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POST-COURSE ENVIRONMENTAL BEHAVIOR CHANGES OF
WILD ROCKIES FIELD INSTITUTE PARTICIPANTS

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Thesis presented in partial fulfillment of the requirements
for the degree of

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ABSTRACT

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Environmental Studies

Post-Course Environmental Behavior Changes of Wild Rockies Field Institute Participants

Committee: Daniel Spencer (Chair), Fletcher Brown, and Laurie Yung

In light of the environmental crisis facing the world, the need for citizens to behave in an environmentally responsible manner is critical to finding lasting solutions. After conducting and analyzing 20 in-depth interviews with alumni of the Wild Rockies Field Institute (WRFI), this study found that despite elevated pre-course levels of environmentally responsible behavior most participants reported an increased level of post course environmental behavior change. Post-course impacts ranged from a change of, or further investment in academic and career goals, lifestyle choices, empowerment, ethical development and political activity. Participants reported these outcomes were influenced by a variety of course factors such as course instructors, student group, guest speakers, and time for reflection in the outdoors. Over all, participants of WRFI reported significant changes in their environmental awareness as well as an increased propensity to act on their intentions. This study helps demonstrate how behavior change theory works on the ground and highlight significant factors that make for successful (or unsuccessful) outcomes.

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Introduction

There is no doubt the earth is under unprecedented pressure from resource demand and use of over six and half billion humans. The voracious consumption of non-renewable fossil fuel resources has contributed significantly to climate change, habitat destruction and mass-extinction of countless species. In his book *Earth in Mind*, environmental educator and author, David Orr states, “the environmental crisis originates with the inability to think about ecological patterns, systems of causation, and the long-term effects of human actions” (Orr, 2004, 2). By cutting ourselves off from nature, a vital component of education is being ignored to the detriment of ecological health. In sum, the ecological crisis is in a large part a result of education. Orr (2004) postulates that a well-rounded education is at the core environmental education. The redesign of education must embrace a holistic view of human society and the natural ecology in a manner that fosters critical thinking, problem solving, empowerment, and engagement in civil society.

Education is at the core about shaping behaviors to provide for a well-socialized and functioning society. Specifically, environmental education is aimed at changing, or further developing behaviors to build a more ecologically minded and sustainable society (Hungerford & Volk, 1990). Yet as noted by numerous authors, simple awareness of

problems and issues does not necessarily lead to environmentally conscious citizenship (Hungerford & Volk, 1990; Yerkes & Haras, 1997).

In my years of working as an outdoor and environmental educator I have seen many students come and go. Some walk away with another great experience visiting a beautiful place but with little drive to go change the world, while a few have blossomed into dedicated advocates for the environment. Students from the same course will walk away with different outcomes, some participants change before my eyes, others will take months or years to reflect and grow from the experience. It is these differences that inspired me to return to graduate school and examine the long-term outcomes of environmental and outdoor education.

The concept of environmentally responsible behavior (ERB) has been developed by a number of researchers over the past forty years. The concept pulls from academic areas such as education research, behavioral psychology, and environmental ethics. In this study I am primarily interested in how ERB is influenced and what aspects of an outdoor environmental education course in particular affect and change an individual's behavior.

Overview

This thesis is broken into five chapters: introduction, literature review, methodology, results and discussion, and conclusion. I build on the current literature of environmental and outdoor education, ethical development, and behavioral psychology to show why this

study is needed, and its connection to the greater field of environmental education research.

In order to build a foundation for this study to rest upon, I examine several areas of academic literature. I address the differences between outdoor and environmental education and how these similar, yet different educational philosophies relate to behavior change. My literature is focused on behavior change and the concept of environmentally responsible behavior (ERB) as well as the concept of significant life experiences. After the literature review, I summarize my methodology where I discuss the participant selection process, potential biases, interview questions and my analysis. In the results and discussion chapter I provide the major findings from this study and relate it back to the larger literature. However, before I dive into the thesis body, I provide an overview of the Wild Rockies Field Institute in order to clarify the scope this study.

The Wild Rockies Field Institute

The organization that I chose to work with on this study is the Wild Rockies Field Institute, or WRFI (affectionately pronounced *wer-fee*). WRFI is a unique program which blends post-secondary level academic courses with outdoor and environmental education in a field based setting for university students. It is important to note that I do not consider this study to be an evaluation of WRFI's program or teaching philosophy. While in some ways this study does serve as an evaluation of educational outcomes and I do provide ideas for improvement, the primary goal is not an assessment of success or failure. I chose WRFI to use for an in-depth study because of its unique education model,

its apparent success, and because it is a small, locally based organization. My approach to this study is not only to produce work of academic quality, but also to assist WRFI to grow and reach their mission.

Background of WRFI

Three graduates of the University of Montana Environmental Studies department at the University of Montana, Tim Bechtold, Matt Thomas and Dave Havlick founded WRFI in 1993 with the initial goal to “provide a different kind of college experience that connected students directly to places and an array of people” in an academic and expedition format. WRFI progressed from an initial Baja California sea kayaking course to running 9 to 12 courses per year that include 40 to 60 students a year (WRFI, WRFI History).

In addition to sea kayaking in Baja, WRFI offers eight week 12 credit semester courses in the fall, spring, and summer. WRFI also runs two to four week courses in restoration ecology of Yellowstone, alternative energy and bicycling, and coastal ecology in Alaska. Students gain credits in environmental studies, anthropology, English, Native American studies, biology and other natural and social sciences (WRFI, About WRFI). See the appendix for an overview of WRFI courses.

WRFI’s mission statement helps guide the organization, but also serves as a baseline of this study to measure outcomes.

The mission of the Wild Rockies Field Institute is to offer academically rigorous, field-based courses that help to develop engaged, informed citizens and strong leaders capable of addressing our society's complex social and environmental issues. We accomplish this by offering courses that:

- Broaden the nature of a liberal arts education.
- Teach critical thinking about social and environmental issues.
- Foster understanding of and respect for natural and human communities.
- Cultivate a sense of place that encourages personal, social and environmental responsibility. (WRFI, WRFI Mission and Vision)

Why the Wild Rockies Field Institute?

WRFI often receives glowing feedback from students about how the program has facilitated a change in their behavior. After initial conversations with WRFI instructors, administration and students there seems to be plenty of anecdotal evidence to suggest that WRFI is succeeding in its mission. In addition my limited experience working as an instructor on a section of a semester course in the fall of 2008 reinforced these perceptions.

I chose to focus my study on the Wild Rockies Field Institute for several reasons. The mission of the organization states the importance of “develop[ing] engaged, informed citizens and strong leaders capable of addressing our society's complex social and environmental issues” (WRFI Mission). The organization's mission all but states behavior change as an expressed outcome, which demonstrates WRFI's dedication to the

philosophies of environmental education. In addition, WRFI courses are conducted in the location and environment that is being studied and incorporate guest speakers who work on issues important to the area or subject matter. The format of WRFI courses engages students directly with place, which increases the likelihood of future behavior change (Vaske & Kobrin, 2001). Guest speakers and assignments such as citizen action letters provide experience and knowledge of action strategies and skills. Many of these traits are important and are outlined as major and minor variables in Hungerford and Volk's (1990) study of environmental citizenship behavior.

In my brief experience with WRFI as an instructor I became aware of how WRFI steps into the realm of behavior change by addressing the ethical and moral complexities of environmental issues. This is a crucial component in addressing long-term behavior change as noted by Fox and Lutt, (1996, cited in Yerkes & Haras, 1997).

As one can see, WRFI courses combine several major educational philosophies such as place-based education, experiential learning, and outdoor and ecological learning under the umbrella model of environmental education. In the next section, I review these educational models and how they relate to the broader question of environmental behavior change.

Research Questions

As I have stated above, developing environmentally responsible behaviors in students is a complex task for educators. It is perhaps easy to assume most students who are drawn to

WRFI courses possess some degree of entry-level ERB variables. The over arching research question is whether a student's ERB changes as result of their course experience. Of course it is very difficult to measure behavior change explicitly, therefore this study examines participants' perceptions of ERB. The most interesting aspect of this research for me is why did a student's perceived behavior change? What components of a course connected most to that student? These thoughts lead me to a set of research questions:

1. Has student perceived ERB changed or developed as result of the student's experience on a WRFI course?
2. What aspects of the course were significant in changing or developing a student's ERB? How did instructors influence development of ERB?
3. Why did these experiences develop (or not develop) ERB?

