AN EXPLORATORY STUDY OF ENVIRONMENTAL VIEWS OF THE EASTERN BAND OF CHEROKEE INDIANS

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ABSTRACT

There is an emerging concern among the Eastern Band of Cherokee Indians (EBCI) that younger generations are losing traditional environmental views. This study explores modern day environmental views of the EBCI through an intergenerational approach. The primary research question guiding this study was: what are the environmental views of the EBCI? The secondary research question was: is there a generational difference in the environmental views of the EBCI? An exploratory, qualitative approach using participatory methods and 1:1 interviews with 14 participants ages 16 to 85 was employed. Responses were distinguished into six themes: philosophies, nature's value, human-nature relationship, influences, environmental concerns, and cultural loss. Findings indicated family and culture as significant influences on environmental views and demonstrated a generational difference in the environmental philosophies of participants. These findings have important implications for environmental education on the EBCI reservation.

Keywords: environmental education, Native American, American Indian, Cherokee, intergenerational study, environmental views, Significant Life Experience, participatory methods

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CHAPTER 1.

INTRODUCTION

In the face of the many global, environmental issues confronting today's society, our youth are uniquely positioned to enact solutions (Kola-Olusanya, 2008; LaFromboise & Marivic, 2003). Even so, a growing body of research suggests that concern for the environment is declining in the younger generation as a whole (Louv, 2008; Sobel, 2008; Twenge, Campbell, & Freeman, 2012). Environmental education helps to address these concerns by equipping students with the necessary knowledge, skills, and commitment for understanding their environment and their place in it (Archie & McCrea, 1996).

Statement of Need

In recent years, the idea of increasing ethnic diversity in environmental education has gained attention (Lewis & James, 1995; Mayeno, 2000; Quimby, Seyala, & Wolfson, 2007). Even so, there remains a lack of formal research about American Indians and environmental education (Lowan-Trudeau, 2013). This is a cause for concern because many American Indian tribes face unique environmental threats such as loss of traditional food sources, natural resource extraction on ancestral lands, and pollution due to poor infrastructure (Glenn, 2013; Korteweg & Russell, 2012; Kowalczak, 2013; Lawson, 2013). American Indian leaders want their youth to be part of the solution (Kowalczak, 2013; Riggs, 2005), but there is an emerging concern among elders of various tribes that their youth are following the trend of the current generation and are not holding traditional environmental views (Glenn, 2013; McDuffie, 2014; Takano, 2005). While an explicit American Indian environmental view has not been defined by research, the literature does contain information potentially relevant to the subject.

Though there are a diverse number of tribal cultures in North America, many studies agree that concern for the environment is traditionally an important value to many American Indian tribes (Aftandilian, 2011; Glenn, 2013; House, Stiffman, & Brown, 2006; Korteweg & Russell, 2012). Additionally, the idea of cultural loss across generations is a prevalent concern (Friedel, 2009; House et al., 2006; Lawson, 2013). Western education methods are often at odds with Native American educational pedagogy (Cajete, 1994, 1999; Gilbert, 2000; Glenn, 2013; LaFromboise & Marivic, 2003; Lowan, 2011; McDuffie, 2014), which involve passing down values and information holistically from generation to generation (Glenn, 2013; Kenyon & Hanson, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011). Environmental education could be a successful mechanism to utilize American Indian educational methods, and there are many programs currently available to American Indians (Hall, 2007; Kowalczak, 2013; Lowan-Trudeau, 2013; Swayze, 2011); however, there has been little research on the need for or long-term effectiveness of these programs (Kowalczak, 2013; McDuffie, 2014; Riggs, 2005).

Research Questions

In light of these conditions, this study contributed to the existing body of literature by exploring modern day Cherokee environmental views. Prior to this study, there was no formal research about Cherokee environmental views. Therefore the purpose of this study was to explore environmental views across Cherokee generations in hopes of providing useful information to the tribe in understanding the role of environmental education that authentically incorporates traditional ways of learning on the Eastern Band of Cherokee Indian (EBCI) reservation. The primary research question guiding this study was: what are the environmental

views of the EBCI? The secondary research question was: is there a generational difference in the environmental views of the EBCI?

Key Terms

- Environmental education: A process which promotes,

  > [an understanding of] the complex nature of the natural and built environments resulting from the interaction of [individuals' and communities'] biological, physical, economical, and cultural aspects to acquire the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems, and in management of the quality of the environment (UNESCO, 1978, p. 2).

- American Indian: A generalization for all the peoples and tribes of North America, including Alaska Natives, Métis, Eskimos, Aluets, and all the tribes of the continental USA and Canada (LaFromboise & Marivic, 2003). The EBCI prefer the term "American Indian" to the widely used "Native American" (Duncan, 1998). Though there are inherent inaccuracies in any such generalization, no disrespect is intended toward any group.
- Qualla Boundary: The 57,000 acres of land owned by the EBCI in western North Carolina. While also referred to as the EBCI reservation, this land is not a true reservation. It was purchased from the federal government on behalf of the Cherokee, and is known among the Cherokee people as the "Qualla Boundary" (Duncan, 1998).
- Participatory methods: Methodology that aims to engage the population under study in a collaborative process of research (Nelson & Wright, 1995; Semken, 2005). For example, an expert panel from the community and/or participants themselves may be invited to provide feedback on research design and/or analysis of results (Semken, 2005).

CHAPTER 2.

LITERATURE REVIEW

Environmental education research involving American Indians is a growing field of interest, but few formal studies have been conducted (Lowan-Trudeau, 2013). The relevance of such research is multi-faceted with many American Indian tribes facing environmental threats particular to their situation (Glenn, 2013; Korteweg & Russell, 2012; Kowalczak, 2013; Lawson, 2013), and wanting their youth to be a part of the solution (Gilbert, 2000; Kowalczak, 2013; Riggs, 2005). However, western education methods appear to be failing to meet the needs of many American Indian students (Cajete, 1994, 1999; LaFromboise & Marivic, 2003; Lowan, 2011). There is increasing evidence that traditional American Indian methods can be impactful on American Indian and non-American Indian students alike (Lawson, 2013; McDuffie, 2014), but there is an emerging concern among tribal elders that their youth are becoming disconnected from traditional cultural values, including environmental values (Glenn, 2013; McDuffie, 2014; Takano, 2005). There has been little research conducted on the state of American Indian youth's environmental views, and it appears that none explores this idea through the lens of generational differences. Even less environmental education research pertains to the EBCI in particular.

The literature review that follows will first present a synthesized understanding of traditional American Indian environmental views drawn from current literature, and will continue by exploring its relevance to American Indian youth, including the cultural importance of youth to many American Indian tribes. It will summarize what the research says about what works and what does not work in terms of education methods for American Indian students, and consider how environmental education can be a mechanism for successful, decolonized

education (i.e. education that seeks to reinforce traditional pathways instead of imposing western perspectives on its learners). Finally, suggestions will be made regarding potential areas for further development in the literature.

A Traditional American Indian Environmental Attitude

When considering possible generational differences in the environmental views of the EBCI, it is helpful to consider what the literature says about traditional American Indian environmental views in order to provide context. Though no traditional views have been defined by formal research for Cherokee in particular, a look at the seven core values published by the Cherokee Preservation Foundation reveals that the tribe values a "strong connection to with land and commitment to stewardship of the homelands" (2014). As this statement is necessarily broad, reviewing more specific literature pertaining to pan-tribal environmental ethics could be also informative.

Stereotypes aside, a relationship with nature has historically been an important value in many American Indian tribes (Aftandilian, 2011; Glenn, 2013; House et al., 2006; Korteweg & Russell, 2012). Dave Aftandilian (2011) expanded this idea by comparing tribes across the country, with an in-depth focus on the Hopi and Koyukon tribes, to identify a pan-tribal environmental ethic. His work can best be summarized by the following characteristics:

- The environmental ethic is passed down orally through stories, which are based on spiritual, cultural, and observational knowledge.
- Humans are understood to have a kinship with the entire universe.
- Humans are recognized to be dependent upon the natural world.

- An ethic of reciprocity is followed, which means humans must make personal and spiritual sacrifices to maintain harmony and balance in the world.
- Native Americans experience a strong sense of place.
- The natural world is viewed as sacred.

