PARENTAL PARTICIPATION IN NON-FORMAL EDUCATION ACTIVITIES

A thesis in
Agricultural and Extension Education
by
Mary Kate Berardi

© 2009 Mary Kate Berardi

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

December 2009
The thesis of Mary Kate Berardi was reviewed and approved* by the following

John C. Ewing
Assistant Professor of Agricultural and Extension Education
Thesis Advisor

Rama B. Radhakrishna
Professor of Agricultural and Extension Education

George R. Vahoviak
Program Director, Shaver’s Creek Environmental Center
Affiliate Assistant Professor in RPTM

Tracy S. Hoover
Professor and Department Head, Agricultural and Extension Education

*Signatures are on file in the Graduate School.
ABSTRACT

According to Rodenburg (1994) both children and adults lack connections with the natural world. The fast-paced life most people operate in today makes outdoor experiences limited, causing a lack of contact with the natural world. If schools cannot provide this opportunity due to reaching toward curriculum goals, it becomes the role of the parents and guardians to provide outdoor learning time for their children. The following study examines barriers that influence parental participation in non-formal education activities with their children. “Research has long shown that parents’ positive involvement with their children’s schooling is related to many positive outcomes” (Horowitz & Bronte-Tinkew, 2007, p.1). Parental involvement in non-formal education would therefore help children function better in society.

To further investigate the question of parental involvement, 41 parents of camp attendees were surveyed about their participation in their children’s environmental education. The surveys were evaluated for reasons why parents might, or might not, participate in their children’s environmental education.

The research found that parents want to participate in non-formal learning with their children, and perceive their participation to be important in their children’s academic performance. One barrier found was that parents do not always have time to participate in their children’s education as much as they would like. A second barrier found was that parents do not always have the finances to pay for non-formal education programs. Educators could use this information to create better programs and enhance their curriculum. Results from this research can impact the creation of programs to involve parents in more environmental education activities with their children.
# TABLE OF CONTENTS

List of Figures................................................................................................. v  
List of Tables................................................................................................. vi  
Acknowledgements....................................................................................... vii  

CHAPTER 1. Introduction............................................................................... 1  
   Environmental Education In and Out of School........................................ 2  
   Purpose and Objectives of the Study......................................................... 4  
   Definition of Terms................................................................................... 6  
   Limitations of the Study........................................................................... 6  
   Summary................................................................................................... 7  

CHAPTER 2. Review of Relevant Literature................................................... 8  
   Philosophical Background........................................................................ 8  
   Hands-on Experiences and No Child Left Behind (2002)......................... 10  
   Education Development of Children Ages Six to Eleven.......................... 12  
   Benefits of Outdoor Education.................................................................. 13  
   Parental Involvement in Outdoor Education............................................ 15  

CHAPTER 3. Methodology............................................................................ 18  
   Problem Setting....................................................................................... 18  
   Research Objectives............................................................................... 18  
   Description of Shaver’s Creek Summer Day Camp................................... 19  
   Research Design..................................................................................... 20  
   Population and Sample.......................................................................... 20  
   Instrumentation...................................................................................... 20  
   Data Collection and Analysis................................................................... 21  
   Analysis of Potential Errors and Problems in the Study............................ 22  
   Summary.................................................................................................. 23  

CHAPTER 4. Results..................................................................................... 25  
   Demographic Profile of the Parents and Families.................................... 26  
   Self-perceived Parental Involvement, Knowledge, and Importance of Select  
   Non-Formal Education Topics.................................................................. 30  
   Parental Participation in Non-Formal Education Activities....................... 33  

CHAPTER 5. Conclusions............................................................................. 37  
   Summary of Purpose and Objectives of the Study.................................... 37  
   Summary of Methods and Procedures Used in this Study........................ 38  
   Summary of Findings.............................................................................. 39  
   Demographic Profile of the Parents and Families.................................... 39  
   Self-perceived Parental Involvement, Knowledge, and Importance of Select  
   Non-Formal Education Topics............................................................... 40  
   Parental Participation in Non-Formal Education Activities....................... 44  
   Recommendations for Further Research................................................. 46  
   Summary.................................................................................................. 48  

REFERENCES............................................................................................... 49
Appendix A Survey Instrument………………………………………………………………..51
Appendix B IRB Approval……………………………………………………………………57
Appendix C Qualitative Responses………………………………………………………….61

LIST OF FIGURES

Figure 2.1. Kolb’s experiential learning cycle.........................................................9
Figure 4.1. Participants county of residence.............................................................28
Figure 4.2. Greatest barriers listed to parental involvement in
non-formal education..............................................................................................36
LIST OF TABLES

Table 4.1. Number of years anyone in the family attended Shaver’s Creek Summer Day Camp
                                                                                           26

Table 4.2. Highest degree earned by parents.                                              27

Table 4.3. Miles to closest non-formal education facility                                  29

Table 4.4. Parental self-perceived involvement in select non-formal education topics       30

Table 4.5. Parental self-perceived knowledge of non-formal education topics               31

Table 4.6. Parental self-perceived importance of select non-formal education topics       32

Table 4.7. Reasons parents participate in non-formal education activities with their children 34

Table 4.8. Factors limiting parental participation in non-formal education with their children 35
ACKNOWLEDGEMENTS

First of all I would like to thank my advisor, Dr. Ewing, for everything he has helped me with the past one and a half years. Without your guidance and understanding, there is no way I could have made it through the many roadblocks that came our way. Thank you for your consistent support.

Secondly, thanks to my family. I am sure you did not always enjoy my phone calls, but you always listened and gave advice. And Annie, I could not have made it without your love and support waiting for me when I got home.

Thanks to my committee members and those in the AEE department. Your flexibility made it possible to me to complete this degree on a shortened schedule.

Finally, thanks to the girls in the office, Susan and Rebecca. We probably would have accomplished much more without laughing, but it definitely would not have been as fun. Dan, thanks for always being there for me, and giving me the best advice. I love you, and I cannot wait to spend the rest of my life with you.
CHAPTER 1

Introduction

Children and adults lack connections with the natural world (Rodenburg, 1994). The fast-paced life most people operate in today makes outdoor experiences limited, causing a lack of contact with the natural world. Rodenburg believed that people need to be reminded of the connection to the natural world, establishing a clear perception of reality. If schools cannot provide this opportunity due to limited time to reach curriculum goals, it becomes more important that parents and guardians provide outdoor learning time for their children.

“Research has long shown that parents’ positive involvement with their children’s schooling is related to many positive outcomes” (Horowitz & Bronte-Tinkew, 2007, p.1). Schooling is often limited to meaning indoor, formal education, but learning needs to continue outside of the classroom too. Non-formal education provides this opportunity for continued growth of the child. Nationwide, non-formal education centers, such as nature centers, zoos, and aquariums, offer programs for children with and without their parents being present. Many parents recognized the importance of getting their children outside, but are unable or unwilling to do so (Horowitz & Bronte-Tinkew, 2007). With the busy world moving around them, parents have many reasons not to take their children outside.

Horowitz and Bronte-Tinkew (2007) investigated why parents, if they recognized their involvement in school is good for their child’s learning, did not look to continue learning outside of school. They found that barriers to family involvement in outdoor
education activities included: other responsibilities, access to the outdoors (limited by both location and time), and comfort level (Horowitz & Bronte-Tinkew). The authors found that parents often come home from work and barely have time to get dinner on the table and children’s homework done before bedtime. Many parents might not have realized, however, that outdoor learning does not have to be an elaborate production. Suitable outdoor activities, such as a short walk around the neighborhood, only require 10 to 15 minutes, giving the child exercise and allowing both parent and child to explore the natural world (Newman, 1996).

While many factors influenced the amount of time parents spend outside with their children, one of the most important was awareness of what outdoor education entails (Horowitz & Bronte-Tinkew, 2007). Parents may not have known the names of everything in the natural world, and cannot always think of learning activities to do with their children while outside. According to Doug Wentzel (2008), Program Director at Penn State’s Shaver’s Creek Environmental Center, a void exists in the area of programming for parents to help them get their children outside. Parents were also not sure what programs are out there for them to participate in with their children. The literature suggests that environmental educators need programs to help get parents more involved with their children’s environmental experience.

*Environmental Education In and Out of Schools*

Non-formal education provides educators, students, and parents with an alternative or supplement to traditional classroom education, making it possible to teach academic standards while allowing children to be active participants in their learning.
Non-formal education includes: structured programs at outdoor education facilities, structured field trips and non-formal outdoor learning and play in a family environment. According to Lieberman and Hoody (1998), using the environment as an integrating context for learning pushes students to have higher scores on standardized tests in reading, writing, math, science and social studies; fewer discipline problems in the classroom; causes an increase in learning engagement and excitement about learning; and creates an enhanced feeling of value and accomplishment where learning is concerned. Unfortunately, many schools structure classroom time to help students meet the No Child Left Behind standards, often not allowing them time to experience non-formal education and the outdoors.