In the end I am interested in finding out *if* participants' perceptions of ERB has developed, as well as *what* aspects of the course were primary drivers of that change and furthermore *why* did these experiences affect ERB. Unfortunately this study is limited in time and I was not able to study behavior changes over time with a pre-course, post-course comparison. However, I believe this study helps build a picture of how ERB is affected by environmental education as well as helping WRFI understand their effectiveness.

How this study helps

While many EE programs express the strong desire and need to assess programmatic performance in a formative manner, they do not have the staff time or resources for longitudinal and long-term tracking. This study will assist WRFI in understanding if the

overarching organizational mission and goals are resulting in positive outcomes. In addition, my study will help fill a gap in environmental education research by providing an in-depth qualitative analysis of how alumni's experience with WRFI affected their post-course environmental behavior.

Many of the studies I have found on ERB are focused on classroom based EE courses (Iwata, 2001) or interpretive lessons for younger students (Knapp & Poff, 2001).

Research focusing on late high school and college age students who participated in a program similar to WRFI focused primarily on quantitative methodologies (i.e. Hammit *et al.*, 1995; Iwata, 2001). In fact I have only found two qualitative studies focusing on college age students on a course similar to WRFI that ask a similar set of research questions (Taniguchi, 2004 and Mazze, 2006). However, neither of these studies address long-range outcomes by interviewing students who participated in a course many years before.

Many environmental educators report anecdotal evidence of a course changing students' environmental behaviors and life directions. In my experience as an educator I have witnessed first hand student behavior change and in some cases been privy to watch the long-term development of students I have kept in touch with. The lack of qualitative studies examining longer-term outcomes of field based college level environmental education courses leads me to believe this study adds to the body environmental education research.

Literature Review

Introduction

The field of environmental education and sustainable behavior is in some ways a recent one with the advent of Earth Day in 1970; however, many of the concepts go back to decades before (Gilbertson *et al.*, 2006). In order to introduce this study I review relevant literature in the fields of outdoor and environmental education as well as behavior change with a special focus on the concepts relating to environmentally responsible behavior.

In the first section of this literature review I discuss several educational models. There are a multitude of models, sub-disciplines and educational theories that one could argue are at play in a Wild Rockies Field Institute course. However, to keep this study focused I review specifically theories of outdoor and environmental education.

I. Types of Education

Education, explicitly or implicitly, is about influencing behavior. Much of the education in primary and secondary schools is about giving students the basic knowledge and

socialization to be productive members of society. Of course education is more than reading and arithmetic, it also teaches students how to behave in a manner consistent with the values of society (Orr, 2004). In this section I discuss several specific types of educational theories that influence environmental behavior.

Outdoor, experiential, adventure, and environmental education are terms often used interchangeably. All have a common source from the educational philosophy of John Dewey and share many pedagogical methods such as hands on lessons, outdoor experience and a focus on constructivist learning. Many aspects of the different educational philosophies overlap such as an outdoor education lesson can cover concerns of environmental issues and environmental education can be conducted in a hands-on experiential manner (Adkins & Simmons, 2002). In this section I focus on outdoor education and environmental education as the two primary pedagogical influences at WRFI.

A. Outdoor Education Originally coined by Donaldson and Donaldson (1958) and still generally accepted today, outdoor education has been broadly defined as “education in, about and for the outdoors” (Ford, 1986). Over the years outdoor education has diverged from environmental and ecological science based programs to focus on adventure activities. In this sense, programs that are referred to as outdoor education are usually associated with recreational activities where learning is often skill based and focused on being a competent outdoors-person. While environmental behavior is often not an expressed outcome Berns and Simpson (2009) note outdoor education and

particular types of recreation have been shown to increase environmental sensitivity, awareness and behavior.

The history of outdoor education provides a glimpse into the general philosophy of this education model. Of course people have been learning in the outdoors and about the outdoors since the beginning of time. The formalization of outdoor education as a teaching philosophy started in the mid to late 19th century with boys' camps that focused on providing experiences to develop character. This progressed from YMCA camps to the expedition type adventure courses of Outward Bound and the National Outdoor Leadership School. It seems that most sources agree that outdoor education focuses on three main areas: ecological relationships, physical skills, and interpersonal relationships (Gilbertson *et al.*, 2006, Ford, 1986, Hanna, 1995).

B. Environmental Education Since the first Earth Day in 1970, the term environmental education has been used to describe an educational philosophy that teaches humans not only about the natural world, but how to live in a manner that reduces impacts and hopefully restores the environment.

Environmental education may be defined in numerous fashions. William Stapp (1969, 15) stated in the first edition of the *Journal of Environmental Education*, that environmental education should educate citizens about the “bio-physical environment and its associated problems” and to be “aware of how to solve these problems and motivated to work towards their solution.” A number of years later the Tbilisi

Intergovernmental Conference on Environmental Education stated that major objectives include building awareness of ecological issues, increasing the sensitivity to these matters, and developing values and attitudes, which motivate action and change. In addition environmental education should provide the skills to allow for citizen participation on environmental issues (Tbilisi Declaration, 1977). Whatever the expressed definition is, it is a common understanding that environmental education is about developing citizens that understand environmental issues and work towards the solutions.

Hungerford and Volk (1990) define what an environmentally responsible citizen should look like. This person would have an awareness and sensitivity to the total environment as well as a basic understanding of the underlying problems and issues. Ecologically minded citizens would also have the motivation to act on their concerns as well as the skills to be active participants in society. I discuss this idea in depth in the section on environmentally responsible behavior.

Whatever the pedagogical differences between the educational models I discussed above, I am examining education that has the desired outcomes of developing values, behaviors and skills in order to empower students to act on environmental problems and issues. There are of course a multitude of strategies to arrive at these outcomes that could be categorized as outdoor or experiential education.

WRFI seems to borrow from both outdoor and environmental education by using the outdoors as a teaching medium to build a connection between participants and the land,

which often leads to students developing self-awareness and confidence. Because of this one could categorize WRFI in the outdoor education arena. However, because of the express emphasis on the human-nature relationship and learning about ecological problems, issues, and solutions WRFI belongs in the environmental education model. The argument of what pedagogical model WRFI subscribes to is not important in the grand scheme of this study. For the purposes of this research and ease of reference, I lump together all educational strategies and pedagogy dealing with developing sustainable environmental related behaviors under the term environmental education.

II. Behavior Change Literature

There are a multitude of theories concerning why humans act the way they do. In this literature review I concentrate on several behavior change theories that I believe are most applicable to this study. In particular I focus on the theory of environmentally responsible behavior (ERB) as it has progressed through the years. It is important to note that different studies use slightly different terminologies (e.g. sustainable behavior or positive environmental behavior), so for consistency's sake I will refer to the concept as ERB.

A. Environmentally Responsible Behavior Environmentally responsible behavior, broadly defined, is one's action and intention to live in an ecologically sustainable manner (Hines *et al.*, 1987). This manifests in numerous ways through conscientious consumption, sustainable transportation choices, voluntary simplicity, recycling efforts and so on. Traditionally teaching towards ERB was thought to be a simple formula where knowledge of environmental problems would develop awareness and attitudes, which

would ultimately drive people towards action (Heimlich & Ardoin, 2008). This ‘build it and they will come’ concept is largely thought to be an inadequate description of behavior change. Some researchers suggest ERB is based on a more complex system (Hines *et al.*, 1987; Hungerford & Volk, 1990).

Hines *et al.* (1987) provided a meta-analysis of 128 behavior studies between 1971 and 1987, out of which they developed the Theory of Responsible Environmental Behavior. This theory states that an individual who intends to act in an environmentally responsible manner has a much greater likelihood of doing so than someone who does not express any intention. Furthermore, intention to act is a factor of multiple variables (e.g. knowledge, skills and personality) that work in combination. Hungerford and Volk (1990) in their landmark paper “Changing Learner Behavior Through Environmental Education” extend this theory further to suggest environmental behavior is based on three levels of variables: entry level (sensitivity and knowledge), ownership (investment in environmental issues) and empowerment (locus of control and action skills).