More research is needed to determine how comprehensively applicable this pan-tribal environmental ethic is to the Cherokee. Even so, a preliminary comparison of Aftandilian's (2011) ethic to a Cherokee environmental perspective described by Cherokee McClellan Hall (2007) reveals remarkable similarities. Hall (2007) writes, "balance, harmony, and beauty are essential to the survival of the planet [and] these are achieved through prayer" (p. 15). This idea is similar to the ethic of reciprocity identified by Aftandilian (2011), which notes that American Indians believe spiritual sacrifices must be made in order to maintain harmony and balance in the natural world. Hall (2007) continues with "prayers are offered for all of the creation- humans, animals, insects, plants, minerals, and the elements" (p. 16), reflecting the idea of human kinship with the universe (Aftandilian, 2011). Hall concludes with words that echo Aftandilian's (2011) observation of storytelling as a means to share an environmental ethic based on cultural and observational knowledge, "Humans can create a positive environment through a process of thinking or conceptualizing, speaking, and singing about the desired outcomes" (Hall, 2007, p. 16). Though this Cherokee perspective does not address every aspect of Aftandilian's (2011) pan-tribal ethic, overall it supports the ethic's applicability to the Cherokee.

Though more research would be needed to truly establish a traditional, American Indian environmental view, the diversity of tribes and tribal beliefs across the nation makes such generalization difficult and inappropriate. Yet even while the literature may be unable to define

all aspects of traditional American Indian environmental views, it is still important and helpful to establish a baseline of understanding in order to better comprehend the context surrounding Cherokee views.

American Indian Youths' Environmental Views

Despite the existence of limited research on traditional environmental views of American Indians, previous studies have yet to address whether or not Cherokee youth possess these traditional views. As was previously mentioned, the literature does not appear to contain any studies addressing this question. However, there are studies that inform research on the topic. This related research mainly centers on the challenges of cultural mixing faced by the American Indian youth of today (Friedel, 2009; House et al., 2006; Kenyon & Hanson, 2012; LaFromboise & Marivic, 2003; Lawson, 2013).

To begin with, it is worthwhile to mention that many American Indian cultures view youth as a precious gift (LaFromboise & Marivic, 2003). Children are integrated into tribal life early, and values such as a loving respect for nature, independence, and self-discipline are passed from one generation to another. Families share in the responsibility of child-rearing and usually refrain from tactics such as physical punishment that pressure children into performing (Duncan, 1998). Instead, disapproval and ensuing embarrassment are often motivators (LaFromboise & Marivic, 2003). It may be helpful to keep these cultural patterns in mind as a reference point when considering the literature surrounding American Indian youth.

It may also be worthwhile to consider that many American Indian tribes experience high levels of depression, substance abuse, eating disorders, and teen pregnancies among their youth, which are thought to be linked with cultural trauma (Kenyon & Hanson, 2012; LaFromboise &

Marivic, 2003). However, a full exploration of cultural trauma and its impacts on youth is beyond the scope of this review. The challenges faced by American Indian youth as they attempt to balance two cultures will be examined in more depth in the following paragraphs.

The pressure experienced by American Indian youth to conform to two cultures can be a source of difficulty in their lives (Friedel, 2009; House et al., 2006; Lawson, 2013). One ongoing concern within American Indian communities related to this internal conflict is the idea of acculturation, or examining cultural loss by comparing traditional beliefs and practices with modern beliefs and practices (Lawson, 2013). No known research has examined acculturation of American Indian youth in regards to environmental views. However, the ideas of cultural loss in general and the challenges of cultural mixing is much more prominent in the literature. In interviews exploring cultural identity, American Indian urban youth from a variety of tribes spoke on the difficulties of having a mixed heritage more often than adults or elders from the same tribe (House et al., 2006). On one hand, they feel they must conform to westernized practices to succeed, but they also are under pressure from their tribe to reconnect with tradition (Friedel, 2009). More research is needed to determine the impacts of western pop culture on this paradox, as well as to determine the potential contribution of this dynamic to cultural loss.

Effectiveness of American Indian Youth Educational Strategies

The western education system is one area in which the challenges of cultural mixing are perhaps most documented. The fact that westernized practices are falling short of educational success with American Indian students is well-supported in the literature (Cajete, 1994, 1999; Gilbert, 2000; Glenn, 2013; LaFromboise & Marivic, 2003; Lowan, 2011; McDuffie, 2014). One facet of this issue is the struggle to incorporate cultural practices while still teaching the

national standards required by the federal government (LaFromboise & Marivic, 2003; Lawson, 2013). A teacher who works with Cherokee students explained the conflict she experienced,

> I was a classroom teacher for eleven years… I often became frustrated with the disconnect the students had from the natural world… [the] restrictions placed on schools, administrators, teachers, and students were preventing me from doing what I felt and saw evidence to prove over and over again was best practice with the population of students [with whom] I was working (J. Metz-Bugg, personal communication, October 8, 2014).

Some of the issues with western practices include inactivity (Cajete, 1999), education that does not highlight a clear practical application or is not culturally relevant to American Indian students (Cajete, 1999; Gilbert, 2000), a focus on measureable knowledge and skills (Cajete, 1999), and standardized testing (Cajete, 1999; Gilbert, 2000; LaFromboise & Marivic, 2003). Standardized testing, in particular, presents multiple problems, including requiring study habits such as note-taking and memorization of lists which are not reinforced by American Indian cultures (Gilbert, 2000). Additional issues are the competitive, individualistic nature of the testing (Gilbert, 2000; LaFromboise & Marivic, 2003), time limits, language barriers, and inherent biases in the test questions (LaFromboise & Marivic, 2003).

Despite these issues, the literature indicates there are many educational methods thought to be effective (Cajete, 1994, 1999; Gilbert, 2000; Glenn, 2013; Kowalczak, 2013; Lowan-Trudeau, 2013; Swayze, 2011). When thinking about curriculum design involving American Indian students, it is important to consider these methods from the beginning of the design process so as to avoid the inauthenticity of adding in a few, traditional practices into an already westernized process (Cajete, 1999; Lowan, 2009). For example, even when cultural practices are

being incorporated, the educational approach can be inauthentic if it highlights antiquated ways of life without acknowledging aspects of modern American Indian traditions and issues (Friedel, 2009; Lawson, 2013). Instead, the education should be culturally relevant to the American Indian students (Gilbert, 2000; Kenyon & Hanson, 2012; Kowalczak, 2012; Swayze, 2011). One way shown in the literature to make education culturally relevant to American Indian students is through place-based education (Glenn, 2013; Kenyon & Hanson, 2012; Kowalczak, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011). The education should also be approached with a holistic perspective (Cajete, 1994, 1999; Kenyon & Hanson, 2012; Lowan 2011; Lowan-Trudeau, 2013; Swayze, 2011). Specific methods thought to be effective include cooperative learning such as in group projects (Cajete, 1994, 1999; Gilbert, 2000; Kowalczak, 2013), hands-on learning (Cajete, 1994, 1999; Glenn, 2013; Kowalczak, 2013), and learning that involves multiple generations (Glenn, 2013; Kenyon & Hanson, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011).

Environmental Education as a Mechanism for Successful Education

Environmental education is well-positioned to utilize many successful education methodologies with American Indian students. First, environmental issues are, by nature, important and relevant to American Indian communities (Aftandilian, 2011; Glenn, 2013; House et al., 2006; Korteweg & Russell, 2012). Second, environmental education lends itself to a more holistic perspective, as it considers the social, economic, and political relationships between humans and the natural environment (UNESCO, 1978). Place-based education is also a widespread movement within environmental education, and employs particularly practical and hands-on methodologies (Sobel, 2008). Finally, there are many opportunities for cooperative

learning within environmental education; a look at the widely-accepted North American Association of Environmental Education's (NAAEE) Guidelines for Learning reveals guidelines geared toward the development of group social skills (NAAEE, 2010).

Youth-centered environmental and outdoor education programs incorporating some of these methods are already in practice in certain areas of North America, and several research studies have evaluated them (Glenn, 2013; Hall, 2007; Kenyon & Hanson, 2012; Kowalczak, 2013; Lowan, 2009, 2011; Lowan-Trudeau, 2013; Swayze, 2011). One of the most notable programs is Bridging the Gap, an environmental education program based in Winnipeg, Manitoba (Swayze, 2011). The community in Winnipeg is mainly urban, and the program seeks to holistically incorporate traditional ideas into environmental education in a way that is culturally relevant. Elders from the local American Indian communities are included as full participants in the program, and are treated as professionals, leaders, and teachers. The ensuing intergenerational relationships have been emphasized by the student participants and elders alike as a highlight of the program (Swayze, 2011).

