and totally be unphased about it. Or like kids who are watching yeah, an 11-year-old cry. And he's not being teased by it." – June, Oaks teacher

As noted above, this time and space was extremely valuable for children to engage with others in a truly collaborative way. It allowed children to be able to deeply work on what they were interested in. It allowed children to internalize their goals as well as let out their frustrations. One might attribute this sense of lengthened time and space to the fact that NatureYear takes place all day outdoors, without walls. The lack of walls might allow children to feel more free to explore and engage with this time and space. Likewise, one can also attribute the space and time to the increased agency that children feel due to teachers' thoughtfulness about whether to engage or disengage. Teachers intentionally refrained from responding in order for children to have their own time to engage in conflict resolution, communication, and cooperation. Whatever it is, this environment was one that is extremely special for a subpopulation of NatureYear: children with special needs.

In the beginning of this paper, I alluded to my interest in better understanding what about the NatureYear experience attracted parents with children with special needs.

Upon learning that some parents I interviewed had children with special needs, I asked them how NatureYear addresses these needs.

[Hong: In terms of your oldest child, are NatureYear teachers aware of her sensory needs?]

Trey: Yeah, they are but it has never really been an issue or really a big conversation. They know about it but she's just a regular kid when she's there.

I had expected parents to mention specific plans or goals that teachers had implemented in order to accommodate for children's special needs, however, I was shocked to hear these needs did not come up in the NatureYear environment. Importantly, Trey believed his child feels normal at NatureYear (personal communication, March 23, 2018).

Similarly, Emily, whose child often stormed out of the classroom in his regular school environment, remarked that NatureYear teachers did not incorporate behavioral feedback about her child, simply because those behaviors did not occur at NatureYear:

“I don't know that there was anything they [NatureYear teachers] needed to incorporate because I feel like the program was already focusing on those things, you know focusing on, interpersonal skills and how to manage conflict. You know what else? So many of the problems don't really take place at NatureYear.”

Later she continues,

“So we're seeing now this *divergence in our kid at NatureYear and our kid in public school*. I mean he's still doing fine academically at public school and I think a lot of that has to do with the fact that *he's better adjusted because of NatureYear*...I'm just glad he has NatureYear because the public school situation for him has been more challenging this year and we're seeing all this behavioral stuff and I feel like *if not for having the input from NatureYear staff*, who says “no he's doing great, he's thriving, these are the things we're observe” *I think as a*

parent I would be at a loss.” (italics mine) (Emily, personal communication, March 18, 2018).

These findings are extremely important in light of the broader discussion of which school settings are “the least restrictive environment” for children with special needs. That is, what environment can children with special needs be educated in with children without special needs, “to the maximum extent possible?” (Crockett & Kauffman, 1999).

Integration within a typical school environment has been challenged due to the fear that full inclusion will not provide appropriate education for either children with special needs or children without special needs (Crockett & Kauffman, 1999). As we have seen, outdoor education programs may be able to navigate this tension, providing a possible alternative for children with special needs.

Conclusion

Parents were drawn to NatureYear often because of dissatisfaction with the school’s approach to their child’s learning. Schools focus on academics, but fall short when it comes to the child’s personal relationships. As an all outdoor education program that values child-centered activities and extended time for exploration, NatureYear is a space that facilitates parent-child, parent-teacher, teacher-child, and child-child relationships. Parents have a better sense of their child’s experiences at NatureYear. They also understand what goals NatureYear teachers are focusing on with their children. However, to do this well, NatureYear teachers have to communicate regularly and provide quality feedback to parents. Teachers also have to constantly balance support for child agency while also maintaining necessary physical and emotional boundaries. All of this thought that goes into creating the NatureYear experience has provided children the

opportunity to engage with deep peer-peer collaboration and conflict resolution. Children also have numerous opportunities to engage with their own interests. Importantly, this experience has especially been powerful for children with special needs, as well as their parents.

Admittedly, there were limitations to this study. First and foremost, I did not collect any quantitative data, nor did I manipulate any experimental conditions, thus, I could only speculate about what may be occurring at NatureYear. However, I hope to have shown the value of qualitative data when trying to encapsulate a program such as NatureYear. There is so much richness in observations and interviews—one cannot do justice to everything that is happening! In addition, parents who opted in to be interviewed were most likely supportive of the NatureYear program. Although I asked about difficulties parents encountered, not many parents mentioned extensive challenges. This may be because they truly do not experience substantial challenges from NatureYear, but this may also be because they chose not to mention any. As mentioned before, even among those who responded, only 7 out of the 19 parents were interviewed. Additionally, all parents interviewed were Caucasian, thus, not fully representing the population of parents at NatureYear. In terms of observations, I mainly observed Maples (5-6 year olds). Although I observed interactions between the Oaks (6-12 year olds) and the Maples and although a majority of my parents interviewed were parents of Oaks, observing Oaks would enhance the scope of my project. Lastly, as previously mentioned, I focused on relational outcomes at NatureYear. I truly believe that looking at NatureYear relationally only chips the surface of NatureYear. However, I hope that my observations, interviews, and results spur new ideas and thoughts on other approaches to examine NatureYear

outcomes. I strongly urge future cohorts to continue researching and investing in programs such as NatureYear. Even if you do not pursue a similar type of project, I hope you hold on to the idea of an education without walls and the hope of what such education can provide.

Appendix A: Teacher Interviews

Warm up question: Tell me about your instructor experience prior to NatureYear?

How do you envision your role as a teacher at NatureYear? What is your role in facilitating learning?

Are there specific behaviors you have observed at NatureYear that you find interesting?

Are there behaviors you find particularly challenging?

Tell me what you know and understand about NatureYear's behavioral management philosophy? How do you use it within the classroom? Do you find it helpful?

Appendix B: Parent Interviews

Warm up question: What was appealing about the NatureYear program?

What did you hope your child would experience as a participant of the program?

How do you think NatureYear impacts your child's home/school experience?

How did your school respond to your child's involvement with NatureYear?

Are there specific behaviors you have observed in your child since entering NatureYear that you find interesting? Are there behaviors you find particularly challenging?

Appendix C: Interview with Rebecca (Director)

Warm up question: Can you tell me about who you are and what do you do as director?

Can you walk me through the development of NatureYear? Your vision?

What factors are drawing parents who are interested?

Past attempts of program evaluation? Are you thinking about more in the future?

Can you tell me about your and the teacher's decision to focus on documentation?

What are your hopes for the upcoming years?

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