First are the entry-level variables, which include environmental sensitivity, attitudes, and basic ecological knowledge. These are the building blocks that provide a basic understanding, empathy and desire to act in an ecologically sensitive manner. General environmental sensitivity variables are good determinates for ecologically minded behavior (Hungerford & Volk, 1990). Research has shown that experience with the natural world is central to developing environmental sensitivity. In particular, studies on significant life experiences demonstrate that time in nature as children is the most

common way environmental advocates and educators became motivated to follow their careers (Chawla, 1998; Palmer *et al.*, 1999).

The second level, ownership, encompasses personal investment on environmental issues, knowledge of these issues as well as an idea of the consequences of behavior and commitment. Ownership variables are what make environmental issues personally important to an individual. At this point a person may have direct experience working on or being affected by a particular issue. This is thought to be a crucial component to acting on one's environmental sensitivity (Hungerford & Volk, 1990).

The third level focuses on empowerment, which the authors state consists of knowledge of skills related to action, locus of control and intention to act. Of these, locus of control plays a significant role in turning intention into action and I spend more time bellow discussing its importance. Researchers believe empowerment is the most important aspect in determining if an individual is to act out their intentions of behaving in an environmentally minded manner (Hungerford & Volk, 1990; Hungerford, 1996).

In addition to Hungerford and Volk's theory, Ajzen's Theory of Planned Behavior (1991) which built off Ajzen and Fishbein's (1980) initial study, is important to help understand why individuals may, or may not act out their intentions to be environmentally responsible citizens. As the above studies discuss, environmental behavior is a function of multiple components, which lead an individual to intend to behave in a certain manner.

The general idea of the Theory of Planned Behavior, is that “intentions to perform behaviors of different kinds...[result] from attitudes towards the behavior, subjective norms, and perceived behavioral control” (Ajzen, 1991, 179). Intentions are based on how one feels towards a particular action and an individual’s attitude towards an action is of course a factor of many variables, such as knowledge, experience and pre-conceived notions; in addition, intentions are influenced by social norms, such as social pressures, cultural influences, the media, religious beliefs, and peer pressure. The third factor is that of perceived behavioral control. The notion of “perceived behavior control refers to people’s perception of the ease or difficulty of performing the behavior” (Ajzen, 1991, 183). Ajzen (1991) remarks that perceived behavioral control, as demonstrated by numerous studies, is a significant predictor of intention becoming action.

Kollmuss and Agyeman (2002) challenge what they viewed as overly simplistic formulas of previous theories suggesting that pro-environmental behavior is based on a complex set of internal (emotions, values, knowledge, and attitude) and external factors (i.e. social norms, political and cultural factors). In addition these factors are further influenced by old belief patterns and other inhibitors such as lack of ecological knowledge and personal incentives. This model can lead to either a positive or negative behavior feedback loop depending on personal or social response.

Perhaps the best way to think about ERB is as an evolving knowledge base and commitments to act upon it. It is important to note that in this theory knowledge itself is not the catalyst for sustainable behavior, but rather is a tool to develop feelings of

ownership and empowerment. For example, students may enter into an environmental education program with a certain level of sensitivity, basic ecological knowledge from science class and a general negative attitude towards pollution. During the course students deepen their knowledge of issues related to water pollution. The students may participate in a stream clean up and experience what it is like to be part of the solution. This action can develop ownership of the solution as well as set them up for future empowering events with the goal that they become active citizens on environmental issues.

B. Locus of Control Hungerford and Volk (1990) as with Ajzen and others, theorize that control over one's behavior is significant in terms of intention becoming action. Locus of control, which is a broader term than Ajzen's notion of perceived behavioral control but none the less significant (Ajzen, 1991), plays an important role in terms of empowerment. The concept of locus of control refers to "the degree an individual believes that a desired outcome can be achieved through one's own behavior or personal characteristics" (Heimlich & Ardoin, 2008, 227). If the outcome is desirable it reinforces feelings of self-efficacy, which in turn increases the likelihood of the action being repeated in the future (Heimlich & Ardoin, 2008). The feedback loop, of course, can be both positive as well as negative.

ERB and locus of control are significant concepts in this study for several reasons. If the ultimate goal of WRFI is to develop engaged and informed citizens, then developing self-efficacy and a set of positive behaviors is a crucial outcome. Also, if a person has a

positive experience with acting on their beliefs, the chances are higher they repeat the action.

C. Types of behaviors In his Value-Belief-Norm (VBN) theory, Stern (2000) outlines several types of environmental behavior: environmental activism (e.g. active participation in organizations and demonstrations), non-activist public sphere behaviors (e.g. support of public policies or contributing to organizations), and private sphere environmentalism (e.g. purchasing eco-friendly goods or using less energy). Stern postulates that each sphere has a different set of causal variables influencing individual behaviors. A chain of values (altruistic, egoistic and biospheric), beliefs (ecological worldview, perceived consequences, ability to reduce threat), and personal norms predict the sphere of action that individuals act in. In addition, individuals who values that are pro-social as opposed to individualistic are much more likely to act in an environmentally responsible manner (Stern *et al.*, 1995; Karp, 1996).

If environmental education programs are to help develop ecologically responsible citizens, it is vital that the actions affect the environment in a broad and positive manner. Many environmental education programs seemed to be geared towards developing individual actions in the private sphere as opposed to the social change activist realm (Palmer *et al.*, 1999). However, many researchers agree that while private actions are important, it is the congregation of behaviors that produce significant change needed to address the environmental crisis (Stern, 2000; Chawla & Cushing, 2007; Jensen & Schnak, 2006; Jensen, 2002; Kollmuss & Agyeman, 2002; Hungerford & Volk, 1990).

Chawla and Cushing (2007, 448) note “environmental education... typically emphasize[s] private sphere environmentalism at the expense of preparing students for public action, and environmental educators often fail to engage students in a strategic analysis of the most effective way to address problems.” Education that leads students to become competent and empowered individuals as well as comfortable working with groups is vital in developing the “action competence” as laid out by Jensen and Schnak (2006). This raises the question of focusing on behavior change (as defined as private action) versus teaching towards development of action-oriented competencies and critical thinking (focusing on the activist realm) (Jensen & Schnak, 2006; Chawla & Cushing, 2007).

Louise Chawla remarks, “there is no single all-potent experience that produces environmentally informed and active citizens” (1998, 381) but rather many variables. Unfortunately this makes the job of an education researcher more difficult. Several studies examining post-course outcomes have shown that intellectual and personal development, interest in outdoor recreation, environmental or outdoor focused careers, and community volunteerism are often expressed changes by alumni of outdoor and environmental education programs (Kellert, 1998, Mazze, 2006, Hammit *et al.*, 1995). Moreover, commitment to notions of environmental sustainability and conservation are frequently noted as long-term outcomes; however actual environmental responsible behavior change is often weak and diminishes over time (Kellert, 1998).

D. Significant Life Experience As I discovered in this study most WRFI students enter into their course with a degree of environmentally responsible behavior. Much of the perceptions of already existing ERB seemed to be based on previous life experiences of participants. Studies examining significant life experience of environmental educators and activists show that people who profess to have a strong degree of environmentally responsible behavior often remark on certain life experiences that affected their lives deeply (Tanner, 1980; Chawla, 1998, 1999; Palmer *et al.*, 1999).

Tanner (1980) and Chawla's (1999) qualitative studies of environmental advocates and Palmer *et al.* (1999) examination of environmental educators, set out to examine what influenced individuals to pursue careers that work to benefit the natural world. All studies found experience in natural areas, especially as a child, as being the most significant. Also reported as important were influences from family members and friends, work and higher education (Chawla, 1999; Palmer *et al.*, 1999). These studies point to exposure to the natural world along with some sort of social mediator like a family member or teacher help set the stage for experiences to become significant and possibly translate into pursuing environmentally focused careers or academics. It is also interesting that these studies mostly focused on external factors (i.e. family) rather than internal reflective silent sides of the experiences. (Chawla, 1998).

The notion of significant life experiences is important to this study in a number of ways. First, previous experiences fall into Hungerford & Volk's (1990) essential entry-level variables for environmental behavior, which is the essential first step towards developing

ERB. Second, it helps build an understanding of what values and behaviors participants enter into their course with. Third, the notion is important in discussing how the course itself translated into a significant life experience and how that affected the participants' post-course behaviors.