Non-formal education also improves students’ attitudes about learning, as Farmer, Knapp, and Benton (2007) concluded through the study of 30 fourth grader’s long-term retention of information one year after a field trip to the Great Smokey Mountains National Park. Farmer et al. (2007) explain that four main themes emerged from the interview process. The first theme to emerge was students used action words to describe their experience and the activities they completed on the trip. Students showed retention of excitement about the day. Many students could clearly describe the activities completed, including mention of active games and projects. The second theme was general knowledge the students retained. Three components of this theme were revealed, including program information, knowledge gained, and learning derived from educational activities. Most students could remember something from one of these areas. The third theme that materialized was student retention of ecological and environmental knowledge. The majority of the students could recall specific knowledge in this area
learned on the field trip. Finally, the fourth emergent theme was perceived pro-environmental attitude. Overall, the authors found that a pro-environmental attitude showed itself in all the different themes, but knowledge of environmental issues such as invasive species impacted the children the most. Overall, each of the students showed retention one year later about at least one major topic learned on their field trip.

The results of Farmer et al. (2007) explain some of the ways non-formal education programs influence students’ learning in the long-term. Students retained specific knowledge of the field trip. The students were left with a pro-environmental attitude and grasp on the lessons from the field trip one year later. If parents can continue to influence their child’s knowledge base through more participation in non-formal education programs, the retention might be stronger and last longer.

Many teachers recognize the benefit of non-formal education, but they cannot implement the practices alone (Farmer, Knapp, & Benton, 2007). Learning needs to continue outside of the classroom; parental involvement helps to continue learning once the children arrive home from school.

**Purpose and Objectives of the Study**

This study examined parental involvement in non-formal education programs with their children and why these parents chose or do not chose to participate. The purpose of this study was to gather descriptive information on parents who attended outdoor education programs with their children, and to investigate the reasons they attend. Results from this study should help environmental education programmers create new curricula to attract more families to their programs. The main research question that
guided the study was: What factors influence parents to participate or not participate in non-formal education activities with their children?

The overall purpose of this study was to determine what factors impacted the involvement of parents in non-formal education through research completed at Shaver’s Creek Summer Camp 2009. The following objectives guided the study:

1. To describe demographic information about parents of children and families who attend Shaver’s Creek Summer Day Camp.
2. To determine parents’ self-perceived involvement in programs similar to Shaver’s Creek Summer Day Camp.
3. To determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.
4. To determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.
5. To determine why parents choose or do not choose to participate in non-formal education with their children.
6. To identify barriers that prevent parents from participating in non-formal education with their children.
Definition of Terms

• **Non-formal education** – education that occurs outside of a formal classroom, such as programs at a nature center, visiting a zoo, taking a hike in the woods, or playing in a backyard (Louv, 2005).

• **Formal education** – the hierarchically structured, chronologically graded educational system running from primary school through the university and including, in addition to general academic studies, a variety of specialized programs and institutions for full-time technical and professional training (Etlig, 1993).

• **Outdoor Education** – an experiential method of learning with the use of all senses. It takes place primarily, but not exclusively, through exposure to the natural environment (Priest, 1990).

• **Environmental Education** – refers to curriculum and programs which aim to teach people about the natural world and particularly about ways in which ecosystems work (Neill, 2006).

Limitations of the Study

The parents that were surveyed for this study had children who participated in Shaver’s Creek Summer Day Camp 2009. The research population may compromise the study as the groups are pre-formed, not allowing for random selection and random assignment of participants within the study. This is difficult to change due to the design of the Summer Camp program. Also, the population used for the study is comprised of
parents who choose outdoor education for their children, so the answers to the survey might reflect this bias.

Summary

Non-formal education is a way for parents to continue their child’s education outside of the classroom. It steers away from the common practice of teaching for the test, and helps combat education issues facing children in the United States (No Child Left Inside, 2008). Parents are not always willing to participate in outdoor activities due to time constraints and a lack of knowledge on natural history topics (Brackbill, 2008). This research study explores this problem further. Findings from this study may be applied by non-formal education programmers to create programs where parents participate in non-formal education with their children.
CHAPTER 2
Review of Relevant Literature

“I am concerned that kids, as well as adults, are losing the ability to relate to the natural world.” – Jacob Rodenburg

Philosophical Background

According to Dewey (1997) students need the right kinds of experiences to increase their learning. Dewey felt traditional schools at his time were a “pattern of organization”, and lacked the proper experiences to help children become self-motivated, stronger learners. He did not feel, however, that learners should depart completely from tradition, but that “everything depend[ed] on the quality of the experience which [was] had” (Dewey, p. 27). Outdoor education provides the framework for experiences to become education. Using academic standards that are already in place, outdoor educators and parents can help their children have the right kind of outdoor learning experiences to enhance their cognitive abilities.

Kolb (1984) considered Dewey’s theories and took them a step further to develop a model of three major themes that make up experiential learning. The first notion is that learning is a process. Kolb believed that what students learn is continually changing based on new experiences they have. Every student has different experiences, thus learning different things. The second notion of experiential learning that Kolb laid out is that learning is a continuous process that comes from experiences. Each learning experience, while unique, is related to previous situations. Every learner goes into a new
lesson with preconceived ideas on the topic they are about to learn, based on what that learner previously experienced. Kolb (1984) believed that educators should make students create new ideas while also disposing of old ideas. The third major notion in experiential learning is that learners have to adapt and resolve their ideas of the world (Kolb, 1984). Learners are constantly faced with opposing ideas, and it is the role of the learners with the help of educators to make sense of these differences. With these three pillars as the foundation, learning can be seen as experiences and the chance to make meaning of them.

Using these pillars of learning, Kolb created a model of experiential education (see Figure 2.1). The model shows how learners travel from having a concrete experience, to thinking about the experience in reflective observation, to conceptualizing the experience they had with previously learned theories, to experimenting with the experience on their own, working to modify it (Kolb, 1984). A learner can start anywhere in the cycle.

Figure 2.1. Kolb’s experiential learning cycle.
Kolb’s theory can be applied to the current school system in the United States. In education as it is now, many educators are not meeting the requirements of all parts of the learning cycle. Children sit at desks, reading from books about the world around them. But the chance to experience that world for themselves and make their own meaning may be missing. Outdoor education provides both experiences and the chance to make meaning out of the experiences.

*Hands-on Experiences and No Child Left Behind (2002)*

When President George W. Bush signed the No Child Left Behind Act (NCLB) in 2002, the primary goal of the legislation was to support education through solid research (NCLB, 2004). Using the four pillars of NCLB, President Bush hoped to reignite educational passion for teachers and students. The four pillars of NCLB include (1) holding schools accountable for testing results, (2) giving parents more choices in schooling, (3) allowing local governments more control over education of children in their districts, and (4) using scientific research to create stronger school programs (NCLB). The pillars form the ideal education situation, but many children now sit inside classrooms the majority of the school day, reading from books to achieve higher test scores while the world outside passes them by (No Child Left Inside, 2008). As NCLB recognizes, parents need to make choices and be involved in their children’s education for the child to get the most out of it.

Brown (1998) stated in his research on outdoor learning centers, that formal instruction covers the subject matter of testing, but many children stop learning once the bell rings. Children become accustomed to patterns and regularity, and never have the
opportunity to apply school lessons to the real world. Brown’s research supported the theories of Dewey and Kolb that traditional education is too organized to allow for making of meaning.

The NCLB Act receives criticism for its focus on testing (No Child Left Inside, 2008). As a result of the NCLB Act, many children sit in classrooms learning subjects that will help them achieve high test scores, not that will help them learn or think outside of school (No Child Left Inside, 2008). The No Child Left Inside (NCLI) movement looks to get children out of the classroom and into the outdoors. The NCLI website serves as a resource for parents, teachers, school administrators and students to find ways to increase outdoor learning. The NCLI movement makes the argument that since environmental education is not included in NCLB, students are not exposed to the outdoors (No Child Left Inside, 2008). Many students only learn from books, and miss out on the chance for real world problem solving. NCLI looks to fix this problem, termed “nature-deficit disorder” (p. 34).

“Nature deficit disorder” was coined by Louv (2005) in Last Child in the Woods. Louv argues that children born in the past two decades lack an intimate connection with nature that children had in the past. In Last Child in the Woods, Louv stated,

Not that long ago, summer camp was a place where you camped, hiked in the woods, learned about plants and animals, or told firelight stories about ghosts or mountain lions. As likely as not today, “summer camp” is a weight-loss camp, or a computer camp. (p. 2)

Children no longer have the opportunity to run free in the woods, building forts and learning their world like the back of their hand. And while many children have lost the connection with nature, Louv shows that children need a link with nature to be
stabilized in other aspects of their life. Louv argues that children need to rekindle this connection to create a stable society and protect the earth. Parents are of utmost importance in this movement. Parents can encourage a love of nature in their children through inspiring a love of the natural world based on their own experiences.