Another notable program is the Manoomin science camp based in Cloquet, Minnesota (Kowalczak, 2013). This program seeks to introduce American Indian students to science, technology, engineering, and math (STEM) fields through culturally relevant and culturally appropriate environmental education. Through pre- and post-surveys, students in the program reported an improved sense of community among their tribe; improved academic performance; enjoyment of the hands-on, practical education methods; improved sense of culture; increased knowledge of careers in STEM fields; and an increased sense of stewardship for the land. Like

Bridging the Gap, the main strength of this program was credited to the inclusion of tribal and community elders in content and delivery of the education (Kowalczak, 2013).

To date, most research about these programs has been conducted through an action research approach, and as such, the research has been conducted alongside the creation and implementation of the environmental education programs (Glenn, 2013; Swayze, 2011). No research has been identified in the literature regarding the place or need for programs like Bridging the Gap, nor has there been longitudinal research investigating long-term effectiveness.

Significant Life Experience

Significant Life Experience (SLE) research is a growing branch of environmental education research that looks at influential experiences over the course of participant's lives on outcomes such as environmental behaviors, attitudes, concerns, and career paths (Chawla, 1998; Wells & Lekies, 2006). To the researcher's knowledge, no SLE research has been conducted on American Indian populations. However, SLE studies do contain interesting insights about potential influences on outcomes related to environmental views for a more general population, and these have implications for environmental education.

Chawla (1998) reviewed several, previously conducted SLE studies specifically in reference to environmental sensitively. Across studies, particularly influential experiences were time spent in nature and family, highlighting the importance of incorporating these factors into environmental education for all populations (Chawla, 1998).

Gaps in Literature

The current literature leaves many significant gaps regarding American Indians and environmental education (Lowan-Trudeau, 2013). Though there are a myriad of environmental

education programs available to American Indian youth, no research has been conducted to determine the widespread accessibility of these programs. The nature of these programs is often tribe-specific, so there may be differing levels of environmental education available to different tribes, and some tribes may have very little access overall. More research is also needed to assess the effectiveness of these programs in reaching program goals (Kowalczak, 2013; McDuffie, 2014; Riggs, 2005). Additionally, the place of environmental education in American Indian public schools should be explored in more depth (Lowan-Trudeau, 2013).

Perhaps even more significant, no known research has assessed the need for environmental education programs through determining the current state of the environmental views of American Indian youth. There is an emerging concern among elders of various tribes that their youth are becoming disconnected from the environmental views traditionally held by the tribe (Glenn, 2013; McDuffie, 2014; Takano, 2005). Cultural loss through the generations is a prevalent source of concern in the literature (Friedel, 2009; House et al., 2006; Lawson, 2013), but the research seems limited in its consideration of environmental views specifically.

Finally, there is scant formal, environmental education research available specific to the EBCI. Due to the great diversity of tribes across the country, studies that add to the body of literature on different tribes would help form a more complete picture of the state of environmental education and American Indian cultures. Studies on American Indian tribes are contextual to that culture, creating a need for a wide research base representative of the tribal diversity in North America.

Purpose of Study

American Indian environmental education is a growing field; yet as a whole, more formal research is needed (Lowan-Trudeau, 2013). Western education methods are often at odds with American Indian educational pedagogies (Cajete, 1994, 1999; LaFromboise & Marivic, 2003; Lowan, 2011, Glenn, 2013; Gilbert, 2000; McDuffie, 2014), which involve passing down values and information holistically from generation to generation (Glenn, 2013; Kenyon & Hanson, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011). Environmental education could be a successful mechanism to utilize American Indian ways of education. Therefore, the purpose of this study is to better understand environmental views of the EBCI in order to provide useful information to the tribe in understanding the role of environmental education that authentically incorporates traditional ways of learning on the EBCI reservation.

CHAPTER 3.

METHODOLOGY

Method

The primary research question guiding this study was: what are the environmental views of the EBCI? The secondary research question was: is there a generational difference in the environmental views of the EBCI? These questions were explored through a qualitative approach. Qualitative research is characterized by a flexible research design in which the researcher observes or interacts with participants in their natural setting in order to determine their meaning, impressions, or perspectives (Creswell, 2014). Furthermore, it allows patterns, categories, and themes to emerge inductively from the data, creating a complex, holistic picture of the issue under study (Creswell, 2014).

Qualitative inquiry was appropriate because of the exploratory nature of the proposed study. Due to a lack of research about Cherokee environmental views, an open approach that allows for rich, contextual data was used to provide valuable information to help direct future research. Gathering rich, contextual data was all the more necessary because the subject of "environmental views" could be affected by a myriad of interwoven components such as culture, economics, and education. Qualitative research allowed such dynamics to naturally emerge. Additionally, the participant-focused nature of qualitative research was fitting because it enabled tribal members to freely express their environmental views in ways that made sense to them. This, in addition to the time-flexibility (e.g. ability to adapt the methods to the timeline) characteristic of qualitative research, contributed to the cultural sensitivity of the study as the Cherokee have a different perception of time than a westernized understanding (Creswell, 2014).

Research Design

The specific strategy of inquiry was interviews. Interviews are used in qualitative research to seek the views and opinions of the participants (Creswell, 2014). Interviews have been used with American Indian populations, and youth in particular, in recent American Indian environmental education research. Friedel (2009) used both focus-group and individual interviews to study urban American Indian youths' perspectives on identity and place-based education in Alberta, Canada. The focus-group interviews were used to familiarize the participants with the research process in a comfortable environment, and were also used to gather data from a collective whole. The individual interviews were held with the same participants, and gave them more freedom to express their views openly without the influence of the group (Friedel, 2009).

This study involved 1:1 interviews in order to ascertain participants' environmental views without outside influence. The primary researcher developed an interview script including seven, semi-structured questions that were appropriate across age brackets, and submitted it to an expert panel of interested members of the EBCI community for an evaluation of cultural sensitivity. The final interview script is included in Appendix A. The purpose of the questions was to generally prompt conversation about various facets of participants' environmental views. Additional questions were guided by participants' responses.

Role of Researcher

Information on the cultural and professional background of the primary researcher is helpful since she will be the data collection instrument in this study. The primary researcher is of Anglo-European ethnicity with an extensive North Carolina family history. Though a very

basic knowledge of the EBCI is common among North Carolinians, prior to this study she had no in-depth knowledge about or contact with the tribe. This lack of previous experience may have affected her interpretation of the results by preventing her from noticing possible cultural implications, but it could also have given her the ability to consider the data with a fresh, original perspective. Professionally, she has worked in the field of environmental education for three years and could have come with inherent biases due to her high valuing of education and environmental literacy.

Within the context of research design, however, her role was to be of service to the EBCI tribe. Accordingly, guidance from the tribe was sought at every stage of the research process. American Indian communities have historically (and understandably) been distrustful of researchers (Davis & Reid, 1999; Semken, 2005), so every care was taken to ensure this study met the needs of the Cherokee community first and foremost (Semken, 2005). The primary researcher familiarized herself with the culture and customs of the Cherokee people, including religious beliefs, conceptions of time, and standards of behavior as much as possible (Semken, 2005). She also attempted to develop relationships with tribal members to show they would not be treated as subjects under study but would be active participants in the process (Semken, 2005). Above all, she tried to approach the research process as humbly as possible in recognition of all she did not know about the culture and customs.

The study was guided by participatory research methods, including an expert panel of interested tribal members to advise the research questions, interview scripts, and methodologies (Semken, 2005). The expert panel included two non-formal educators, a professor from the Cherokee studies program at Western Carolina University, and an environmental consultant who

had worked extensively with various partners in the EBCI community. The initial contacts for this panel were provided by the chair of the EBCI Internal Review Board (IRB), and additional community members were suggested by the original contacts to arrive at the final panelists. The EBCI IRB process was also completed prior to beginning data collection, including authorization by the Tribal Council. This was followed by additional authorization from the Montreat College IRB.

Participants and Sample

The EBCI tribe was selected because they are a little-studied people group in the area of formal, environmental education research. Additionally, the potential usefulness of any findings to the tribe was a driving force in the researcher's desire to conduct this research. Practically speaking, they were also a convenient choice due to proximity to the researcher's location in Western North Carolina.

Potential participants were selected using the snowball sampling technique (Kola-Olusanya, 2008). This technique is especially valuable in exploratory studies of hard-to-reach or marginalized populations (Atkinson & Flint, 2001; Spreen, 1992), and was useful in the context of this study as the researcher was an outsider trying to access a close-knit social network. She requested at least two names of tribal members who may be interested in participating from a few initial tribal contacts preceding interviews. Contact was made with these individuals, who were asked in turn to submit two names. This technique utilized the close-knit network of the tribe, and encouraged the potential interviewees to feel supported in their participation by their fellow tribal members. Subsequent communication with each participant was conducted through email, telephone, text, or Facebook depending on their preferred method of contact.