E. Actual versus perceived behaviors It is important to note the difficulty of measuring actual behavior change. Because this study relies on self-reported information, it is significant to point out the differences between perceived and actual behavior change. Camargo and Shavelson's (2010) paper, "Direct Measures in Environmental Education Evaluation: Behavioral Intentions versus Observable Actions" outlines a number of pitfalls that educational research has especially in regards to environmental behavior. This paper outlines weaknesses and limitations to the traditional way of conducting environmental behavior change studies. The authors argue that more studies need to use direct observation to see how behaviors manifest.

In this study, observing participants' daily lives to make independent observations is outside the scope. I do recognize the implicit bias that exists in self-reported information. Reflections are influenced by many factors and many participants attended WRFI many years ago. The information used in this study must be viewed with this bias in mind. I do not believe that perceptions of behavior change are any less important, however it is important to note in terms of social science research that the behavior changes discussed in this study are based on participant perceptions.

III. Relevant Studies

In this section I review several studies are applicable to this thesis. During my research I found few studies examining environmental ethics and behavior of students from outdoor-based environmental education programs. Of the studies found, the vast majority dealt with outdoor school curricula or classroom-based primary and secondary school programs, many of which were quantitative in nature (e.g. Dettmann-Easler & Pease, 1999; Morgan *et al.* 2009; Stern *et al.*, 2008). In addition, there are a host of studies examining environmental behavior change of visitors and participants in interpretive centers such as zoos, arboretums and national parks (e.g. Hwang *et al.*, 2000; Knapp & Poff, 2001). These studies are informative only in that exposure to environmental issues and experience in the natural world are important steps towards awareness.

As for studies examining post-secondary, college and university students the majority looked at classroom-based introductory environmental studies or psychology classes. (e.g. McMillan *et al.*, 2004; Hsu, 2004; Iwata, 2001). These studies did find relative success of such courses in raising awareness of environmental issues as well as an elevated level of awareness in college students in general.

Very few studies were qualitative, focused on behavior change in outdoor-based environmental education, and looking at post-secondary level students. The few studies that fit that description were an unpublished masters thesis and doctoral dissertation (Mazze, 2006; Taniguchi, 2004). The lack of studies examining college students in outdoor environmental education clearly demonstrates the need for this study.

A. Long Term Behavior De Young (1993) argues that many of the techniques used in environmental education support short-term behavior changes while long-term behavior is crucial for changing the way humans interact with nature. Specifically “technique[s] well suited for causing rapid behavior change may fail to result in durable change. Likewise, a technique able to create self-sustaining change may require more personalized attention be given to the participants” (De Young, 1993, 500).

However, there is a surprising lack of studies examining behavior change over a long period of time. The few that did used surveys conducted in a pre-test and post-test fashion. Knapp and Poff (2001) conducted a study examining the short and intermediate term outcomes of an environmental interpretive program. They found, that hands on learning enhanced outcomes, and that students did have a higher awareness of issues, however, retention of specific information decreased rapidly afterwards.

B. Studies examining ERB in outdoor education Hammit *et al.* (1995) conducted a survey of 228 students who participated in a National Outdoor Leadership School (NOLS) course about how the experience affected their environmental behavior. The study focused primarily on exposure to nature and Leave No Trace, a minimum impact camping curriculum and responsible environmental behavior. The surveys were given prior to the course, immediately after and again between 4 and 8 months after the course. According to the study, there appeared to be a correlation between the course’s

environmental messages and awareness as well as self reported pro environmental behavior.

Kellert (1998), expanded on this idea and conducted a review of multiple studies to formulate an industry wide study comparing the three largest organizations, the Student Conservation Association (SCA), Outward Bound and NOLS. This study, while not exclusively looking at environmental behaviors, did find a notable increase in awareness while not finding a significant increase in sustainable behaviors.

Mazze (2006) was one of the only qualitative studies I found examining outdoor education students and long-term environmental behavior. She built off the Hammit *et al.* (1995) study on the effects of the Leave No Trace curriculum. This study seemed to correlate with the aforementioned studies by Hammit *et al.* (1995) and Kellert (1998).

IV. Conclusion

This literature review has covered a very brief history of outdoor and environmental education as well as a cursory review of behavior change. While there are ample studies of environmental behavior change, there have been very few examining outdoor education and even fewer qualitative studies. This study adds to the overall literature by examining a unique program. WRFI combines the power of a facilitated academic examination of environmental issues along with the catalyst of outdoor experience. It is my belief that this combination leads to significant long-term positive environmental

behavior. The complex nature of behavior development is exactly the reason that this qualitative study is important.

Methodology

Introduction

This study utilizes in-depth semi-structured interviews that I conducted with alumni of the Wild Rockies Field Institute (WRFI). I chose to study WRFI students because of the program's unique blend of college-level academics and outdoor education, with a focus on environmental sustainability and ethics.

I decided to conduct in-depth interviews because it is better suited to allow respondents to reflect on their experiences. In addition, a qualitative study allows for a more nuanced reflection of an experience, allowing details to come to light that may be overlooked in a quantitative study. Interviews allow subjects to delve deeper into ideas that they perceive as important as well as allow the researcher to ask probes and follow up questions to gain more perspective. In addition, I postulate that many students who enroll in WRFI courses tend to follow non-traditional education philosophies; such students may react better to personal interaction rather than the formality of surveys. Furthermore, qualitative methods allow for the nuances and complexities of a topic to bubble up during the research and analytical phase (Berg, 2007)

Historically, environmental education research has been dominated by quantitative research (Hart & Nolan, 1999). For many reasons, qualitative methods have not been the process of choice in this kind of research. I only found a handful of qualitative studies that looked at environmental education and behavior change; the majority of them focused on the concept of significant life experiences or were dissertations or masters thesis (i.e. Mazze, 2006; Taniguchi, 2004).

Starting in the spring of 2009 and continuing through the winter of 2010, I interviewed 20 WRFI alumni who participated in at least one course. Most students participated in a single course, which varied in length from two weeks to two months. However, four participants took multiple WRFI courses. The dates of course participation varied from as recently as fall 2008 and extended back to one of the first WRFI courses in 1995. I believe 20 interviews allowed for a high degree of saturation and fulfilled the quotas set in my selection criteria.

Participant Selection

Prior to the participant selection process, I first approached WRFI staff about the idea for this project. They were excited and very supportive of the study from the very beginning and provided me with information as well as access to the entire alumni database.

Before any participants were contacted, my study was considered and approved by the University of Montana Institutional Review Board. The board found no ethical concerns

regarding participants as all were over 18 years old and were not a sensitive population. In addition the interviews did not discuss sensitive personal information. All participants received informed consent forms either in person for face-to-face interviews, or via email for phone interviews. Participants whom I interviewed over the phone sent signed forms back either over email, post, or fax.

I selected my participants using a quota and purposive method system based on gender, time since course, and course length. I divided the list of all WRFI alumni into three distinct sections based on when the participants took their course. The breakdown was based on recent alumni (2008-2007), mid range alumni (2006-2003), and older alumni (2002-1993). The database that I was provided by WRFI was current up to the fall of 2008, when I started the initial research. I further divided the list by course length, split into short courses (lasting less than one month) and long courses (lasting more than one month).

I initially attempted to interview an equal number of males and females, however I adjusted the ratio to more accurately fit the overall gender breakdown of the WRFI alumni list. The rest of the criteria I feel reflect the breakdown of the alumni as a whole.

The following tables show the breakdown of participant selection criteria.

Table 1:

Gender	
Male	7
Female	13

Course Length	
Short Courses	9
Long Courses	12
Multiple Courses	4

Time Since Course	
Recent Alum	8
Mid- Range Alum	6
Older Alum	6

Interview Location	
Phone	12
Face to Face	8

To ensure randomness in selecting participants I used an Excel spreadsheet and hid all names on the database list and chose participants at random to contact, keeping in mind the above purposive sampling criteria. In addition, in order reduce the influences phone interviews may have on the data I wanted to ensure several of the interviews took place in person. I selected several participants based on their proximity to my location. However, several more interviews were in person than I expected, as several randomly selected participants were able to meet face to face for a total of eight face-to-face meetings.

After selecting the first set of participants I attempted to contact them by phone or email. I also utilized Internet searches and social networking sites such as Facebook and My Space to track down participants who did not initially respond. If I could not get a hold of the selected individuals, I chose more names in the same manner until my needed criteria were fulfilled.