*Education Development of Children Ages Six to Eleven*

The parents in this study had children between the ages of six to eleven that attended Shaver’s Creek Summer Day Camp 2009, or a similar program at Shaver’s Creek Environmental Center. According to Halliburton and Gable (2003), these ages are particularly important years of a child’s development. During this time, children are working on their feeling of self-worth, and feedback from adults and peers is of particular importance. Adults, especially, help children at this age form opinions of themselves through feedback on their actions, making the child think about right and wrong. Children look to emulate adult behavior. This makes it the perfect age for parents to foster a love of nature in their children.

In a survey of 2,000 urban-living adults about their childhood, Wells and Lekies (2006) found that if the adults had time for free play in nature as children before age 11, they were more likely to have an appreciation for nature as adults. A majority of the children who attended Shaver’s Creek Summer Day Camps are 11 years old or younger, and are in what Piaget called the stage of concrete operations (as cited in Kolb, 1984). In this stage, children are developing abstract thinking skills. Until age seven, children develop concrete ideas that will serve from age’s seven to 11 as the foundation for higher thinking later in life. Children at this age apply concepts and theories learned in a
classroom to make meaning of their experiences in the real world (Kolb, 1984). If children are not allowed to expand on their concrete knowledge gained from classrooms, they will not fully develop their abstract thinking skills.

**Benefits of Outdoor Education**

Quincy (1997) looked at how environmental education can be used to integrate classroom subjects and help foster meaning for students. The author claims that cramming subjects into regimented time slots limits the time students have to make bigger connections from school to the outside world. Using Bloom’s Taxonomy and environmental education, the author believed teachers and students will naturally link subjects. All students, regardless of learning styles and ability, will become excited and passionate about the application of subject matter to real life situations. One primary goal of any education curriculum is to produce students who can function outside of the classroom. The author recognized that integrating the environment into the classroom creates students who become functional citizens in society.

Lieberman and Hoody (1998) reported on a study completed by state education agencies from 13 states in the United States that combined resources to create a State Education and Environment Roundtable. The Roundtable was formed to address the rising interest in environment-based education programs. The Roundtable coined the term “environment as an integrated context for learning” (EIC), which means a framework for education involving “interdisciplinary, collaborative, student-centered, hands-on, and engaged learning” (Lieberman & Hoody, p. 21). The Roundtable looked at schools they
felt met these standards, and compared students in those programs to children in traditional school programs.

The majority of students in schools that used EIC in the curriculum had higher achievement across disciplines than their traditional classroom peers. Students performed better on standardized tests, were better behaved in the classroom, were more enthusiastic about their learning, and took pride in their accomplishments. Lieberman and Hoody (1998) went on to cite quantitative examples of the benefits to general education, specific academic areas such as language arts, math, science, social studies, and personal development areas such as thinking and interpersonal skills. In all of these areas, EIC students’ achievements were significantly better when compared to their non-EIC peers. The Roundtable researchers state that using the environment as a learning context excites students and helps educators provide curricula to students that creates a passion for learning, thus helping to close the widening academic achievement gap seen in many traditional classrooms.

Children all over America and the world are leading more sedentary lifestyles; they sit in front of televisions and computers for an average of three or more hours per day (Fredriks et al, 2005). Yet, 40% of children wish they could spend more time in free play in the outdoors, an activity that helps them understand reality, according to Fredriks et al (2005). Learning in a natural environment helped children become more creative, and gave children more motivation to attend school. Along with academic advancements, children who played outdoors more often than their peers develop stronger motor-sensory skills than their traditional classroom peers.
Farmer, Knapp, and Benton (2007) conducted a study interviewing 30 fourth graders one year after an environmental field trip. They found that all of the students showed retention one year later about at least one major topic learned on their field trip. These results indicate that environmental education programs influence students in the long-term. If parents can continue to influence their child’s knowledge base from an environmental education program, the retention may be stronger and last longer. Children need these experiences to help build their abstract knowledge, and outdoor education expands on concrete knowledge learned in the classroom (Kolb, 1984).

Parental Involvement in Outdoor Education

If schools cannot allow time to learn with children in non-formal settings, then the burden falls on parents, and many parents see it as a burden. Horowitz and Bronte-Tinkew (2007) wanted to investigate why parents, if they recognize that involvement in school is good for their child’s learning, do not look to increase learning outside of school. Horowitz and Bronte-Tinkew’s ultimate goal was to give suggestions to non-formal educational facilities to help them create new programs and get families involved. After defining family involvement as the participation of a child’s family members in any aspect of an out-of-school program, Horowitz and Bronte-Tinkew went on to talk about why family involvement is important. Reasons for importance included helping children’s relationships and academic performance, helping reduce teen’s risky behaviors, helping outdoor education facilities create better programs, and helping parents do a better job of parenting. Horowitz and Bronte-Tinkew discovered three barriers to family involvement including other responsibilities, access to programs (which
included time restraints), and comfort level. The researchers then went on to suggest ways to get more families involved, including defining involvement to the parents, addressing the barriers listed above, increasing comfort level, engaging families regularly, and recognizing that engagement might take time.

Researchers such as Legault (1999) agree with Horowitz and Bronte-Tinkew, and feel that parents and children can share in learning together if they just take the time. Legault found that children enrolled in a formal environmental education program in Ottawa, Canada were more likely to involve their parents in their learning experience. Through this program, the parents had an increase in environmental knowledge, and were more likely to work with their children toward common educational goals.

Rodenburg (1994) explored the reasons students who come to his nature center view the outdoor world as strange. Rodenburg wrote that modern life speeds by creating sensory overload, and nature seems boring by comparison. Most children experience nature through video images on television or video games. Rodenburg believed that with minimal planning, families can enjoy nature together while staying in their own backyards. Rodenburg went on to suggest activities for families to try in order to maximize sensory experiences nature can provide. The research discussed in this chapter explains how families want to learn together outdoors, but just lack the resources to get the process started.

Summary

As the literature on this topic shows, and Rodenburg aptly summarizes, “kids, as well as adults, are losing the ability to relate to the natural world.” The lack of time and
learning outdoors leaves many children without a solid connection to reality (Fredriks et al, 2005). Researchers such as Legault (1999) and Horowitz and Bronte-Tinkew (2007) support the idea that families can share in learning together if they just take the time. Children need non-formal education experiences to help build their abstract knowledge (Kolb, 1984). Lieberman and Hoody (1998) support that using the environment as a learning context benefits students in the areas of general education, specific academic areas such as language arts, math, science, social studies, and personal development areas such as thinking and interpersonal skills. Students’ using the environment as a contact for learning achieved significantly better when compared to their non-environmental learning peers (Leiberman and Hoody, 1998). These reasons make this research particularly significant, especially where environmental education programming is concerned. The information found in this study could help environmental educators program to help families make the most of their non-formal education experience.
CHAPTER 3
Methodology

Problem Setting

The purpose of this study was to determine why parents who already participate in non-formal education activities with their children continue to do so. Barriers for not participating were also examined. Reasons for parental participation were determined through a descriptive study of parents whose children attended Shaver’s Creek Summer Day Camp 2009 or a similar activity at Shaver’s Creek Environmental Center.

Parents targeted for this research study had children who attended one of the seven weeks of Shaver’s Creek Summer Day Camp 2009. Summer day camp is a four or five day program where children spend six hours learning about nature with staff from Shaver’s Creek Environmental Center.

Research Objectives

The research objectives guiding the study were to:

1. Describe demographic information about parents of children and families who attend Shaver’s Creek Summer Day Camp.
2. Determine parents’ self-perceived involvement in programs similar to Shaver’s Creek Summer Day Camp.
3. Determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.
4. Determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.

5. Determine why parents choose or do not choose to participate in non-formal education with their children.

6. Identify barriers that prevent parents from participating in non-formal education with their children.

Description of Shaver’s Creek Summer Day Camp

Shaver’s Creek Summer Day Camp runs seven weeks every summer from late June to mid-August. Children from the State College area attend camp Tuesday through Friday, with the exception of two extended weeks that run Monday through Friday. Tuesday through Friday campers spend six hours per day exploring the woods around Shaver’s Creek Environmental Center with their counselors and camp group. Themes of camp rotate throughout the years, and can include, but are not limited to songbirds, mammals, plants, and reptiles. Each day of camp covers a different sub theme, including biodiversity, interrelationships, natural cycles, and habitats. Campers participate in a range of activities throughout the week of camp, such as a stream study, building houses for oven birds and toads, and playing nature games with other groups. Each camper’s experience is unique based on the week they are enrolled, their counselors, and the mix of what nature provides for them.