The researcher sought to conduct interviews with individuals with a minimum age of eight because many participants between zero and seven would likely be too young to fully understand the interview questions or express developed environmental views. Though traditional designations of generations over the past 150 years have trended around 20-year age brackets (Stein, 2013), 15-year age brackets were selected to allow for a detailed comparison across generations. Therefore, the age brackets were as follows: 8-22 years old, 23-37 years old, 38-52 years old, 53-67 years old, and 67+ years old. Three participants were preferred per age bracket to allow for triangulation of responses, bringing the ideal sample size to 15 participants.

Data Collection

Interviews were conducted over a span of four days on two different occasions, scheduled according to participants' availabilities. A total of three locations were utilized: an education room at the Museum of the Cherokee Indian, a conference room at the Great Smoky Mountain National Park Visitor Center, and a conference room at the Qualla Arts and Crafts Center. All three locations were similar in lighting, size, and noise level. All interviews were conducted by the primary researcher, and were recorded using a Sony Digital Voice Recorder. They lasted anywhere from 20 minutes to an hour, depending on the amount the participant wanted to share. Upon completion of the interview, participants were given peach jam to demonstrate the researcher's appreciation of their time and willingness to share their views. The jam was prepared by the researcher with fruit from her family's farm.

The recorded interviews were then transcribed and returned to the participants within the week following their interview. Participants were given an additional week to return the final transcripts with any corrections or clarifications they felt were necessary.

Data Analysis

The final transcribed interviews were analyzed through a coding process. The primary researcher read over each transcript to create a code list of reoccurring ideas from the interviews (Creswell, 2014; Patton, 2015). Two inter-coders who were unfamiliar with the data were then given the code list with the definitions of the codes and key words. The inter-coders coded 20% of the data, and this was compared to the original coded transcripts to determine the inter-coder reliability rate (Creswell, 2014). An inter-coder reliability rate of 70% and 75% was reached, and the code list was negotiated to resolve any discrepancies. Following negotiation, a re-coding of the data brought coders to 100% agreement, well over the required 80% reliability rate (Creswell, 2014). The revised codes were then collapsed into themes, and these were used to determine patterns across generations in order to develop a picture of the environmental views of the EBCI. These themes are reported in Chapter Four, along with representative participant quotes to aid in understanding the data.

Trustworthiness

Several approaches were used to enhance the trustworthiness of this study. The use of two inter-coders provided analyst triangulation, which contributed to the trustworthiness of the findings by using multiple analysts to review the data (Patton, 2015). Various methods of member checking were also employed (Creswell, 2014), including continued review of the research process by the expert panel, as well as an opportunity for participants to review their transcripts and clarify any statements to more accurately reflect their views. Participants were also given the opportunity to provide feedback on drafts of the "Results" and the "Discussions and Recommendations" chapters of this thesis. Finally, peer debriefing with Montreat College

faculty and graduate students helped ensure the study was relevant and understandable to people other than the researcher (Creswell, 2014).

CHAPTER 4.

RESULTS

14 total participants were interviewed across age brackets, with a total of eight females and six males. This sample was reached through just two cycles of the snowball method, with about 20 tribal members being approached overall. Tribal members who declined to be a part of the study did so due to personal time constraints. There were no evident differences between the responses of males and females. The youngest participant was 16 years of age; the oldest was 85. The distribution across age brackets is displayed in Figure 1.

Figure 1. Number of Participants/ Age Bracket

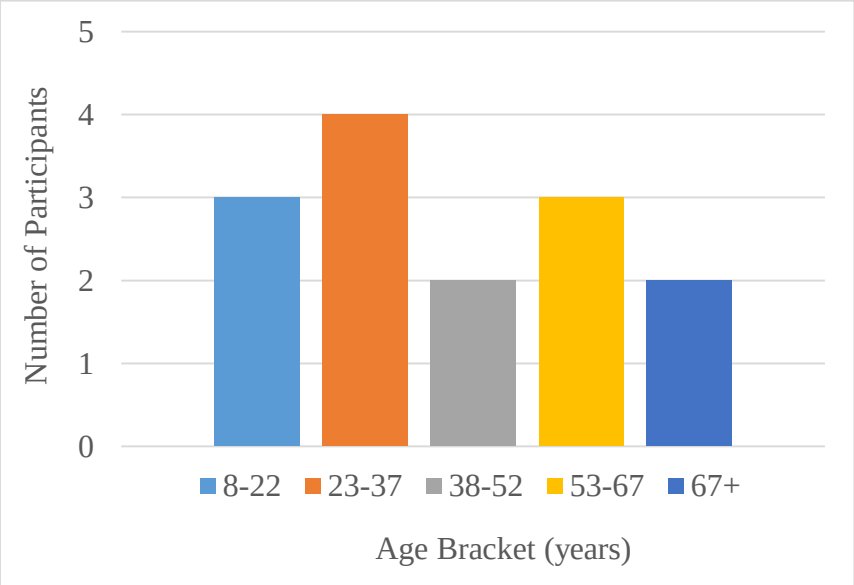

Figure 1. Distribution of participants across age brackets.

Transcripts were analyzed as a whole as opposed to analyzing responses individually by question. This was true to the interview process because participants would often address

various facets of different questions throughout the interview, connecting ideas across responses. Participants' responses were distinguished into the themes of a) *philosophies*- beliefs about nature, b) *nature's value*- benefits of nature, c) *human-nature relationship*- beliefs about proper interactions between humans and nature, d) *influences*- people, experiences, or other factors that significantly affected participants' views of nature, e) *environmental concerns*- issues related to current interactions between humans and nature on and beyond the Qualla Boundary, and f) *cultural loss*- perspectives on how the Cherokee's relationship with nature has changed over time. These themes will be defined one by one, and will be accompanied by frequency tables displaying subthemes. Significant subthemes will be further defined using representative quotes of participants, identified by age brackets.

Theme One: Philosophies

Several subthemes of general philosophies emerged throughout the interviews. These philosophies were expressed as significant contributions to participants' foundational beliefs about nature. As opposed to being a specific reply to a question, these philosophies were often woven into other perspectives as support for the response the participant was trying to communicate. The subthemes are not mutually exclusive and are often interrelated. Table 1 displays the frequency of participants who articulated each of these subthemes in descending order, and shows the distribution of mentions across age groups.

Table 1

Philosophies about Nature

	Age Brackets					
Philosophy	**8-22**	**23-37**	**38-52**	**53-67**	**67+**	***n***
Holistic		1	1	2		4
Appreciation	1			2	1	4
Animate			1	1	1	3
Interconnected			1	1	1	3
Kinship				2	1	3
Natural Supremacy			1	1	1	3
Spirituality			1	2		3

Note: ***n*** represents the number of participants who had responses categorized into each subtheme. The same participant may be counted in more than one subtheme if they expressed views accordingly.

Holistic. The four participants who expressed views in this subtheme articulated an inclusive perception of nature in which humans were seen as a part of nature as opposed to being separate from it. Several participants verbalized that "everything is nature," like one participant (23-37 yrs.) who described nature as "the universe, everything that is around us, that we are on." The designated subthemes "animate," "interconnected," "kinship," "natural supremacy," and "spirituality" are all closely aligned with the "holistic" subtheme, and participants who expressed one often expressed several others. Five total participants expressed at least one of these stated subthemes (holistic, animate, interconnected, kinship, natural supremacy, and/or spirituality), four of which were in the age bracket of 38-52 yrs. or above, and only one of which was in a younger age bracket of 23-37 yrs.

Appreciation. The four participants in this subtheme expressed a simple appreciation for the nature around them. This appreciation seemed to be almost intrinsic, and was not held for any particular benefit of nature to the participant. For example, one participant (8-22 yrs.) who had lived in both Arizona and North Carolina said,

> The animals. I love animals. And the pretty trees here in NC, I love them. And the rivers, I love the rivers. In Arizona you don't have rivers, or you don't see them as much as you do here. And especially the green. But I love… Arizona just as much. I like the cactuses, I love cactuses.