Selection challenges that may have introduced certain biases into the study included the availability of contacts (students from longer ago were overall harder to track down), accuracy of contact information, life style (i.e. not having access to a phone), physical location (i.e. living abroad), and the willingness of alumni to participate in an hour-long in-depth interview. Because of these challenges, participants whose lives are more conducive to being tracked down by a researcher were perhaps more likely to respond.

Also it may be that students who had a more positive experience with WRFI responded while those who did not, declined to participate. In addition, alumni who believe they positively changed as a result and who were impacted by their experience may have been more likely to respond to requests. This bias may have contributed to an overwhelmingly positive response to WRFI as well as a general feeling of environmental behavior change during these interviews. However I did not see anything in the interviews or my analysis that indicated a major influence that would skew this study significantly.

I set up times for phone or in-person interviews as participants responded. The interviews were conducted in private locations suitable for the participant. Many of the interviews were over the phone (12 of 20) due to the diverse locations, career paths and academic directions of alumni. However face-to-face interviews are preferable if logistically possible.

The interviews lasted from 30 minutes to an hour. I let the participant talk as much as they wanted to ensure that I was not cutting their time off. I asked follow up and probing

questions to help flesh out the ideas the participant was discussing. The interviews were all recorded and transcribed and along with my notes entered into the coding program, NVIVO for analysis.

Researcher Biases

It is important to recognize researcher bias in this study. As I have mentioned before, I have briefly worked for the Wild Rockies Field Institute as a field instructor and due to random selection one of the respondents was a past student of mine. I did not run into any obvious biases due to the inclusion of a former student; in fact I believe that relationship made that particular interview very insightful. In addition, I did not readily give away to participants that I have worked for WRFI as an instructor, unless asked directly.

However, it is important to recognize the possible influences of a bias. There is the possibility participant responses may have been influenced by the knowledge of my relationship with the organization (i.e. an overly positive response to the experience); although I do not think this was a factor in any of the interviews. Overall my work relationship with WRFI provided many benefits to this study, such as having an already developed relationship with the organization, as well as a basic knowledge and understanding of course curriculum and philosophy.

Interview Questions

The interviews consisted of open-ended questions to allow the subjects to reflect and respond on how their WRFI course experience affected their ethics, behavior, and life

choices. The interview was designed to be flexible in order to allow a natural and organic flow. I asked probing and follow-up questions to focus responses and delve deeper into important topics. I wrote and refined the interview questions prior to the interviews, however there were minor changes to the wording and emphasis of questions after the initial interviews. I believe these changes did not affect the overall consistency of the interview data. Please reference the interview guide attached in the appendix.

I started the interview by asking respondents what course they took and when they participated in order to cross reference information from the alumni database. I then asked an icebreaker question about what the participant remembered as significant highlights from their course. I followed up this question by asking the interviewee to summarize the focus of their course. These questions helped develop a general picture of the participants' recollection of the course and it helps warm-up the reflecting process.

The next several questions regarded participants' experience in the outdoors and exposure to environmental issues prior to their WRFI course. Experience in the outdoors, such as camping, hiking, bird watching, and general play, is noted by numerous authors as being essential foundations for an environmental ethic (Louv, 2005). Hungerford and Volk (1990) refer to this as "entry level variables" while Tanner (1980), Chawla (1998 and 1999) and Palmer *et al.* (1999) reference significant life experiences such as exposure to the natural world through activities as being important starting places for environmental activists and educators. I also asked participants to comment on their exposure to environmental issues prior to WRFI. This question was selected because of

the significance in Hungerford and Volk's (1990) second variable of ownership and exposure to environmental issues as well. This factor is also discussed in studies of significant life experiences (Tanner, 1980; Chawla, 1998 & 1999; and Palmer *et al.*, 1999).

After asking questions to understand participants' background, I asked them to reflect on how they believed the course affected them overall. I followed up this question by asking if the course affected their career or academic goals in particular, as these were important distinctions I wanted to analyze in this study. This follow up question tended to help focus responses.

I then asked questions that focused on the question of perceived behavior change. To start off I asked respondents how their course empowered them to become more involved in environmental issues. Moving on, I asked if the course addressed issues of sustainability as well as how the participant thought that affected their behavior. This led naturally to the next question of what ways did the course alter day-to-day lifestyle choices.

Responses to this question often needed some prompting such as asking about more specific behaviors like consumer habits or transportation choices. From here I asked participants to reflect back and think of particular course experiences that influenced these changes in behavior. To probe deeper, I asked about influences of lessons, guest speakers, activities, instructors, and the overall student group to get a better sense of course factors that were important.

The last question focused on perceived behavior change asked about change in the participant political activity. This question was followed up by questions about components of the course that affected this behavior. I am interested in how participants' WRFI experience set them up for what Chawla and Cushing (2007) term "strategic behavior." In other words, did participants leave WRFI with the skills, knowledge and empowerment to effect change?

At the end of the interview I concluded with a catchall question: what else can you tell me about how this course affected you? This question gave participants a chance to share ideas that I had not asked about as well as sum up their perceptions of how the course affected them the most. I occasionally found respondents would comment on additional effects while answering this question.

Interview Analysis

I first read and took general notes on the interviews to gain a basic understanding of each participant's thoughts. I then coded the interviews with NVIVO, an open coding program, to pull out relevant themes. I first coded themes and ideas that naturally arose from the transcribed text. From these codes and interview notes I pulled out major themes and relevant details that I was able to compare across interviews to develop an overarching picture of course effects on environmental behavior. My intent was to produce a phenomenological description of students' experiences. My analysis was focused through the lens of relevant literature on behavior change as well as environmentally responsible behavior that is outlined in the literature review chapter.

I analyzed data in several stages. First, I examined the codes I developed in NVIVO looking for overall themes and trends in regards to individual interviews. I then summarized major themes and compared them between interviews by developing a large spreadsheet. On this spreadsheet I summarized participants' answers across the relevant themes I developed in my coding process. Being able to see summarized points for all themes and all participants allowed me to develop the analytical categories I used in my analysis.

I picked quotations from interviews to illustrate results based on several criteria. First, I wanted to show the range of findings from the interviews. Second, I chose quotations that articulated the point the most clearly as interviewees varied in their reflective quality as well as their articulation. Third, I focused on summarizing the total findings of this study by choosing quotes and anecdotes that best illustrated the general mood of particular themes.

Conclusion

Overall, utilizing qualitative methods was particularly helpful in fleshing out the larger question of why ERB changes occur and how WRFI students perceive that change. A survey may have been able to find similar results and allow for a larger sample size. This may be helpful in the future to expand on this study.

Unfortunately due to the timeline of this study I was not able to track participants longitudinally. This would have helped answer the question of how participants change over time. This question is important and I recommended such studies for further research.

Despite the limitations to this study and to qualitative methods, I believe taking a qualitative approach to this study allowed these research questions to be answered. The depth that occurs with in-depth interviews is particularly useful in investigating a complex question. I also think the interaction that happens during an interview, even over the phone, helped me guide reflection towards issues that were of particular interest to the participant. This helped me find connections between themes across the study.

Results and Discussion

Introduction

The results of my analysis are from in-person and over the phone interviews. All the information from the interviews is self-reported and is not corroborated. For confidentiality purposes the identities of participants in this study are hidden including names and any identifying characteristics. This level of confidentiality extends to the identities of instructors, other students, and guest speakers.

After spending months interviewing, analyzing and organizing the information I collected, I believe the experience gained on Wild Rockies Field Institute courses indeed positively impacts student environmental behavior. In this chapter I present the range of results from this study as well as provide discussion on my analysis and interpretation. It is my intention to relay the full spectrum of findings in order to develop a full picture of the post course behavior changes of WRFI participants. As this section illustrates, WRFI courses touched each participant in a multitude of ways.

Overview

For the purposes of my analysis, results are grouped into three categories: previous outdoor experience and exposure to environmental issues, course effects on participant environmental responsible behavior, and contributing factors of the course. In order to develop a better understanding of what level of perceived environmental behaviors participants entered WRFI with I inquired about previous experience in the outdoors as well as exposure to environmental issues. In addition I extrapolated from the interviews what I viewed as the level of existing environmental awareness and responsible behavior of participants prior to their WRFI course or courses. The next section examines participant perceptions of course effects on environmental responsible behavior (ERB), which contains the bulk of the interview results. In this section I explore the numerous behavioral influences participants discussed and how they were influenced by their WRFI course experience. I split this section into several sub categories: academic and career impacts, lifestyle choices and general environmental behavior, empowerment, and political activity and awareness. In the last section I examine the contributing factors participants recalled from the course that may have impacted ERB. These factors include course curriculum, instructor influences, student group impacts, and reflection.