This research focused on the portion of camp that involves camper’s parents. On Friday night, parents have the option of staying overnight with their children for a picnic dinner, ice cream social, camp fire, and night hike. The next morning the counselors and
camp staff serve a pancake breakfast to the families, and everyone reflects on the week at camp. The parents of children who attended this camp or a similar activity at Shaver’s Creek Environmental Center were the focus of this research study.

Research Design

The research was a descriptive study designed to determine why parents who attend non-formal education programs continue to attend them. A survey instrument, designed by the researchers, was used to collect data from the parents of children who attended Shaver’s Creek Summer Day Camp 2009.

Population and Sample

Forty-one families whose children attended Shaver’s Creek Summer Camp 2009 participated in the study. Surveys were handed out during the first day of camp at registration.

Instrumentation

A questionnaire suitable for collecting data for the study was developed by the researchers. The questionnaire contained five sections. Section One probed the parents for how many non-formal activities they had been involved in in the past year. Section Two contained questions about reasons the parents choose to participate in non-formal activities with their children. Section Three asked their parents about their knowledge of non-formal education topics, how important they thought non-formal education was, and how involved the parents thought they were in their children’s non-formal education.
Section Four focused on barriers parents perceive as reasons they are not involved in their non-formal education. The final section, Section Five, asked parents for their demographic information.

A panel of experts reviewed the survey questionnaire for content and face validity. Following these reviews, changes were made to the instrument prior to administering the pilot test. Reliability for the entire instrument was determined through a pilot test conducted before the actual data was collected. Reliability for this instrument was determined through a pilot test that was conducted during the first week of Shaver’s Creek Summer Day Camp 2009 on a sample population (n=10) similar to the final research population.

Reliabilities were also run Section Three, survey questions five, six, and seven. For question 5, reliability was determined to be Cronbach’s $\alpha = 0.87$. The reliability for question 6 was determined to be Cronbach’s $\alpha = 0.54$. The final section of the survey for which reliability was calculated was Section Four, question eight, for which the reliability was Cronbach’s $\alpha = 0.80$. Using SPSS 16.0, reliability was determined for the entire survey instrument to be Cronbach’s $\alpha = 0.80$. The limitations section altered this number, and when it was removed, the new reliability for the entire survey instrument was determined to be Cronbach’s $\alpha = 0.90$.

Data Collection and Analysis

The parents’ perception of their knowledge, importance of, and involvement in non-formal education were recorded through self-reported responses to the survey questions. Descriptive statistics (mean, standard deviation, and frequency) were used to
describe why parents chose or did not choose to participate in non-formal education with their children.

The researchers passed out 69 surveys, and the parents returned 41 of them, for a response rate of 59.4%. All of the returned surveys were completed enough for the researchers to use the data, making the accepting sample 41 or 59.4%.

As parents dropped off their children for camp, they were asked to participate in the study and were informed of the purpose and timeline of the study. If parents agreed to take the survey, they were assigned a survey number to keep track of who returned the surveys, and to make sure no one completed the survey more than once. This information was kept in a locked filing cabinet in the researcher’s advisor’s office in accordance with Institutional Review Board (IRB).

Throughout the week of camp, parents were reminded about the survey. A drop box was provided for the parents to drop off their surveys when completed. An address was also provided if parents wished to send their survey by mail. On the last day of the camp week, the researcher reminded parents of the survey, and passed another copy out to anyone who wanted to participate or lost the original survey copy. Parents were informed to contact the researcher with further questions using a phone number and e-mail address provided by the researcher.

The researcher contacted the participants four times to get responses. The first contact was on registration day at camp (the first day of the camp week). The second contact occurred on the last day of camp before the sleepover. The third contact was through a reminder sent to the e-mail addresses that parents provided at the time when first given the survey. This contact thanked families who had participated and reminded
those who had not participated yet to send their surveys to the researcher. The final reminder was sent to only those who had not returned their surveys after a four week time period.

Analysis of Potential Errors and Problems in the Study

All of the returned surveys were completed enough to be used in data collection, therefore there was not any non-response error. There was not a true sampling error, as the sample was a convenience sample. The study could have been done with parents who were not as active in non-formal education, allowing for more unbiased results as per the population. This was controlled by focusing the study on parents at Shaver’s Creek specifically. Further research studies could broaden the population by looking at parents who were not as involved in non-formal education. Such studies would allow for a population not quite as entwined with non-formal education to express their views in the research areas.

Summary

The parents’ perception of their awareness, importance of, and barriers to involvement in non-formal education were recorded through self-reported answers to the survey questions. Means and standard deviations of the perceptions were calculated to determine why parents chose or did not choose to participate in non-formal education with their children. The data collected was presented as a help to non-formal educators to help them understand why parents might participate or not participate in programs. The
results of the study could be applied to improve future programs and involve more parents in their children’s learning process.
CHAPTER 4

Results

This chapter presents the results obtained from the data collected through statistical and qualitative analysis. The purpose of this study was to determine some of the reasons parents choose to participate or not participate in non-formal education activities with their children. The results are outlined per the following objectives:

1. To describe demographic information about parents of children and families who attend Shaver’s Creek Summer Day Camp.

2. To determine parents’ self-perceived involvement in programs similar to Shaver’s Creek Summer Day Camp.

3. To determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.

4. To determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.

5. To determine why parents choose or do not choose to participate in non-formal education with their children.

6. To identify barriers that prevent parents from participating in non-formal education with their children.
Demographic Profile of the Parents and Families

Objective #1: To describe demographic information about parents of children who attend Shaver’s Creek Summer Day Camp.

Forty-one parents of children who attended Shaver’s Creek Summer Camp 2009 filled out the survey questionnaire. Only 40 of the participants, however, responded to demographic questions. These questions included inquiries about the number of children they had attending summer camp, the total number of children the parents have, the number of years anyone in their family attended summer camp, the parents’ gender, the highest degree earned by the respondent, what county they live in, and how far they live from an non-formal education facility.

The first demographic question was about the number of children the parents had who attended Shaver’s Creek Summer Day Camp. Of the 40 participants who responded to this question, eight parents did not have any children attend camp (but they did attend a similar activity at Shaver’s Creek), 16 parents had one child at camp, 13 parents had two children at camp, and three parents had 3 children at camp.

The second demographic question was in regards to the total number of children the parents have. Of the parents surveyed, 56.1% (n=23) of the participants have two children, 19.5% (n=8) have one child, 17.1% (n=7) have three children, and 4.9% (n=2) have four children.

There was a large variation in the number of years the parents had children who attended camp, ranging from this being their first year attending to having some family members attend for the past 35 years. Table 4.1 outlines the break down of how many
years families have attended camp. Twenty-two percent (n=9) of the parents had children who attended camp for one year. For 19.5% (n=8) of the respondents this was their first year their children attended camp, and for 17.1% of the participants (n=7), their children attended camp for two years.

Table 4.1. Number of years anyone in the family attended Shaver’s Creek Summer Day Camp.

<table>
<thead>
<tr>
<th>Years</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>19.5</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>22.0</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>17.1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>35</td>
<td>1</td>
<td>2.4</td>
</tr>
</tbody>
</table>

The majority of participants (n=31) were female, and nine of the participants were male. The parents were well educated, as is shown in Table 4.2, with approximately 86% of the respondents holding a Bachelor of Science degree or higher.
Table 4.2. Highest degree earned by parents

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>Associate’s Degree</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>12</td>
<td>29.3</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>18</td>
<td>43.9</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>5</td>
<td>12.2</td>
</tr>
</tbody>
</table>

As shown in Figure 4.1, most of the families (77.5%; n=31) came from Centre county, Pennsylvania. Other families came from Huntingdon county, Montgomery county, and Blair county, Pennsylvania. One family attended camp all the way from Orange county, California.

Figure 4.1. Participants county of residence
As shown in Table 4.3, twenty-two of the families (55%) lived within five miles of a non-formal education facility. The population surveyed is largely from areas where a non-formal education facility is located.

Table 4.3. Miles to closest non-formal education facility

<table>
<thead>
<tr>
<th>Miles</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>9.8</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>14.6</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>2.4</td>
</tr>
</tbody>
</table>
Self-perceived Parental Involvement, Knowledge, and Importance of Select Non-Formal Education Topics

Objective #2: To determine parents’ involvement in programs similar to Shaver’s Creek Summer Day Camp.

Response categories for this question included: 1 (Very Uninvolved), 2 (Somewhat Uninvolved), 3 (Somewhat Involved), and 4 (Very Involved). The results are outlined in Table 4.4. Parents perceived themselves to be “very involved” in their children’s learning success (mean = 3.63, st. dev. = +/- 0.767). Parents perceived themselves to be “somewhat involved” in education programs at zoos and/or aquariums (mean = 2.46, std. dev. = +/- 0.925). The parents perceived that they were equally involved (“very involved”) in most of the topics, and had high levels of involvement.