Animate. Participants who viewed nature as "animate" believed that all of nature is living, and perhaps even imbued with a spirit. Even features that would be scientifically considered "non-living" such as rocks, water, and mountains were viewed as living by these participants. One participant (53-67 yrs.) articulated, "Nature to me is a living thing, it's not an inanimate object [that] can be separated from everything." Another (38-52 yrs.) shared that he recognized

> the spirit that lives in all things… everything is living. You know, out there. You know, everything… has its niche, as we were taught academically… But when, I think, you're out there, the native way is to allow your being to recognize and open up yourself to feel that niche at times. And I think that this earth has a heartbeat and it pulses with life…

Interconnected. Three participants vocalized that they believe everything is connected. One participant (53-67 yrs.) explained, "What's happening up there in the universe affects what's right here. Every bit of it is connected."

Kinship. Three participants expressed beliefs that supported the idea of humans as "kin" to other living things; as literal family members to be honored, respected, and ultimately treated as brother and sister. Two participants spoke of communication between nature and humans, referencing signs in nature that demonstrate nature's ability to communicate to us if we are willing to listen. One participant (67+ yrs.) clearly stated, "… in the old days, we were taught that all living things were our brothers and sisters. A blade of grass, a tree, the mountains, the forest, the air." Another (53-67 yrs.) told of a rattlesnake who was treated well and who gave back in return,

> My grandpa said that he lived with a man named Ute Jumper. And Ute kept a rattlesnake in his cornfield in the summertime. Said he fed it cornbread and milk. And uh, said he talked to that snake and asked that snake to guard his corn. And he said that snake would always go in front of him in the field and he said it'd keep the squirrels and coons out of the corn. But that's the connection the old guys had.

As with another human being, participants who expressed views of "kinship" seemed to extend the western "Golden Rule" to nature and to other organisms, understanding that one's treatment of nature will be reflected in its treatment of you. This element of reciprocity and balance also revealed itself in other ways throughout the interviews.

Natural supremacy. While humans can certainly affect nature, participants who held a belief of natural supremacy expressed that nature will win in the end. One participant (53-67 yrs.) explained, "You can see it in Louisiana after those floods you know. Nature will come back and, and it'll kinda survive on its own but… the immediate future is what is really going to be impacted by it." Their concerns regarding humans' impact to nature were more expressed as

a caveat to humans, as opposed to a belief that humans have power over nature itself. Two participants articulated natural supremacy in relation to climate change, like one participant (38-52 yrs.) who explained,

> You know, from the oceans all the way up to the highest peaks of the mountains, we have human influence… it's [a] global successional stage. You know, this planet has been around for a long time… this ole planet's gonna rock us every now and then… we're gonna feel it's wrath. And we're gonna see what we can do… what it can do to us.

Spirituality. Participants who expressed views in this subtheme referenced a supernatural or a sacred component to their connection to nature. One participant referenced nature as God's Creation, aligning with the Christian tradition of religion. Another participant (53-67 yrs.) gave this example,

> For instance, when I go for medicine or food plants or anything, I wait till I find the seventh plant before I ever start gathering what I want. That ensures that that resource will be there. The number seven's sacred so you're involving the Creator, you're involving everything that's sacred.

Two participants elaborated that there is a limit to science; things that science cannot explain that are nevertheless real. These participants believed that while science can teach certain things about natural mechanisms, "there's a barrier that science needs to let go of, its formalities and its egos" (38-52 yrs.).

Theme Two: Nature's Value

Four subthemes emerged as sources of value to participants in regards to nature. The two most commonly referenced sources of value were nature's provision of sustenance and fostering

of mental wellbeing, each of which were mentioned by six participants. The two other sources of value mentioned were aesthetic value and historical significance, mentioned by two participants each. These results, along with the age distribution, are displayed in Table 2.

Table 2

Nature's Value

	Age Brackets					
Source of Value	**8-22**	**23-37**	**38-52**	**53-67**	**67+**	***n***
Sustenance	1	3		2		6
Mental Well-being		3	1	2		6
Aesthetic	1				1	2
Historical Significance	1	1				2

Note: ***n*** represents the number of participants who had responses categorized into each subtheme. The same participant may be counted in more than one subtheme if they expressed views accordingly.

Sustenance. Nature is seen as providing resources humans need such as food, wood, and water. Several participants went on to say that humans could not physically survive without these resources, and one participant (53-67 yrs.) pointed out that "if you destroy the land and you destroy the water, you are the next to go." This understanding of nature as a provider was often expressed as a source of connection between the participant and nature.

Mental wellbeing. To many participants, nature was seen as "[a healing tool]; body, mind, and spirit" (38-52 yrs.). Nature was referenced as an escape or refuge, a place of refreshing solitude, and ultimately, a source of peace. Often, this source of value was the first

aspect of nature described by these participants, like the participant (38-52 yrs.) who stated, "what nature means to me is it is a mechanism that provides me inner peace."

Aesthetic. Many participants alluded to the beauty of nature, but two participants identified it as one of the primary sources of their connection to nature. One participant (8-22 yrs.) explained, "I've always cared about nature and like, I've always admired the beauty from it."

Historical significance. Two participants cited the importance of nature as a mechanism to keep in touch with the past, and honoring traditional ways of life. One participant (23-37 yrs.) said, "… if we become too urbanized then we lose… the past."

Theme Three: Human-Nature Relationship

Many participants shared perspectives about how humans should treat nature. Most of these perspectives can be categorized into perspectives centered on conserving resources, which was expressed by ten of the 14 participants. Other subthemes include perspectives related to respecting the natural order and respecting all life, each of which was mentioned by three participants. These results, along with the age distribution, are displayed in Table 3.

Table 3

Perspectives on Nature's Treatment

	Age Brackets					
Perspective	**8-22**	**23-37**	**38-52**	**53-67**	**67+**	***n***
Conserve resources	3	2	1	2	2	10
Respect natural order			1	1	1	3
Respect life	1		1		1	3

Note: ***n*** represents the number of participants who had responses categorized into each subtheme. The same participant may be counted in more than one subtheme if they expressed views accordingly.

Conserve resources. Conserving resources on several different levels was an important norm for many of the participants, including those in the younger age brackets. Some participants spoke of the traditional ways of harvesting beneficial plants, which left roots in the ground in order to allow the plant to regenerate; others expressed the importance of fully utilizing harvested resources in order to prevent wastefulness. One participant (38-52 yrs.) described the building process of the new Cherokee Central School, sharing, "We built our new school and we recycled everything that was used. I mean the timber and everything. It's back into the school; it's part of the siding and everywhere. It's just used." Two participants referenced using less water and energy efficient lightbulbs as a way to live life with less of an impact. Many of the participants who expressed perspectives about conserving resources also expressed concerns about the overuse of resources both inside and outside the Qualla Boundary.

Respect the natural order. Several participants in the older age brackets articulated that there is a natural order of how things in nature are supposed to function. Nature is seen as a web of cycles which cannot be full understood, much less managed. Humans are seen as a part of

that functioning, and we should recognize our place in that instead of making decisions without consideration. Additionally, we should recognize and respect other organisms' place or niche in the natural system. When humans start to deviate from the natural system and act outside of these rules, according to this perspective the consequences are never good. One participant (67+ yrs.) used an example from Yellowstone, stating,

> We truly don't know how to manage nature. We can't control it. Like Yellowstone… they said there are too many beaver ponds, they got rid of the beavers… you removed that cog in the wheel that was turning, and something had to move up to fill that. You lost some animals, you filled some animals, and they were undesirable.

This participant was against the reintroduction of elk and white-tailed deer onto the Qualla Boundary, pointing out that the natural predators that once kept these species in check no longer exist on the Boundary.

Respect life. Several participants shared their perspectives of hunting and killing in general, and emphasized a basic respect for life and all living things as a part of that. One participant explained the traditional perception of hunting, which was that animals offered themselves to be killed so that others may live. Traditional hunters would act in awareness of that, "and before a hunter would go out to kill a deer, he would ask forgiveness… After he gave his honor and respect, the deer would offer itself up to be killed" (67+ yrs.). Another participant (38-52 yrs.) told of a deer he had taken near the end of the hunting season with which he had formed a connection, saying, "I went and I spent a little extra time with that animal and did my own personal… appreciation." To these participants, there is a time to kill, but also a time to let

live. One participant expressed that she did not approve of hunting at all. Another participant, a veteran of the Vietnam War, spoke of the importance of respecting life even in a war scenario.

Theme Four: Influences

All of the participants spoke of many different influences on their views of nature throughout the interviews. Thirteen out of the 14 participants referenced at least one person, experience, or other factor that influenced them during their childhood. The most commonly mentioned influences were people, culture, time spent in nature, gardening, secondary education, and access. Participants in the 67+ age bracket referenced fewer influences than participants in the other age brackets overall, mentioning only people, culture, nonformal educational experiences, and profession. Table 4 displays these influences in descending order, along with the age distribution.