These sections refer to my research questions I laid out for this study: has student perceptions of ERB changed or developed as result of the student's experience on a WRFI course, what aspects of the course were significant in influencing a student's environmental behavior and why did these experiences develop (or not develop) perceptions of this behavior? My analysis demonstrates that indeed WRFI courses did

positively develop participant behavior as well as highlights the major themes that developed as significant influences. Throughout my analysis I offer my thoughts and reasons as to why certain influences affected (or did not affect) environmental behavior.

I. Previous Experience

Examining what level of previous outdoor experience and exposure to environmental issues participants reported prior to enrolling in a WRFI course is crucial in understanding how much an individual perceived their ERB change. Previous experience is cited as the first major entrance variable by Hungerford and Volk (1990) as well as studies of significant life experiences (e.g. Chawla, 1998, 1999). Initial experiences in the outdoors help define the attitude individuals have towards environmental issues. This attitude is a critical determinate in how people behave in terms of lifestyle choices, political action and general environmental responsibility.

A. Previous Outdoors Experience All participants reported some level of previous experience with the outdoors. This ranged from taking occasional day hikes, to growing up with family camping and backpacking trips, to time playing outdoors as a kid. The intensity of outdoor experience seemed to vary widely from occasional day hikes to long multi-day backcountry excursions. These differences in type and intensity did not seem to impact the individual's commitment to environmental behavior.

The most common experience in the outdoors was time spent outside with family growing up. Family experiences ranged from fly-fishing trips, to car camping vacations

and backpacking trips. Half of all participants directly reported family influences in their formative outdoor activities. One participant, who described himself as being raised in an outdoor focused family, stated: “I grew up fly fishing...[it was] a way to really explore the outdoors with my dad and my grandfather... [when] we had a family vacation it wasn't ‘go to Disneyland,’ it was going for 5 days on the river.” He later speculated that these formative experiences were important in developing his environmental ethic.

In addition to family members playing a role in getting outside, many participants also recalled having fun as essential in their formative outdoor experiences. Although having fun outside is not essential in developing an environmental ethic, it can be a stepping-stone for an evolution of behavior. Chawla (1999) cites having fun in the outdoors as being a significant influence and a major foundation in developing environmental behavior in life experience studies of environmentalists. Another participant remembered his introduction to experiencing the outdoors:

I started going on bike rides with my dad when I was young. That was when I spent most of my time in the woods just riding bikes. My dad probably couldn't ID many plants; he wasn't really outspoken about beliefs or whatever, so I wasn't really raised like an activist for the forest or a particularly informed ecologist anyway. It was more like we are out here having fun.

Although starting out having fun outside, this participant progressed to majoring in forestry at university prior to attending his WRFI course. It seemed evident from the tone during this interview that fun was still a major component of his outdoor experience.

Some interviewees noted the importance of growing up in communities where access to the outdoors was readily available. One participant noted of her formative years “I kind of grew up on a little bit of a farm outside of town. We raised animals, raised steers for 4H. Did a lot of hunting and fishing... it has always been a huge part of my life.” She recalled growing up in this environment as being influential to her eventual life choices.

It could be surmised that individuals who grew up in rural or semi-rural areas would have a more developed sense of connection to the environment. However, it was not across the board. Some participants reported growing up in urban and suburban communities where outdoor play and access was restricted. Often times these participants commented on the fact of growing up in a city as limiting their experience. However even these individuals recalled some element of nature interaction as being significant in their lives, even if it was playing in small wood lots surrounded by development. Also a number of respondents pointed to sports and outdoor activities such as skiing and rock climbing as being pivotal in their outdoor experience.

College afforded some participants the ability to gain additional experience in the outdoors, giving them the freedom to camp and backpack more. One participant discussed his thought when choosing a place to attend college: “Where do I want to go play? There! Where is there a school nearby? There... and it’s not a bad one either.” During college years, some respondents gained outdoor experience as well as an in-depth academic understanding of environmental issues. College was also the time most participants in this study enrolled in WRFI.

The phenomenon of picking a college for its proximity to the outdoors is not an entirely new idea. I made my move to western Montana over a decade ago less for academic pursuits and more to be close to the wilds of the northern Rocky Mountains. It is of course no surprise that college provides a time for students to experiment with new ideas, academic directions, and recreational activities. Often times the activities and behaviors picked up in college continue into adulthood. Additionally, the ethics that outdoor activities can instill hopefully transfer into lifestyle and behavioral choices.

Like college, employment in the outdoors gave participants experience as well as perspective. Several participants commented on their experience working in the outdoors as being influential in their environmental awareness. This included one participant who had worked as an outdoor educator previous to taking her course, another as a naturalist at a resort in North Carolina and one who worked as a biologist on the Green River in Utah. However, due to the age most students took their course, many had not had the time to work in the outdoors, although, many commented that they were motivated to pursue careers and jobs in environmental fields post course. Working in the outdoors or for environmental causes was an oft-discussed goal of many participants, especially those who recently graduated from college. I discuss career related outcomes in detail later on in this chapter.

Not only did previous outdoor experience inspire respondents to act in a responsible manner, it also gave them the ability to complete a course with significant amount of time

in the backcountry. While not required by WRFI, experiences in the outdoors helped set students up for success on their courses in a number of ways. A participant who traveled to Latin America for an ecology class before attending WRFI said:

We lived really primitively so [it]... helped set me up for being in the wilderness with Alaska. I knew that I could tough it out, cause we in the... [jungle] we had some harrowing experiences ... So I had that kind of background to know what I had with in me and so I wasn't frightened when things came up in Alaska. I figured that I could tough it out.

Some participants reported limited outdoor experience. One participant remarked she did not have much exposure to outside activities, "It wasn't anything that substantial... neither of my parents were really outdoorsy." However as she grew older and went to college she found an interest in hiking and being outside. Interestingly it was years after her WRFI course, when she returned to her home state after attending graduate school in a large metropolitan city that she reconnected to the importance of being in a place that is surrounded by the outdoors. This connection to place was a theme in several interviews and is something I discuss in greater detail later in this chapter.

Most participants in this study would be best described in the category of having "some experience" category. They often contrasted their limited outdoor experience to the extended time in the backcountry that they had on their WRFI course. "I grew up... doing outdoorsy kind of stuff. But I hadn't done, [an] extended... backcountry trip [the most]

that I had done was a weeklong raft trip. I definitely hadn't done anything that was weeks of self supported travel. I had never definitely done anything like that before.”

The question of outdoor experience split the group into two categories: the ones who grew up spending time being active outdoors, and the ones with limited experience. Both groups commented on the importance of spending time outside in their interest in taking a WRFI course. It seems all participants had some level of experience with the outdoors in their formative years and this appeared to have influenced their decision to pursue a course with WRFI. In fact, it may be experience in the outdoors served as an entry path for these individuals to become aware of their own environmental behavior.

Outdoor recreation does not always result in an heightened awareness of environmental ethics. Perhaps a student is drawn to WRFI because of the outdoor recreation component. This could result in several possible outcomes such as reporting a heightened awareness of environmental issues and a desire to live more sustainably, or the student does not take the academics seriously or is frustrated with the course and has a negative experience. However as the participants in this study help demonstrate experience in the outdoors is significant in developing an affinity to the environment.

Whatever the level of experience in the outdoors participants brought with them to WRFI the fact the course involved some kind of outdoor activity was an important component for all respondents in their decision to attend. Overall respondents seemed to be active people who enjoy time in the outdoors (to varying degrees of intensity), who had some

sort of positive interaction in the outdoors that in part inspired them to pursue a WRFI course.

B. Previous Exposure to Environmental Issues In order to gain a deeper understanding about existing levels of environmental behavior, I asked participants about their exposure to environmental issues previous to their WRFI course. I focused my questions primarily on environmental issues, but several respondents brought up experience with social justice matters as well.