Table 4.4. Parental self-perceived involvement in select non-formal education topics

<table>
<thead>
<tr>
<th>(*Compared on a scale of 1 to 4. )</th>
<th>Mean*</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td>3.15</td>
<td>+/- 0.823</td>
</tr>
<tr>
<td>Formal Education Programs at Zoos and/or Aquariums</td>
<td>2.46</td>
<td>+/- 0.925</td>
</tr>
<tr>
<td>Formal Education Programs at Nature Centers</td>
<td>2.56</td>
<td>+/- 0.923</td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking)</td>
<td>3.39</td>
<td>+/- 0.833</td>
</tr>
<tr>
<td>Learning</td>
<td>3.63</td>
<td>+/- 0.767</td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td>3.07</td>
<td>+/- 0.787</td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td>3.00</td>
<td>+/- 0.949</td>
</tr>
<tr>
<td>Non-Formal Education (out of school)</td>
<td>3.56</td>
<td>+/- 0.709</td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td>3.51</td>
<td>+/- 0.637</td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch)</td>
<td>3.59</td>
<td>+/- 0.670</td>
</tr>
</tbody>
</table>
Objective #3: To determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.

Response categories for this question included: 1 (I know nothing about the topic) or 2 (I know a little bit about the topic) or 3 (I know quite a bit about the topic). Parents perceived that they know the most about both hands-on learning and informal outdoor play (such as playing catch and on playgrounds; mean = 2.61, st. dev. = +/-0.542). Parents perceived that they know “a little bit” about education programs at zoos and/or aquariums (mean = 1.95, std. dev. = +/- 0.498). Results related to parental self-perceived knowledge are outlined in Table 4.5. Overall, parents perceived that they know “a little bit” about each topic they were asked about.

Table 4.5. Parental self-perceived knowledge of non-formal education topics.

<table>
<thead>
<tr>
<th>(*Compared on a Scale of 1 to 3.)</th>
<th>Mean*</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td>2.17</td>
<td>+/- 0.543</td>
</tr>
<tr>
<td>Education Programs at Zoos and/or Aquariums</td>
<td>1.95</td>
<td>+/- 0.498</td>
</tr>
<tr>
<td>Education Programs at Nature Centers</td>
<td>2.12</td>
<td>+/- 0.600</td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking with your family)</td>
<td>2.34</td>
<td>+/- 0.617</td>
</tr>
<tr>
<td>Effects of Parental Involvement on Children’s Learning Success</td>
<td>2.56</td>
<td>+/- 0.634</td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td>2.32</td>
<td>+/- 0.650</td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td>2.34</td>
<td>+/- 0.762</td>
</tr>
<tr>
<td>Non-Formal Education (out of school)</td>
<td>2.44</td>
<td>+/- 0.594</td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td>2.61</td>
<td>+/- 0.542</td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch, playgrounds)</td>
<td>2.61</td>
<td>+/- 0.542</td>
</tr>
</tbody>
</table>
Objective #4: To determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.

Participants could choose from the following responses for this question: 1 (Very Unimportant), 2 (Unimportant), 3 (Neutral), 4 (Important), and 5 (Very Important). As shown in Table 4.6, parents perceived that the effects of parental involvement on children’s learning success to be between “important” and “very important” (mean = 4.66, st. dev. = +/-0.990). Parents perceived formal education programs at zoos and/or aquariums to be “neutral” (mean = 3.59, std. dev. = +/- 0.741). There was not much difference in most of the topics, meaning parents perceived all of the select non-formal education topics to be of similar importance. They perceived all of the topics importance to be relatively high. All of the topics were perceived as “important” meaning 4.0 or above on the scale), with the exception of formal education programs at zoos or aquariums.
Table 4.6. Parental self-perceived importance of select non-formal education topics.

<table>
<thead>
<tr>
<th>(*Compared on a Scale of 1 to 5.)</th>
<th>Mean*</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td>4.34</td>
<td>+/- 1.039</td>
</tr>
<tr>
<td>Formal Education Programs at Zoos and/or Aquariums</td>
<td>3.59</td>
<td>+/- 0.741</td>
</tr>
<tr>
<td>Formal Education Programs at Nature Centers</td>
<td>4.00</td>
<td>+/- 0.894</td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking with your family)</td>
<td>4.22</td>
<td>+/- 0.909</td>
</tr>
<tr>
<td>Effects of Parental Involvement on Children’s Learning Success</td>
<td>4.66</td>
<td>+/- 0.990</td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td>4.20</td>
<td>+/- 0.954</td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td>4.34</td>
<td>+/- 0.938</td>
</tr>
<tr>
<td>Non-formal Education (out of school)</td>
<td>4.44</td>
<td>+/- 0.896</td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td>4.63</td>
<td>+/- 0.859</td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch, playgrounds)</td>
<td>4.49</td>
<td>+/- 0.870</td>
</tr>
</tbody>
</table>

**Parental Participation in Non-Formal Education Activities**

**Objective #5: To determine why parents choose or do not choose to participate in non-formal education with their children.**

There were several reasons parents chose to participate in non-formal education activities with their children. Ninety-five percent of participants (n=39) stated their main reasons for involvement in their children’s non-formal education activities to be their children learning new things and to teach their children about the natural world. Eighty-four and a half percent of the participants (n=35) stated their second most important reasons for participating were to have fun and to spend time with their children. Most of the participants surveyed (84.5%; n=35) stated helping their children avoid future risky
behaviors was not a reason they participated in non-formal education activities. The results are shown in Table 4.7.

Table 4.7. Reasons parents participate in non-formal education activities with their children.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>To meet new people.</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Children like to meet new people.</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>Helps my children build relationships with others.</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>Helps my children learn better in school.</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Helps my children’s academic performance.</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Helps my children avoid developing future risky behaviors.</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>To have fun.</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>My children have fun.</td>
<td>38</td>
<td>3</td>
</tr>
<tr>
<td>My friends participate with their children.</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>My children learn new things.</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>To spend time with my children.</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>To teach my children about the natural world.</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>Children not getting enough outdoor time in school.</td>
<td>13</td>
<td>28</td>
</tr>
</tbody>
</table>

**Objective #6: To identify barriers that prevent parents from participating in non-formal education with their children.**

In general this population of parents did not have many barriers keeping them back from participating in non-formal education activities with their children. The factor that
seemed to be the main barrier was time. Approximately seven percent (n=3) of the participants stated time as a major limitation to their participation. A second barrier identified by the parents (n=4), specifically in the free response area about barriers was time. The factor that was most reported as “not at all a limitation was children not enjoying non-formal education (95.1%, n=39). Ninety percent (n=37) stated their children not enjoying being outdoors as the second least limiting factor. These results are reflected in Table 4.8.

Table 4.8. Factors limiting parental participation in non-formal education with their children.

<table>
<thead>
<tr>
<th></th>
<th>Not at all a Limitation</th>
<th>Somewhat of a Limitation</th>
<th>A Major Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Availability of Resources</td>
<td>33</td>
<td>80.5</td>
<td>6</td>
</tr>
<tr>
<td>A Family Member’s Allergies</td>
<td>28</td>
<td>68.3</td>
<td>13</td>
</tr>
<tr>
<td>Financial Cost</td>
<td>15</td>
<td>36.6</td>
<td>24</td>
</tr>
<tr>
<td>Transportation</td>
<td>28</td>
<td>68.3</td>
<td>13</td>
</tr>
<tr>
<td>Time Required for Participation</td>
<td>17</td>
<td>41.5</td>
<td>21</td>
</tr>
<tr>
<td>Comfort Level in Nature</td>
<td>29</td>
<td>70.7</td>
<td>10</td>
</tr>
<tr>
<td>Parent’s Knowledge of Nature</td>
<td>26</td>
<td>63.4</td>
<td>13</td>
</tr>
<tr>
<td>Children do not Enjoy Non-Formal Education</td>
<td>39</td>
<td>95.1</td>
<td>2</td>
</tr>
<tr>
<td>Children do not Enjoy Being Outdoors</td>
<td>37</td>
<td>90.2</td>
<td>4</td>
</tr>
</tbody>
</table>

The participants were asked to answer which factor was the most limiting to them in a free response format. Of the 25 participants who responded to this question, 17 stated a schedule conflict (time) as their main reason for not attending a non-formal education
program. The second major limitation to parental participation was finances, as was stated by four participants. Other barriers listed included location, the program being full, or bad weather, as can be seen in Figure 4.2.

Figure 4.2. Barriers to parental involvement in non-formal education
CHAPTER 5

Conclusions

This chapter summarizes the purpose, objectives, and procedures used during this study, as well as the findings and conclusions from the survey instrument. Recommendations for future studies and for programs are given at the end of the chapter.