Table 4

Influences on Environmental Views

	Age Brackets					
Influences	**8-22**	**23-37**	**38-52**	**53-67**	**67+**	***n***
People	3	4	2	3	2	14
Culture	2	3	2	3	1	11
Time in nature	1	4	1	1		7
Gardening	1	2	1	3		7
Secondary education	2	2	1	1		6
Access	1	2	1	2		6
Sense of place	1	2	1	2		6
Nonformal education	2	1		1	1	5
Harvesting beneficial plants	1		1	1		3
Primary education	1		1	1		3
Profession			1	1	1	3
Travel	1	2				3

Note: ***n*** represents the number of participants who had responses categorized into each subtheme. The same participant may be counted in more than one subtheme if they expressed views accordingly.

People. Every participant referenced at least one person who was influential on their view of nature. For 13 of the 14 participants, this person or persons was a family member, extended or immediate. Four of these 13 mentioned only immediate family members, and four also only mentioned extended family members. Five mentioned both. In every case, the family member mentioned was described to have spent time with the participant in nature, and shared their knowledge of local plants and animals. One participant (67+ yrs.) explained,

> [Uncle George] basically was my father figure. This was the second and third grade… We would go out and see animals. And he said, that's *sloli*, squirrel. And see how his tail is jerking? He is hearing us. And hear that barking? …He is spreading the word, it is like an alarm system going off. And it was fascinating... So, he didn't teach me to appreciate, but he showed me what the animals were doing and later as I got older I came to respect more.

Other people mentioned were community members, friends, scientists, and significant others.

Culture. Culture had a significant impact on views of nature for 11 of the 14 participants. For eight of these participants, valuing nature was referenced as a community norm; a value taught and learned through something of a social osmosis. It was described as part of the identity of the community, and thus the identity of the participants themselves. One (23-37 yrs.) said,

> "My heritage brought me closer since our people came from it. That kind of just gave me, always gave me a different respect for it, my whole life."

Four participants referenced traditional crafts as being influential because of the incorporation of local natural resources. Four participants also referenced the importance of storytelling, and two referenced traditional dance, both of which feature natural themes.

Time in nature. Half of the participants mentioned time in nature, both as a child and as an adult, as formative to their views of nature. Six of these seven participants described unstructured time in nature, in which they would, "go anywhere, and never feared… you knew you had to be home by dark, but I mean, I would go and sit by the river and just… let all my troubles wash away. And climb trees" (53-67 yrs.). Others referenced more structured time, like

the participant (23-37 yrs.) who said, “We used to always go out nature biking, doin’ all kinda stuff and just taught me to respect and honor it.”

Gardening. Half of the participants mentioned growing their own food, either as a small garden or a subsistence farm, as significant experiences. Gardening seemed to foster an understanding of the energy and natural resources that went into food production. One (23-37 yrs.) shared,

> “We had a garden… My grandparents would come over, we would work like all day on Saturdays and, you know, as a kid you were like, "I don't want to work on," like, "Let's go do something." They're like, "No, this is what we eat.”

Secondary education. Six participants referenced experiences with college or university courses as helping shape their views of nature. These experiences seemed to help them understand nature on an academic level that trickled down to the personal level in application. One participant (8-22 yrs.) said, “I took an ecology class and my professor really emphasized you know having a right relationship with nature.” She went on to describe the concept of habitat fragmentation, and how it changed how she viewed big picture decisions about development.

Access. Six participants referenced having access to nature as being vital in the development of their connection to it. One participant (23-37 yrs.) who had lived away from the reservation for a while before moving back explained, “Just being close to the national park where we see all this wildlife and everything; it’s brought us so much closer.” Another (8-22 yrs.) pointed out, “You know I know a lot of people in the suburbs, in the city... They don’t have the luxury we do of just going outside... spending the day.”

Sense of place. Six participants expressed perspectives that showed a sense of place as being part of their connection to the natural world, and thus influential on their views of nature. One participant (38-52 yrs.) shared, "I guess I'm just connected by birth. I've lived here in the mountains all this time and this is all I've known… My grandparents and my parents have lived here too, and they wouldn't want to live anywhere else."

Theme Five: Environmental Concerns

Several participants voiced concerns related to current interactions between humans and nature. Most of these concerns were related to specific issues on the Qualla Boundary in response to the question, "Do you agree with the way your community interacts with nature?" Of these concerns, the most frequently referenced were issues related to overuse of resources, which was mentioned by six participants. Also frequently mentioned were issues related to littering and/or graffiti, as well as urbanization/development, each mentioned by five participants. Other concerns include the loss of understanding of the natural system, the abuse of animals, and climate change. Participants in the 67+ yrs. age bracket expressed fewer concerns than the other participants overall, mentioning only the category "loss of understanding of the natural system." Table 5 displays the frequencies each of these subthemes were mentioned in descending order, including the age distribution.

Table 5

Environmental Concerns

	Age Brackets					
Concern	**8-22**	**23-37**	**38-52**	**53-67**	**67+**	***n***
Overuse	2	1	1	2		6
Urbanization	2	2		1		5
Littering/Graffiti	2	1		2		5
Loss of understanding of natural system		1	1		1	3
Abuse of animals	1			1		2
Climate Change			1	1		2

Note: ***n*** represents the number of participants who had responses categorized into each subtheme. The same participant may be counted in more than one subtheme if they expressed views accordingly.

Overuse. This concern was often mentioned in a general sense, like one participant (53-67 yrs.) who said, "We overuse our resources… and a lot of people don't seem to care about that." However, it was also expressed in relation to the issue of harvesting beneficial plants like ramps and Galax. One participant explained that some tribal members no longer know how to harvest them in traditional ways which allow for regeneration; others talked about individuals from outside the community who will "line up at the top of the mountain, from top to bottom and they'll sweep with rakes and just clean it off" (53-67 yrs.).

Urbanization. The rate of development on the Qualla Boundary was a concern for several participants. One participant (8-22 yrs.) was explaining interactions she did not agree

with between her community and nature, and she said, “I know we have a lot of work done to our land. Kind of, stuff we really didn’t need”.

Littering/Graffiti. Littering and graffiti were frequently mentioned as a concern due to its effect on wildlife as well as on aesthetics. One participant (8-22 yrs.) complained,

> “There’s like people drinking like late at night or people who use drugs and they just throw all their trash out. And there’s a bunch on the bank. I think we should do something like about that. And people just throw stuff in the river. Like cans and stuff, and animals eat that, ‘cause they don’t know better… I think we should take care of the community more as, like no spray paint… A couple weeks back the new vice chief got in, and he wanted to repaint all the dumpsters because they had a bunch of like graffiti on them. As soon as they painted them they looked really nice and people went back to what they were doing and so that didn’t really help. Then there’s trashy areas like that just look really bad on us.”

Theme Six: Cultural Loss

Theme six emerged as a pattern across interviews as opposed to rigidly identified categories, and is therefore presented as an interconnected story in accordance with the manner it was conveyed. Thirteen out of 14 participants expressed perspectives aligning with the idea that the traditional valuing of nature has been lost over time. One participant (67+ yrs.) attested that when “you put the values of a Cherokee and the values of a tourist on nature and you are going to see very little variance between the two”. Most argued that some Cherokee do still value nature in the traditional way, but admitted there is a significant number who do not. Another

claimed the difference is generational, and said the older Cherokee value nature while the younger Cherokee do not.

Throughout the interviews, a pattern emerged, telling the story of cultural loss for the Cherokee in regards to traditional views of nature. Three participants pointed out that cultural loss started with colonization. One said (23-37 yrs.), "Our people were worse off, and are still worse today than we ever were before colonization." Another (53-67 yrs.) painted the picture of the sophistication of pre-contact Cherokee life, describing their system of natural balance:

> They rotated the crops annually… and sometimes they would even move the village. Maybe, thirty or forty miles away to the opposite end of the valley and would progress their gardens from one end of the valley to the other. And each year a group of trees would have the bark taken off. The bark would probably be used for roofing. The trees would die, and as those trees dropped their limbs, that would be a firewood resource; and as they completely died and fell that would open up new farmland. And so there was a constant cycle. A renewing and using the natural resources that were coming back in those garden spaces. So, after twenty/thirty years, when the village moved back to the original site, the saplings had grown up to build the new houses out of and everything… that they needed was right there.

Three participants also spoke sadly of the giant trees that once covered the mountains, illustrating the balance that existed between the people that lived there and the natural world.