Similar to the question about previous experience in the outdoors, participants reported a wide range of exposure to environmental issues from very little, to “only what I learned in school,” to time spent working on issues as an activist. The types of experience also varied and I grouped responses into several categories: family influences during formative years, place-based influence, school influences, and work experience. Most respondents were able to identify their level of experience as well as name major influences that affected them. There were several respondents who recalled always being environmentally aware and were not able to provide specific details about influences, while several others reported having very limited exposure to ecological issues.

As stated above, numerous participants attributed some of their pre-course environmental exposure to their parents and other family. A few participants reported gaining awareness through their parents’ work, such as one respondent who discussed becoming aware of environmental contamination when her father worked on oil spill clean up efforts. Other

participants attributed their exposure to environmental ideas because of a liberal upbringing. One participant stated, “my parents are incredibly liberal and my dad’s kind of a hippie.” Liberal or environmentally minded parents were brought up occasionally in regards to this question. It may be that many participants who reported having “always been environmentally minded” were actually influenced by parents, family members and other peers (see Chawla, 1998, 1999 and Palmer *et al.*, 1999).

In addition to growing up in a politically liberal household, numerous participants reported the geographic location of where they grew up was a factor in their general environmental awareness. Close proximity to nature allowed them to spend time outside, exposing them to environmental issues. Some participants commented that they grew up in places where environmental sentiments and natural resources are more visible and perhaps therefore more in the minds of the citizens. On the other hand, several participants who grew up in more urbanized states reported awareness of issues more visible in those environments such as sprawl and water contamination.

Because most WRFI students (all but two participants in this study) were in college when they participated in their courses, it is easy to imagine that a great deal of awareness and exposure to environmental issues happened relatively recently during their first few years at college. This was indeed the case in this study as a vast majority of participants cited environmental studies classes during college as exposing them to issues. As one participant noted in his interview in “two years of Environmental Studies you get a pretty good crash course about everything that is bad that’s going on.”

The majority of participants reported majoring or minoring in an environmental studies or science program in college. Other majors included anthropology, biology, forestry architecture, geography, and business. Some respondents had returned to school after attending a WRFI course to pursue higher degrees such as a Master's, or a Juris Doctorate. I address academic effects from the courses in depth later on in this chapter.

Several respondents had taken field based courses or participated in a study abroad program prior to their WRFI course. Several others studied abroad in Latin America and Africa, which they remembered as being significant, both in terms of exposure to issues, but also as a taste of an interdisciplinary education model.

In addition to academic programs, college was also a time when many participants volunteered with groups. Interestingly, only a few participants reported being involved with campus student groups. These students volunteered with organizations working on global warming, campus sustainability, as well as social and environmental justice issues. These groups tended to have a more activist leaning such as the Sierra Club. It is interesting to note the relative infrequency of respondents discussing volunteerism as a significant point of exposure.

Other significant influences included exposure to issues from work or internships. Participants who reported work as an influence had typically graduated or had almost graduated college during their experience, including two participants who had enrolled in

WRFI at an older than average age. The oldest participant I interviewed was in her 40's when she took her WRFI course and told of one of her eye opening experiences:

I did an internship at a wildlife center... So I got to see and work with a lot of damaged native species...I saw environmentally from that aspect how there is habitat destruction. We had a lot of burrowing owls with development that were rescued before the bulldozers [came] to tear everything down, plow them over. I saw basically habitat destruction, lack of respect of wild life, over-hunting or just amusement in abusing animals.

This participant's case is interesting; her work at the wildlife center inspired her to expand her knowledge and investigate some of the causes to environmental degradation. After she attended WRFI she continued her education in a Master's program studying similar questions.

Only a few participants reported no or very little exposure to environmental issues. One participant, who was on the younger side when she took her first course reported, "I knew absolutely nothing, like I knew that there was a hole in the ozone layer... and I knew that you should probably recycle. But that was the extent of what I knew. So I came with a completely open mind to all of it." She expressed amazement that other students came to her course with a much higher awareness of environmental issues. In addition she reflected because of her inexperience she developed a high level of change in her awareness and environmentally responsible behavior. Despite the lack of exposure this respondent remembered being interested in environmental issues before her course and was following that path in her first year of college.

In response to this question, participants seemed split into two major categories. On one side are participants with experience working or learning about environmental issues, who were usually already majoring in ecology or environmental studies programs in college. This group had a good deal of exposure and expressed or implied an awareness of existing environmental behavior. The second group includes students who had an interest in environmental issues, but with relatively little exposure and who tended to be majoring in different subjects. These participants expressed an awareness of needing to behave environmentally, but intention may not have been actualized into action. Neither of these groups seemed to be too influenced in terms of age and gender.

C. Conclusion Despite the varying degrees of experience, the alumni interviewed in this study generally held some degree of outdoor experience and had some exposure to environmental issues. However, without a control group to compare and contrast results to (i.e. non WRFI students) it is hard to say if participants were higher than average in their environmental behavior. The measurements I use here are based on generalized beliefs from my experience as an instructor and teacher. Participants entered WRFI with different levels of awareness and understanding of environmental issues and with varying degrees levels of environmentally responsible behavior. Since WRFI markets itself as field based, environmentally focused and academically rigorous courses, it seems logical that they would attract students of a similar world-view. Through a variety of experiences all participants had some level of appreciation for the outdoors as well as a desire for a

healthy environment. How the environmental behaviors and beliefs developed is the next question addressed in this study.

II. Course Effects

After developing a basic idea of the environmental beliefs that participants held prior to their WRFI course, the next question is how did participants perceive behavior change. Responses to this question varied to a degree but seemed to fall in a predictable range of results. For my analysis I group course effects into five major categories: impacts on academic and career paths, lifestyle choices, ethical development, feelings of empowerment, and political activity and awareness.

In each section several major themes were shared across interviews. As I noted in the above section on previous experience, most participants were already following an environmentally or socially minded academic track or career path before their WRFI course. Because of WRFI's attraction to environmentally conscious students, impacts on academic and career path were primarily described as "clarifying existing goals" or inspiring participants to "step up" their commitment or activity to a higher level. However, for some, WRFI made it difficult to return to conventional classroom learning. These individuals instead found alternative ways to follow their academic paths such as traveling the world, or working as an outdoor education instructor.

In regards to lifestyle and environmental behavior choices, major themes included increased awareness of individual actions. This awareness seemed to be sparked in a

multitude of ways and emerged as a number of different behaviors. Often, participants discussed striving to reduce their ecological footprint and to be mindful of how actions affect the environment and other people. Respondents discussed behaviors and actions that they are more conscious of post-course such as consumption awareness (such as not buying overly packaged goods and buying local and organic foods), using alternative transportation, reducing energy use by turning off lights, decreasing the use of technology, and increasing water conservation efforts.

Another theme that emerged emphasized practicality in regards to individual action and impacts. Many participants talked about environmental behavior and the importance of striving towards the goal of sustainability as a personal action. However, many were quick to note their own inconsistencies.

Part of WRFI's philosophy is to empower students to become confident citizens as well as environmental leaders (WRFI Mission). In addition to the physical empowerment participants felt from living outdoors for an extended length of time, many students remembered a sense of mental and emotional confidence after the course as well. This self-assuredness in some cases translated into participants reporting an increase in action. However, there were some participants who either expressly stated or implied that the course did not change their level of empowerment to make change. Often these respondents discussed having a developed degree of confidence prior to the course.

The final area I looked at is political action. Some participants reported an increase in political action, while some intended to do more but for various reasons were not yet able to act. Others commented on how the course raised their awareness of political issues; this group ranged for ones that already were politically active and those that were not but held some degree of awareness. Overall, it seemed that development of political action was less of a constant theme than the sense of personal lifestyle choices and empowerment of individual action.

In the following sections I address the themes I summarized above by sharing pertinent quotes and my analysis of general overarching pictures that developed from the interviews.

A. Academic Impacts WRFI's mission states courses work to "develop engaged, informed citizens and strong leaders capable of addressing our society's complex social and environmental issues" (WRFI Mission). As many participants noted, WRFI served as a stepping-stone towards their evolution in becoming informed citizens. Some commented that post-WRFI they were not only motivated to learn, but continued to become educated on issues or become a leader by working to protect the environment as a profession. As I have noted before, WRFI students are often in college or recently graduated and are usually at a flux point in life where career and academic possibilities seem wide open. Because of this, WRFI students leave their courses with a wide list of possible life directions.