Summary of Purpose and Objectives of this Study

The purpose of this study was to determine some of the reasons parents choose to participate or not participate in non-formal education activities with their children. The study was developed around the following objectives:

1. To describe demographic information about parents of children and families who attend Shaver’s Creek Summer Day Camp.
2. To determine parents’ self-perceived involvement in programs similar to Shaver’s Creek Summer Day Camp.
3. To determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.
4. To determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.
5. To determine why parents choose or do not choose to participate in non-formal education with their children.
6. To identify barriers that prevent parents from participating in non-formal education with their children.

Summary of Methods and Procedures Used in this Study

The participants in this study were 41 parents who had children attend Shaver’s Creek Summer Day Camp, or had been to Shaver’s Creek for another non-formal education activity. The majority of the participants were females with two children, and had at least one child participating at Shaver’s Creek. Most of the families were from Centre County and lived within five miles of an non-formal education facility.

Reasons for parental involvement were determined through a descriptive study of parents whose children attended Shaver’s Creek Summer Day Camp 2009 or attended a similar activity at Shaver’s Creek. Summer Day Camp is a four or five day program where children spend six hours learning about nature with staff from Shaver’s Creek Environmental Center. Surveys were handed out at registration during the first day of camp. A drop box was provided for the parents to return the completed surveys when completed. An address was also provided if parents wished to return the survey by mail.

The research questions were addressed through a researcher-developed survey instrument. A panel of experts reviewed the survey instrument for content and face validity. Reliability for this instrument was determined through a pilot test that was conducted during the first week of Shaver’s Creek Summer Day Camp 2009 on a sample population (n=10) similar to the final research population. Using SPSS 16.0, reliability of the entire survey instrument was determined to be Cronbach’s $\alpha = 0.80$. 

The parents’ perception of their knowledge, importance of, and involvement in non-formal education were recorded through self-reported responses to the survey questions. Descriptive statistics (mean, standard deviation, and frequency) were used to describe why parents chose or did not choose to participate in non-formal education with their children.

Summary of Findings

This study surveyed parents whose children attended Shaver’s Creek Summer Day Camp 2009 or attended a similar program at Shaver’s Creek. The survey population was chosen through convenience sampling. Parents were asked to participate upon arrival on the first day of camp. Forty-one parents chose to participate in the study, who were given the survey on the very first day of the camp.

Demographic Profile of the Parents and Families

Objective #1: To describe demographic information about parents of children who attend Shaver’s Creek Summer Day Camp.

Forty of the parents who participated responded to demographic questions. Six parents did not have any children that attended the camp, 18 parents had one child at camp, 13 parents had two children at camp, and three parents had three children at camp.

The number of years the parents had children who attended camp ranged from not attending to having some family members attend for 35 years. The majority of participants’ who responded to the questionnaire had children (22.0%) who attended
camp for one year. For 19.5% of the participant’s children, this was their first year at camp, and 17.1% of the participants’ children reported attending camp for two years.

Of the participants who responded to the demographic questions, 22.4% of the participants were male, and 74.6% of the participants were female. The majority of the parents (43.9%) had earned a Master’s Degree, and 29.3% of the parents had a Bachelor’s Degree. The majority of the families (77.4%) lived in Centre County, Pennsylvania. Most families lived within five miles of a non-formal education facility.

Self-perceived Parental Involvement, Knowledge, and Importance of Select Non-Formal Education Topics

Objective #2: To determine parents’ self-perceived involvement in programs similar to Shaver’s Creek Summer Day Camp.

Parents perceived themselves to be “very involved” in their children’s learning success (mean = 3.63, st. dev. = +/-0.767). Parents perceived themselves to be “somewhat involved” in education programs at zoos and/or aquariums (mean = 2.46, std. dev. = +/- 0.925). There are not many zoos or aquariums in the State College area, and since most of the population is from that area, the parents are probably not very involved in these types of non-formal education programs. The parents perceived that they were highly involved across most of the topics, such as outdoor education, lesson content taught in schools, and hands-on learning. This was probably because the population is very familiar with non-formal education, so are involved in most of the selected topics.
Objective #3: To determine parents’ self-perceived knowledge about non-formal education topics similar to the topics taught at Shaver’s Creek Summer Day Camp.

Parents perceived they “know quite a bit about” both hands-on learning and informal outdoor play (such as playing catch and on playgrounds; mean = 2.61, st. dev. = +/-0.542). Parents perceived that they “know a little bit about” education programs at zoos and/or aquariums (mean = 1.95, std. dev. = +/- 0.498). There are not many zoos or aquariums in the State College area, and since most of the population is from that area, they probably do not know much about them for that reason. Most of the parents in the study encourage their children to be outside, based on the fact that their children are enrolled in a day camp that is largely based outside. They would know about their children playing outside based on this fact.

Objective #4: To determine the parents’ self-perceived importance of programs similar to Shaver’s Creek Summer Day Camp.

The parents surveyed perceived the effects of parental involvement on children’s learning success to be the “most important” non-formal education topic (mean = 4.66, st. dev. = +/-0.990). They perceived formal education programs at zoos and/or aquariums to be the “least important” (mean = 3.59, std. dev. = +/- 0.741). There are not many zoos or aquariums in the State College area, and since most of the population is from that area, they do not see them as important as what they are familiar with. There was not much difference in most of the data on the other topics, showing that parents perceived all of the select non-formal education topics to be of similar importance. Parents in the study perceived all of the topics’ importance to be relatively high. This is probably because the
participants are very familiar with non-formal education, so they give it a high level of importance.

Conclusions, Discussions, and Recommendations – Objectives #2, #3, and #4

The parents perceived themselves to be “very involved” (mean = 3.63, std.dev. = +/- 0.767) in their children’s learning success. This reflects the idea that many parents recognize the importance of getting their children outside, and helping their children with their learning.

“Research has long shown that parents’ positive involvement with their children’s schooling is related to many positive outcomes” (Horowitz & Bronte-Tinkew, 2007, p.1). According to the results of this study, parents perceived that involvement in their children’s learning was “very important” (mean = 4.66, std. dev. = +/- 0.990). In the additional comments section on the survey instrument, one participant stated, “Most programs focus on just the children without parents present once children hit elementary school. It would be nice to have some parent with child programs.” Parents recognize the importance of their involvement, but feel that not enough programs exist in non-formal education to include them in the learning process. This supports the idea that parents think they should be involved in their children’s education; implying a need for including them in planning of outdoor programs.

Parents perceive that they “know a little bit about” most of the selected non-formal education topics. This further supports the idea that more programs involving both parents and their children would help parents be more comfortable with the natural world
and more involved in their children’s learning. Non-formal education provides educators, students, and parents with an alternative or supplement to traditional classroom education, making it possible to teach academic standards while allowing children to be active participants in their learning (Farmer, Knapp, & Benton, 2007).

According to Lieberman and Hoody (1998), using the environment as an integrating context for learning pushes students to have higher scores on standardized tests in reading, writing, math, science and social studies; fewer discipline problems in the classroom; causes an increase in learning engagement and excitement about learning; and creates an enhanced feeling of value and accomplishment where learning is concerned. In the additional comments section of the survey, another parent suggested an increase in the number of programs offered for “parents/children, such as father/daughter, etc…”) Findings of the study support the idea that parents could know more about non-formal education, but they recognize the importance of and want to be involved in their children’s education and learning. This may be due to the fact that the survey population is familiar with non-formal education, and are well-educated themselves. Non-formal education facilities could use this information to build programs that involve both parents and children learning and playing in the natural world.

Such an activity could be a walk about the seasons where parents and children cooperate to explore the forest. One specific activity for such a walk is a tree exploration. Parents could lead their blindfolded children to a tree in a designated spot in the woods. The children could use their senses to learn about the tree, then try to find the tree once the blindfold comes off. The parent and child could switch roles, and repeat the activity.
This activity, and others that are similar, would allow parents and children to spend time learning about the natural world together.

*Parental Participation in Non-Formal Education Activities*

**Objective #5: To determine why parents choose or do not choose to participate in non-formal education with their children.**

There were several reasons parents chose to participate in non-formal education activities with their children. The majority of participants (95.1%) stated their reasons for involvement in their children’s non-formal education activities to be with their children learning new things and to teach their children about the natural world. Other participants (84.5%) stated their second most important reasons for participating were to have fun and to spend time with their children. This reflects the idea that the parents surveyed are a part of the population that enjoys being outdoors, so they think it is important for their children to be outdoors. This confers with what Louv stated in *Last Child in the Woods*:

> Not that long ago, summer camp was a place where you camped, hiked in the woods, learned about plants and animals, or told firelight stories about ghosts or mountain lions. As likely as not today, “summer camp” is a weight-loss camp, or a computer camp. (p.2)

In the present day, children no longer have the opportunity to run free in the woods, building forts and learning their world like the back of their hand, but the parents in this study know their children should learn outside.