Then, post-contact, "a lot of cultural knowledge died with colonization, disease, war, and so we've had to evolve what we do" (23-37 yrs.). The days in which Cherokee students were

taken from their homes and forced to assimilate into Western education at a boarding school are still in living memory for many Cherokee. According to one participant (53-67 yrs.),

> The Board School had a huge impact on that extended family and that information transfer… Neither one of my parents spoke [Cherokee]. And mom refuses to learn. I mean, the assimilation was so strong… her time in school, it was through the end of WWII, right up through… I mean, I was a baby boomer, born 1957. So their attitude was assimilate, get a job, get an education, make money, fit into mainstream America. You know, be proud you're a Cherokee, but it's not that important… And it was do or die, most of the time, you know.

Following this time period, modernization came to the Qualla Boundary. One participant (53-67 yrs.) grew up on the Boundary before moving away for thirty-two years. She remembers the community as extremely close-knit; everyone knew everyone else, and depended on one another. Her memories coincide with descriptions from three other participants, all over the age of 50. When she moved back, she said,

> In that time span, the reservation grew, some in a positive way and some in a negative way. But it is definitely not the closeness that it was whenever I was growing up… the casino came in and just a lot more money came in. Because when we were growing up… from probably the middle of October until April, everything was shut down around here. So I mean, there was no monies to be made, no nothing, so we all depended upon one another.

11 of the 13 participants across age brackets cited some aspect of modernization as a source of cultural loss. Two participants cited the building of modern houses as a source, in

which everyone retreated away from their extended family and community into their immediate families, fostering isolation and restricting the traditional transfer of ideas. One (53-67 yrs.) elaborated,

> We've built over 6,000 modern houses just here in the last 40 years. And that impacted the extended family, the appreciation of the environment and the natural settings around us. Cause, you know, when you're having to observe how you're living to exist, you know, it makes a big difference instead of just turning the thermostat up or you know, turning the water on.

His comments agreed with many other participants, who cited a modernized lifestyle as one that is separated from the natural world.

Two participants made the additional point that, "when [commercialism] comes in, greed just comes to everybody" (23-37 yrs.). Two more added that they felt tribal leadership was, at times, too revenue-focused at the expense of natural resources. However, at least three participants felt that more consideration was given to natural resources as a part of decision-making on the Qualla Boundary than in other places. They cited the requirement of an Environmental Impact Assessment before any development on public or private land. Two added, "I think the good thing for us though is that we have such high mountains, they can't do construction everywhere… so they have their limits" (8-22 yrs.).

Four participants focused on technology as one of the main sources of disconnect from community and nature. One participant (23-37 yrs.) shared, "It's hard to see the kids now… they are so disconnected. It's like, "Well, I just want to get on my phone. I don't care about this crap." She added, "it's also a generational thing where we do have a lot of kids being raised by their

grandparents right now, and their grandparents aren't as agile to be able to… be outside and play because some of them can barely walk, some of them are in wheelchairs and still trying to raise children... It's easier for a grandparent to like, "Here, just do this real quick because I'm, I'm tired."

Yet even while cultural loss in regards to traditional views of nature was apparent to many participants, seven out of the 14 participants cited an elevated effort to return to past traditions in recent years. According to one participant (23-37 yrs.), "I'd say there's, lately… more focus on maintaining the past culture." Another (67+ yrs.) said, "You know, there was a span there where they didn't really teach their children about things dealing with nature… I think they are doing a better job now." Many of the examples provided to illustrate this were non-formal education programs, such as a garden club at the local Cherokee Central School.

Summary of Results

The participants in this sample expressed diverse views about nature throughout their interviews. These views had been influenced in many different ways throughout their lives, with the most often referenced influences being people (primarily extended and immediate family members) and culture. Participants in the 67+ age bracket mentioned less influences overall than did other participants. Another generational difference that emerged in this sample was that older participants held more holistic philosophies about nature than did younger participants, seeing themselves as more of a part of nature as opposed to being separate from it. On the other hand, younger participants expressed more environmental concerns than did older participants, focusing on overuse, urbanization, and littering/graffiti as the main sources for their concern.

Overall, 13 out of the 14 participants said that the traditional valuing has been lost over time, but seven mentioned that there has been an elevated effort to return to past traditions in recent years.

CHAPTER 5.

DISCUSSION AND RECOMMENDATIONS

Discussion

The results of this study offer a few intriguing elements including an intergenerational picture of participants' environmental views and implications for environmental education.

Intergenerational Cherokee environmental views. The philosophies that emerged, along with their interconnected values and perspectives on a proper human-nature relationship, reveal the current, changing state of the environmental views of the Eastern Band of Cherokee Indians. Overall, there was evidence throughout the data of all six of Aftandilian's (2011) pan-tribal commonalities in terms of environmental ethics:

- The environmental ethic is passed down orally through stories, which are based on spiritual, cultural, and observational knowledge.
- Humans are understood to have a kinship with the entire universe.
- Humans are recognized to be dependent upon the natural world.
- An ethic of reciprocity is followed, which means humans must make personal and spiritual sacrifices to maintain harmony and balance in the world.
- American Indians experience a strong sense of place.
- The natural world is viewed as sacred.

Of these ethics, the points that align more with the holistic philosophy (kinship, reciprocity, and sacredness) were mentioned only by the older age groups. Even so, this holistic view of the natural world, in which humans are a part of nature and subject to the natural order, seemed to form the base of the more traditional environmental views of the Cherokee. This

philosophy supports beliefs about interconnectedness, kinship, and natural animation in which everything in nature is living. It also holds implications for the human-nature relationship, as behaviors that could be seen as outside the natural order are perceived as dangerous and wrong by participants with this philosophy. Sacredness was also elemental in this belief, as honoring and respecting the natural world was seen as an important aspect of maintaining the balance of the natural order. Often, these rituals were reported to have been passed down through the generations for thousands of years. One participant (53-67 yrs.) explained, "My grandpaw had a way of doing everything. And it was just traditions that had been handed down, that had been proven through trial and error to work the best way."

Evidence of the other points in Aftandilian's pan-tribal environmental ethic seemed to be more evenly distributed across age groups. For example, storytelling was mentioned as an influence on environmental views by a participant from each age bracket except the 23-37 age bracket. Sense of place was also indicated by at least one participant from each age bracket, except the 67+ age bracket. Additionally, though several participants suggested older tribal members had a better understanding of nature as the provider of sustenance, this was not supported by the data. One participant (8-22 yrs.) confessed,

> I know with like my granny, she was pretty connected with nature. She always had gardens. You know, they got their water, and I would just go to the grocery store. I am trying to get back with nature. Um, I guess, give back as well. Stop taking so much, stop being so greedy. I'm gonna grow my own food this summer. So I'm trying.

Yet of the six participants who made statements recognizing humans as dependent on the natural world, four were in the 8-22 or 23-37 age brackets and the other two were in the 53-67 age

bracket. Thus, an understanding of this dependent relationship also appeared to be widely held among participants in this study.

Regardless of specific areas of cultural loss, this study supports findings from previous studies in that cultural loss in general was a concern for 13 out of the 14 participants (Glenn, 2013; McDuffie, 2014; Takano, 2005). Eleven participants cited some aspect of modernization as the reason, including technology, commercialization, and forced assimilation. According to these participants, the results of modernization have been a transition to a more individualistic community and the development of lifestyles that are disconnected from the natural world. This process of cultural loss does parallel findings in other studies which cite cultural mixing as a cause of loss (Friedel, 2009; House et al., 2006; Lawson, 2013). Even so, unlike these other studies, younger participants did not specifically reference challenges resulting from mixed heritage (House, et al. 2006) or conflicting pressure to conform from both the tribe and westernized society (Friedel, 2009).

Environmental education implications. Overall, the findings of this study reinforce the importance of environmental education as a successful mechanism for culturally relevant education. Concerns related to cultural loss and the generational difference in holistic philosophies about the environment support recommendations by previous studies that education in general should be approached more holistically (Cajete, 1994, 1999; Kenyon & Hanson, 2012; Lowan 2011; Lowan-Trudeau, 2013; Swayze, 2011). As previously stated, environmental education lends itself to a more holistic perspective, as it considers the social, economic, and political relationships between humans and the natural environment (UNESCO, 1978).

Analysis of the theme of influences on environmental views hold other important implications for environmental education. While participants in the 67+ age bracket mentioned comparatively fewer influences on their personal environmental views, younger generations mentioned a wide variety of factors including but not limited to people, culture, time in nature (both structured and unstructured), gardening, secondary education, access, sense of place, and nonformal education programs. Comparison of these patterns with influences identified by SLE studies show interesting parallels, with a few notable differences.