According to Horowitz and Bronte-Tinkew (2007), outdoor education helps children’s relationships and academic performance, helps reduce children’s risky behaviors, helps outdoor education facilities create better programs, and helps parents do
a better job of parenting. The majority (84.5%) of the parents surveyed stated helping their children avoid future risky behaviors was not a reason they participate in their learning. The children of the parents in the population are young, so risky behaviors may not be a forefront concern to parents yet.

Conclusions, Discussion, and Recommendations – Objective #5

Parents want to participate in non-formal education activities with their children because both they and their children enjoy learning and being outdoors. With this in mind, non-formal educators should create programs for both parents and their children that combine fun and learning to attract participants. Allowing parents to be involved in their children’s learning motivates the parents to enroll in non-formal learning activities. Parents want the opportunity to be involved in their children’s lives, and non-formal education activities can provide these opportunities.

Objective #6: To identify barriers that prevent parents from participating in non-formal education with their children.

In general this population of parents did not have many barriers keeping them from not participating in non-formal education activities with their children. The factor participants (7.3%) stated as a major limitation to their participation was time. In the free response section, this was also the reason parents (17) listed as the most important reason they do not participate in non-formal education activities with their children. This reason
supports the idea that parents want to participate in non-formal education activities with their children, but cannot always make time in their schedules to do so.

The factor that was least limiting to the majority of the survey population (95.1%) was children not enjoying non-formal education. The survey population was largely comprised of people interested in non-formal education, as most participants (82.9%) already send their children to Shaver’s Creek Environmental Center Day Camp.

Conclusions, Discussion, and Recommendations – Objective #6

As the participants are already interested in non-formal education, it makes sense there would not be many limitations to their participation. A schedule conflict is the main reason for not being able to participate. If parents want to participate in non-formal education, time would be the main thing that would get in the way, as it is something that cannot be easily controlled. Programs offered by non-formal education facilities should be at times most convenient to parents schedules. They should be short enough to fit into busy schedules while still allowing time for learning to occur. These ideas would allow more parents to participate in non-formal education activities with their children.

Recommendations from the Research

The following are recommendations from the findings of this research.

- **For parents:** If parents see time and finances as the most problematic barriers to their participation in non-formal education, they should try to find
inexpensive ways to increase involvement. This could include programs that are free or less costly, or activities at home such as reading books from the library or just observing nature in the backyard. As far as time, environmental educators such as Rodenburg (1994) believe that with minimal planning and time, families can enjoy nature together while staying in their own backyards.

- **For Shaver’s Creek and Other Non-Formal Education Facilities:** Non-formal education facilities, such as Shaver’s Creek, should attempt to create programs for parents that coordinate with busy work schedules. Programs offered at night (after 5pm) and on the weekends would increase parental attendance. Non-formal education facilities could also attempt to create free or price reduced programs. Application to grants and creative ways to save money would help reduce the cost of programs, allowing parents to attend. Many non-formal education facilities are not in the heart of town, so educators could travel to the audience. Travel would allow non-formal education facilities to incur most of the costs, as well as shorten time for families to attend, covering both of the barriers found in this study.

- **For children:** The barriers do not really affect children directly, other than how it affects their families. Children cannot really help their parents with time or finance problems, but they can express how much they enjoy non-formal education. This might encourage parents to become further involved in such programs.
Summary

The research study outlined in this paper was designed to explore the reasons parents participate or do not participate in non-formal education activities with their children. It was found that parents know their influence is important on their children’s learning, but they do not always have the time to go to scheduled activities. Using the results of this study, non-formal educators could create programs that meet the needs of parents and children. By incorporating these needs into programs, increased parental enrollment would benefit parents, children, and non-formal educators alike.
REFERENCES


Appendix A

Survey Instrument
Parental Involvement in Non-Formal Education

Department of Agricultural and Extension Education
215 Ferguson Building
University Park, PA 16802
You are invited to participate in this survey to provide information on your participation in, awareness of, and the importance of non-formal education.

Please answer all questions in the survey.

Your participation is completely voluntary. Your responses will be kept confidential. Individual responses will not be identified in any report.

An non-formal education activity includes any activity done in an non-formal education setting, i.e. planned programs at an outdoor education facility and informal activities planned by you. With that in mind, please answer the following questions.

1. Have you participated in any non-formal education activities with your children in the past year? **(Please circle one)** Yes No

   **If you circled “No” above, please skip ahead to Question #4 on Page 3. If you circled “Yes”, please continue to answer the questions below.**

2. If you circled “Yes” above, about how many outdoor education activities have you participated in with your children in the past year? **(Please give a total number)** _________

3. Which of the following types of non-formal education programs have you participated in? **(Please check all that apply)**

   - Nature Center Programs
   - Zoo and/or Aquarium Programs
   - School Field Trips
   - Extension Programs (4-H)
   - Scouts
   - Other **(Please specify)** ______________________
4. What factors influence your decision to participate (or not participate) in non-formal education activities with your children? *(Please check all that apply)*

The following are reasons I participate in non-formal activities with my children:

- □ To meet new people
- □ Children like to meet new people
- □ Helps my children build relationships with others
- □ Helps my children learn better in school
- □ Helps my children’s academic performance
- □ Helps my children avoid developing future risky behaviors
- □ To have fun
- □ My children have fun
- □ My friends participate with their children
- □ My children learn new things
- □ To spend time with my children
- □ To teach my children about the natural world
- □ Children not getting enough outdoor time in school.
- □ Other *(Please specify)* ____________________________

**From the choices you checked above, please circle the top three factors that are most important to you.**
5. For each of the following non-formal education topics, please circle only one response that best represents your awareness of the topics.

Awareness describes your knowledge about the topic, such as research done on the topic, personal experience with the topic, and/or an understanding of where to involve your family with the particular topic, etc... Please respond using the following scale:

1 = I know nothing about the topic  
2 = I know a little bit about the topic  
3 = I know quite a bit about the topic

<table>
<thead>
<tr>
<th>How much do you know about…</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Programs at Zoos and/or Aquariums</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Programs at Nature Centers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking with your family)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects of Parental Involvement on Children’s Learning Success</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Formal Education (out of school)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch, playgrounds)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Topics:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. For each of the following non-formal education topics listed below, please circle only one response that best represents your opinion of the importance of each of the topics with regards to your child’s intellectual and physical development. For each example, consider how much you think the topic effects you or your child, and how important it is in your life. Please respond using the following scale:

1 = Very Unimportant  
2 = Unimportant  
3 = Neutral  
4 = Important  
5 = Very Important

<table>
<thead>
<tr>
<th>What is the importance of (to you)...</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal Education Programs at Zoos and/or Aquariums</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal Education Programs at Nature Centers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking with your family)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects of Parental Involvement on Children’s Learning Success</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Formal Education (out of school)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch, playgrounds)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Topics: ________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. For each of the following topics, please circle only one response that best represents your involvement in your child’s participation in each of the topics below. Please respond using the following scale:

1 = Very Uninvolved  
2 = Somewhat Uninvolved  
3 = Somewhat Involved  
4 = Very Involved

<table>
<thead>
<tr>
<th>What is your INVOLVEMENT LEVEL in your child's...</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Education</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Formal Education Programs at Zoos and/or Aquariums</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Formal Education Programs at Nature Centers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Non-Formal Outdoor Education (i.e. hiking with your family)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Lesson Content Taught in School Classrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Teaching Styles in School Classrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Non-Formal Education (out of school)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Hands-on Learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Informal Outdoor Play (i.e. playing catch, playgrounds)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Other Topics: ________________________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
8. Which of the following factors limit your participation in non-formal education with your children? Please respond using the following scale:

1 = Not at all a Limitation  
2 = Somewhat of a Limitation  
3 = A Major Limitation

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of resources (i.e. outdoor learning facilities, parks, backyard, etc…)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A family member’s allergies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The financial cost of participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The time required for participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort level in nature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My knowledge of nature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My children do not enjoy non-formal education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My children do not enjoy being outdoors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any other reason:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any other reason:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. If you ever choose to not attend an outdoor education experience with your child(ren), what would you list as the main reason for not attending?

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________

10. How many of your children are attending Shaver's Creek Summer Camp 2009? ________

11. For how many years has anyone in your family attended Shaver's Creek Summer Camp? (Please give a total number) ________

12. How many children do you have? ______________________________

13. How old are your children? (Please list all ages) ________ ________

14. What is your gender? (Please circle one): M F

15. Which county do you live in? ______________________________

16. What is your highest completed level of education? ___________________

17. Approximately how close (miles) are you to a non-formal education facility? ____________
18. We appreciate any comments/suggestions you can provide to help non-formal educators. Please use the space below to write your comments.
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

19. Would you be interested in receiving further information on the following Shaver’s Creek programs? (Please circle all that apply). If so, is there an e-mail or address where we can reach you? If so, this will only be used by Shaver’s Creek to send out information. It will not be used in any other capacity.