Influential factors commonly identified in SLE studies that were also identified in this study include family, education, vocation, principles/religion/spirituality, cultural identity, travel abroad, and love for the place in which one was raised (similar to the "sense of place" category) (Chawla, 1998). However, the differences are perhaps more telling. While most SLE studies agree that time spent in the outdoors is the most important influential factor on environmental attitudes and behavior (Chawla, 1998), in this study, time spent in nature (seven participants) was outranked by the influence of family (13 participants) and culture (11 participants). In regards to family, Chawla found in a study of 57 participants that 64% named parents and 13% named other family members. In this study, immediate family members and extended family members were equally named. These findings make interesting suggestions as to the importance of family, including extended family, and culture in the development of environmental views for EBCI tribal members.

Another difference was the addition of gardening to the list of influential factors. Seven out of the 14 participants mentioned gardening as an influential experience on the participants' understanding of the provision of nature.

Conspicuously absent in SLE studies and in this study are the mention of western primary educational experiences such as specific classes, tests, teachers, or standardized curriculum concepts. In the cases where primary education was mentioned by participants, the examples were hands-on, cultural activities such as the incorporation of storytelling, arts and crafts, and traditional dance. This omission, in addition to the various other influences on environmental views that were named by participants, supports the inclusion of environmental education on the Qualla Boundary in both formal and nonformal education.

As such, it is important to intentionally consider cultural relevancy from the beginning of the environmental education curriculum design process (Cajete, 1999; Lowan 2009), and several findings have significance here. The importance of sense of place as an influence on the environmental views of participants reinforces the effectiveness of place-based education with American Indian students (Glenn, 2013; Kenyon & Hanson, 2012; Kowalczak, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011).

The findings of this study also agree with many other studies that multiple generations should be involved in environmental education for American Indian students (Glenn, 2013; Kenyon & Hanson, 2012; Lowan-Trudeau, 2013; McDuffie, 2014; Swayze, 2011). As previously mentioned, both immediate and extended family members appear to play particularly large roles as 13 out of the 14 participants referenced a family member as an important influence on their environmental views.

Finally, in agreement with previous studies, findings indicate that environmental concerns are important to American Indian students (Aftandilian, 2011; Glenn, 2013; House et al., 2006; Korteweg & Russell, 2012). Overuse, urbanization, and littering/graffiti were the top

three environmental concerns mentioned by younger and older generations alike of EBCI participants.

Limitations

Theoretical saturation was not reached in this study in that new ideas continued to emerge throughout the analysis of each interview. As such, the findings were not exhaustive by any means; if more interviews had been conducted, more ideas would have emerged. This could have been due in part to the small sample size. In addition to the small sample size, uneven distribution across age brackets made it impossible to generalize the findings of this study to the EBCI population as a whole. The snowball method further restricted variation between participants as participants were often of the same network of family or friends. The initial contacts were also from the academic EBCI community, so the tribal members who were ultimately involved may not have been demographically representative of the whole. More research is needed to further explore the significant findings of this study.

Recommendations for Future Research

As theoretical saturation was not reached, a continuation of this study in which more interviews are conducted could reveal elements of EBCI environmental views that were not identified in this study. A more extensive qualitative study could further inform an increased understanding of Cherokee environmental views including philosophies, values, influences, and concerns.

In order to confirm a generational difference in Cherokee environmental views and/or define the scope of cultural loss in regards to traditional environmental views, quantitative research may be needed. A quantitative study could utilize surveys delivered to a large, random

sample of EBCI tribal members, and its findings could be generalized to the population as a whole. The survey could be written based on the findings of a more extensive qualitative study in regards to traditional Cherokee environmental views, and could specifically compare these views to the EBCI generations in order to further understand acculturation among EBCI tribal members. One specific area that may need further clarification from this study is whether or not a generational difference exists in regards to understanding nature's provision, as suggested by several participants.

Ultimately, many of the gaps in American Indian environmental education research previously identified in the literature review were not addressed by this study. In regards to the EBCI, the wide-spread accessibility of the environmental education programs that do exist could be evaluated. Longitudinal research could also be conducted to investigate the long term effectiveness of these programs. Finally, more targeted research may be needed to determine if difficulties of cultural mixing exist for younger generations of EBCI tribal members in regards to the pressures of balancing both western and tribal cultures.

Throughout any study with the EBCI community, participatory research methods should continue to be implemented. Working closely with the EBCI IRB is both required and helpful. A flexible research timeline is essential, and the snowball method is an effective way to build a strong network of participants who feel comfortable in engaging in the research process. Providing participants with multiple opportunities to comment on their representation in the research further contributes to the trust relationship. Additionally, providing a small compensation demonstrating the researcher's appreciation of participants' time and willingness

to share was well received, and could be incorporated into future studies if possible.

Recommendations for Practice

In general, findings from this study support environmental education that incorporates a wide variety of hands-on, cultural experiences in both formal and nonformal education. In regards to the traditional environmental views of the EBCI, including critical thinking activities about traditional environmental philosophies could be a way to encourage younger generations to think on a deeper level about their relationship to nature. Additionally, multiple generations should be integrated into environmental education programs when possible, especially immediate and extended family members. Place-based education strategies could also be used to reinforce students' connection to their community.

Ultimately, environmental education curriculum should highlight culture as a significant piece of students' connection to nature. Elements of culture that may be included are traditional crafts, storytelling, and traditional dance. When incorporating crafts, the whole procedure from the traditional harvesting of necessary natural resources to the completion of the craft could be integrated into the experience, highlighting the natural connection inherent in the process. Finally, the incorporation of gardening as a cultural relevant activity could be an effective way to foster a connection and understanding between EBCI students and the natural world.

Another important consideration is the high level of concern participants expressed in regards to overuse, urbanization, and littering/graffiti. These concerns could be implemented into environmental education curriculum through community action projects.

Above all, educators should be familiar with and respect the ancient wisdom that is part of Cherokee culture. I suspect it would come as no surprise to traditional Cherokee elders that

multiple generations of family members and cultural elements such as crafts, storytelling, and dancing were suggested as the two most influential factors to participants' environmental views. In approaching an educational experience, educators should value the opportunity to engage in the free-flowing transfer of ideas in which everyone involved learns from the collective wisdom of the whole, as would be fitting with traditional Cherokee learning.

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APPENDIX A

INTERVIEW SCRIPT

Interview # _____

Recording # _____

Participant # _____

Hello and welcome. My name is Erin Lineberger.

As you may recall, I am a Montreat College graduate student working on a project in partnership with the EBCI. This study seeks to understand Cherokee environmental views, and I thank you for volunteering your time today to participate in this process.

I am interested in talking with you about your feelings and values in relation to nature. Understanding the environmental views of the Eastern Band of Cherokee Indians can provide information about the transmission of environmental knowledge across generations.

It is important for you to know that everything you say will be confidential. I will not use your name in any report prepared from the research. Your responses will provide valuable information for the EBCI tribe and the research community.

We are going to visit for about 30-45 minutes, during which time you will be asked various questions regarding your feelings, values, and attitudes toward nature. Your responses will be recorded by written notes and an audio recorder in order to assist us in capturing all of your answers accurately. Do I have your permission to record our conversation?

The form in front of you summarizes what I have just explained. Please review it now and let me know if you have any questions. If you feel comfortable with everything stated on the form and wish to continue your participation in this research, please sign the appropriate line of the form. *(If the participant chooses not to sign the form, thank them for their time. If the participant signs the form, continue with the process).*

Thank you for your time here today. Remember, you may choose not to participate or may choose to not answer a specific question at any time. Also remember there is no right or wrong answer to any of these questions; the purpose of this study is merely to learn about the environmental views of current EBCI tribal members as they exist.

1. Under which age bracket do you fall: 8-22, 23-37, 38-52, 53-67, or 67+ years old? (How old are you?) (Note for interviewer: Circle response).
2. What does nature mean to you?

3. How would you describe your connection to nature?

4. What people or experiences do you believe contributed to your view of nature?

5. Do you believe nature is valued by the Cherokee tribe as a whole? Why or why not?

6. Do you agree with the way your community interacts with nature? Why or why not?

7. Have you had any experiences or participated in any programs that have helped you better understand a proper relationship between humans and nature? If so, please describe what they were and how they taught you.

8. Is there anything else you would like to share with me regarding any experiences that you have had that have shaped your views of nature?