________________________________________________________________

_______________________________
Kids Corner (late fall & winter)

_______________________________
Maple Harvest Festival (March)

_______________________________
Children’s Halloween Trail and Festival (October)

_______________________________
Field Trips at the center or at your school

_______________________________
Outdoor School

_______________________________
Migration Morning Birdwalks (April-May, September)

_______________________________
Youth Programs (Fall or Spring)

_______________________________
Other Public Programs (Wildflower, Mushroom, Fall Foliage Walks, etc.)

_______________________________
Teambuilding Programs

_______________________________
Birthday Parties and other Rentals
Appendix B

IRB Approval
Reminder Cards 1 & 2

Date:

Dear Parent:

On _________ 2009, you were given a survey regarding the reasons you might be involved in your children’s non-formal education. So far we have not received your completed survey.

If you have already completed and returned the survey, please accept our sincere thanks. If not, please do so today. Your input is very important to the future direction of non-formal education centers such as Shaver’s Creek Environmental Center. We truly appreciate your assistance in this important study. We look forward to receiving your completed surveys. Thanks again and best wishes.

Sincerely,

John C. Ewing, Ph.D.    Kate Berardi
Assistant Professor    Graduate Assistant
Script for Recruitment

**Principle Investigator:** Hello and welcome to Shaver’s Creek. My name is Kate Berardi, and I am a graduate student and friend of Shaver’s Creek. I was wondering if I could take a few minutes and see if you might be interested in helping me out with my graduate school research.

**Participant Reply:** No.

**Principle Investigator:** Thanks anyway, and I hope you have a great week at camp.

**Participant Reply:** Yes.

**Principle Investigator:** Thank you! Let me tell you a little bit about my research. I am investigating some of the factors that influence why parents participate or do not participate in non-formal education activities with their children. Non-formal education includes any learning activity outside of school, such as Shaver’s Creek Day Camp, visits to zoos, hikes with your family, and field trips to name a few. The information gathered in the study will hopefully help places like Shaver’s Creek create programs for parents and their children. If you are interested in participating in my study, you will have to fill out a brief survey asking a little more about your reasons for participation, and return it to the survey box on the registration table at your leisure. The study will be completely confidential. Are you interested in helping me with this study?

**Participant Reply:** No.

**Principle Investigator:** Well thank you for your time today. Have a great week at camp!

**Participant Reply:** Yes.

**Principle Investigator:** Thank you! If you could please sign this informed consent sheet, I will pass you your survey. You can return it any day this week, or to the address provided on the envelope.
Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: Parental Involvement in Non-Formal Education
Principal Investigator: Kate Berardi, Graduate Student
009 Ferguson Building
University Park, PA 16802
814-863-0416
mkb5001@psu.edu

Advisor: Dr. John Ewing
215 Ferguson Building
University Park, PA 16802
814-863-7463
jce122@psu.edu

1. Purpose of the Study: The purpose of this research is to investigate reasons parents attend non-formal education programs with their children, such as the programs at Shaver's Creek. The information gathered in the study will describe parents who attend programs and parents who do not attend programs, and hopefully give non-formal education facilities ideas for new programs.

2. Procedures to be followed: You will be asked to answer 14 questions on a survey.

3. Duration/Time: The survey will take about 20 minutes to complete.

4. Statement of Confidentiality: Your participation in this research is confidential. The data will be stored and secured at Ferguson Building in a locked file. Your information will only be linked to a number assigned to you when you agree to participate. Only the principle investigator and her advisor will have access to these numbers. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.

5. Right to Ask Questions: Please contact Kate Berardi at (814) 863-0416 or mkb5001@psu.edu or Dr. John Ewing at (814) 863-7463 or jce122@psu.edu with questions or concerns about this study.

6. Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

______________________________  _____________________
Participant Signature       Date

______________________________  _____________________
Person Obtaining Consent      Date
First IRB E-Mail

Hi Mary,

The Office for Research Protections (ORP) has reviewed the above-referenced study and has determined that additional information and/or revisions are needed in order to reach a decision regarding the determination of exemption. Ensure that the assigned number noted in the subject line is listed on all correspondence regarding this study. Please respond to the following concern(s):

1. Regarding the application, please clarify the following by revising the “Exemption Determination Form” and resubmitting it for review. If changes are made to any other responses in the “Exemption Determination Form,” please indicate the Question(s) where additional changes have been made. Signatures do not need to be obtained again.
   a. Question 16E-
      
      I. Are participants given the survey to take home with them? I assume this is the case if they do not have time to fill it out there, but it is not explained here that they can take it home and will be sent reminders.

      II. Could you please describe how you will access participant’s addresses to send the reminders.

      III. Also, when they send their surveys back, how will you know who it is that is sending it back without a name attached? This is also addressed in 16g under confidentiality and privacy where you said participants will be given an id so that you can track respondents. Please clarify this process.

2. In the recruitment*:
   a. Please add a statement explaining how the study is affiliated with Penn State.

*Once revised, please send an updated version as a separate email attachment for review.

NOTE: One email may be sent with the requested revisions included as separate attachments. Multiple emails with only one attachment are not necessary.

Please respond to the concern(s) raised by the IRB by June 5, 2009 so that a decision may be reached. If you have any questions or need to check the status of your application, please feel free to contact me directly. Human participants may not be involved until you have received written documentation from this office.

Thank you,
Sara

Sara Hartman
Research Compliance Coordinator II
Office for Research Protections
The Pennsylvania State University
201 Kern Graduate Building, University Park, PA 16802

Telephone: 814-865-3696
Second IRB E-Mail

Hi Mary Kate,

The Office for Research Protections (ORP) has reviewed the application for the research study noted in the subject line of this email and determined it to be exempt from IRB review. You may begin your research. This study qualifies under the following category:

Category 2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observations of public behavior unless: (i) information obtained is recorded in such a manner that human participants can be identified, directly or through identifiers linked to the participants; and (ii) any disclosure of the human participants’ responses outside the research could reasonably place the participants at risk of criminal or civil liability or be damaging to the participants’ financial standing, employability, or reputation. [45 CFR 46.101(b)(2)]

PLEASE NOTE THE FOLLOWING:

• Include your IRB number in any correspondence to the ORP.
• The principal investigator is responsible for determining and adhering to additional requirements established by any outside sponsors/funding sources.
• Record Keeping
  o The principal investigator is expected to maintain the original signed informed consent forms, if applicable, along with the research records for at least three (3) years after termination of the study.
  o This will be the only correspondence you will receive from our office regarding this exemption determination.
  ▪ MAINTAIN A COPY OF THIS EMAIL FOR YOUR RECORDS.
• Consent Document(s)
  o The exempt consent form(s) will no longer be stamped with the approval/expiration dates.
  o The most recent consent form(s) that you sent in for review is the one that you are expected to use.
• Recruitment Material
  o The most recent recruitment that you sent in for review is the one that you are expected to use.
• Follow-Up
  o The Office for Research Protections will contact you in three (3) years to inquire if this study will be on-going.
  o If the study is completed within the three year period, the principal investigator may complete and submit a Project Close-Out Report.
    (http://www.research.psu.edu/orp/areas/humans/applications/closeout.rtf)
• Revisions/Modifications
  o Any changes or modifications to the study must be submitted to the Office for Research Protections on the Modification Request Form - Exemption available on our website:
    http://www.research.psu.edu/orp/areas/humans/applications/modrequest.rtf
  o Modifications will not be accepted unless the Modification Request Form is included with the submission.

Please do not hesitate to contact me if you have any questions or concerns.

Thank you,

Sara Hartman
Research Compliance Coordinator II
Office for Research Protections
Appendix C

Qualitative Responses
Question 18: Additional Comments

1. Empowering children with knowledge from semi-structured study is important and hands-on.
2. Our family utilizes outdoor education facilities wherever we go. We love your programs.
3. Most programs focus on just the children without parents present once children hit elementary school. It would be nice to have some parent with child programs.
4. Never made that choice [to not attend an Environmental Education program with her children]! But I have been disappointed in content shared and methods used…and talked about it with kids.
5. Parent/child programs – Father/Daughter, etc…
6. Thank you.
7. Good survey. Good topic to be researching!
8. Always establish clear behavior expectations with both kids and parents and be sure to communicate and enforce them. Keep it framed in “the positive”.
9. Shaver’s Creek is a great facility. We appreciate all the activities.
10. The quality of the programs at Shaver’s Creek is outstanding!
11. I enjoy the outdoors more than my husband so we do less than I might do on my own.
Key Words: barriers, involvement, outdoor education, informal education, non-formal education