Since WRFI's goal is to "offer academically rigorous" courses it is important to look at effects on participants' education (WRFI Mission). I asked respondents to talk about how their course experience impacted their academic goals. One could imagine that many WRFI students would change majors or academic interests because of an impactful course. However, as I noted already in this study most participants were already majoring in conservation or socially minded fields and had some existing level of environmental awareness. That said there were profound effects on academics on numerous levels such as helping students build connections between academic learning and real world experience as well as developing critical thinking skills by hearing from multiple sides of an issue.

As a field-based program, WRFI's philosophy is influenced strongly by experiential education. It may come as no surprise that students who favor alternative education models would be attracted to WRFI courses. Many participants noted having problems with conventional learning styles and that WRFI's hands on and more experientially focused educational model greatly enhanced the course's academic outcomes for these individuals. One participant reflected, "I am not a good classroom learning person. And so I think it was such an awesome way to learn and being active and having that small community it was one of my favorite college experiences for sure."

Another participant remarked, "I truly feel I learned more in that five week time period than I learned in most of the rest of my college career put together.... [I don't know] if it's just that I am a particularly practical learner or something." She continues by

reflecting on the hands on nature of the courses. Being able “to learn about the issues while you are there and talking to people, I came out of it like I actually knew a ton about the area, about everything that we learned about, where other classes I didn’t necessarily feel that way in college.”

The transition back to “normal” school was difficult for some respondents. One interviewee noted, “After I got back... I had one semester left, and it was kind of hard to come back to school.... It was difficult to get used to being inside again and learning from a book.” Despite the culture shock some experienced, the hands on approach to education impacted many of the students I interviewed.

For some the taste of a new educational model made the transition back to conventional classroom settings very difficult. As one participant noted,

For me not being able to sit in a classroom is the best thing that has ever happened to me... I was like I can’t sit in a classroom anymore... [I] stopp[ed] going to school and was like, I need to take some time, I need to take some kinks out, I need to travel, I need to do what I need to do. I need to take that confidence and... the new found curiosity and perspective on the world and build on that myself, just not in an institution for a while.

While dropping out of school and traveling the world may not seem to meet the goals of an educational institute, it seemed to help provide an alternative learning path for this individual. This example is certainly not the norm for WRFI alumni, however it is not

uncommon either or an unexpected outcome of a program that encourages critical thinking and empowerment.

Perhaps due to the interdisciplinary approach, participants talked about how the course helped them see connections between academics and real world environmental issues. For example, one participant reflected on his eye opening experience, “For me it was very much connecting what I have been reading about in college and reading about on the course and actually seeing it in real life.... I never really thought about where my water comes from I just would say it comes from a faucet, or you know like I never connected it with the coal we see.” He continued by remarking “I was an environmental studies major, I could’ve read about it all the time and I was very passionate about it, but to actually see it and connect the two on the course, like to me that was the really, really valuable part of it.”

The impact of building connections and gaining a more global perspective did not go unnoticed by others. One respondent spoke about the direct effect of building larger picture connections on her own academics:

I feel like as someone who is interested in sociology I am always looking for the reason behind what we do and why life is like it is and the processes behind energy use and climate change I think are really in tune with that. Because they are so complex and so involved with human activities as well as environmental issues... it really helped me further my interests, [and] further my understanding of that kind of sociological perspective.

Another participant in architecture double majored with environmental studies discussed how her WRFI courses influenced her last year in college. “I ended up writing my [senior] thesis on exposure to nature and having nature as part of a green design and how that helps people live healthier and better lives.” She continued by reflecting on why she focused on this topic: “I think it was because... having that happy healthy experience on my bike in the middle of nowhere, or in a kayak in the middle of nowhere helped me to experience that. So that is probably where that came from.” Many participants commented on the positive nature of being able to experience a place in such depth.

The connection to place as a space for education to occur is echoed through out the interviews. It is no accident that WRFI courses take place in some of the most stunning places in the western United States such as the wild and scenic Missouri river in Montana, the Canyonlands of southern Utah, and the wild coastline of Southeast Alaska. These magnificent places not only allow for solace and a rare chance for reflection, but also serve as incredible classrooms for students to see first hand the issues they learn about in their textbooks. One participant talked about his experience in the canyon classroom of southwest Utah.

I remember picking up a big chunk of petrified wood that was bright yellow and going gosh... look at this, this is a pretty cool... and [the instructor] goes, yeah that’s uranium, put it down... And its everywhere and its like this pile of dirt looks funny and you are able to walk away from it for half a mile and you look back and you are like, whoa that’s a tailings pile... You are able to gain

perspective and see the hugeness of things. Sure you can look in a microscope at little things but when you are able, the desert landscape rim to rim on a canyon you can see such a huge area. Now I see it, there it is. When you are up close you don't... The history is all over the place and the desert is slow to reclaim what once was natural, or untouched.

Perspective changes one's understanding of what is around them. It is the hope in environmental education that experiences like this are more than a single teachable moment but serve as a point of transference to the student to understand the importance of a broad perspective and transfer it to other parts of their life (Hanna, 1995; Hammit *et al.*, 1995).

For some, building connections between what they have learned in books and what they saw around them on course also meant developing critical thinking skills. Hearing from multiple perspectives is a major theme on WRFI courses. Students are exposed to diverse views on issues by reading articles and visiting with guest speakers from a broad range of ideological and worldviews. This approach generated critical thinking skills and a desire to understand an issue from multiple directions. An interviewee reflected about his experience,

[It] got me to think more critically about certain subjects... like [hearing] many different perspectives on issues. So a lot of the time we would, you know we wouldn't just take one side of one issue. You know, we would learn about an issue and like I said, maybe we would go meet with the federal land manager for that area but then we would also meet with the people, like an advocacy

group that is trying to fight the federal land managing agency to try and get different perspectives, so maybe that has helped me see more sides to issues, help me think more critically about things.

As mentioned above, most students who were still in college after their WRFI course did not report changing majors as result of their course because most were already in an environmentally focused program. The few participants who majored in other areas said the course might have motivated them to change or pick up a minor in environmental studies or related program. One participant reported, “I may have not necessarily changed my focus I think I would have stayed with [my major], but I might have done an environmental studies minor, or figured out a way to continue on that course. I was just too close to the end at that point to really use that.”

Several WRFI alumni addressed the importance of their course in pursuing a graduate degree. One noted, “I think that WRFI was [the] great next step for me before coming here to [graduate] school. It helped me decide what to do. At least it helped me confirm the path that I was going down.... It helped me confirm that I wanted to go into environmental studies for sure.”

Another respondent reflected on how WRFI carried over to her own philosophy about education,

The basis of me going to...[graduate school] now... [is] the opportunity to do something instead of just learning about this stuff and packaging it up and

putting in on a shelf. It comes down to you really need to apply this knowledge somehow. Why learn it if you are not going to live it or share it?

The inspiration to not simply become educated but to act and share this knowledge to make the world a better place was shared by many participants. One interviewee, who was able to finish his undergraduate degree in environmental studies by attending a WRFI course and who continued on to law school said,

I guess [as] I got a deeper understanding of the environmental issues, it may have given me more direction. Honestly it kind of gave me a boost, kind of a shot in the arm to keep focused [on] ... going to law school and doing that to come out as an environmental lawyer.

Educating students to become “informed citizens” who are able to “address the complex issues” of our times is not only in the mission of WRFI but is also a central theme in environmental education (Orr, 2004). Perhaps steered by pre-course factors, or influenced by their course experience or some mixture of the two, the WRFI alumni interviewed seemed impacted in terms of academics and life long learning. By becoming informed and wanting to follow an environmentally minded academic track, many participants found these impacts followed them into their post-college career goals and paths.

B. Career Impacts As with academics, many participants were already inclined to work in an environmental field prior to WRFI courses, perhaps due to previous experiences that steered them in that direction. In particular, participants who prior to WRFI already wanted to work in an environmentally focused field discussed gaining

focus, clarity, or a renewed inspiration to follow an environmental career path after their course experience. Courses impacted student career goals in a variety of fashions from class discussions and readings, exposure to nature, and mentorship from instructor role models.

In one such example of how WRFI shaped students' career goals an interviewee recalled a discussion during his WRFI course that had a large influence on the career path he has now followed.

I can remember... having a conversation in our class and our conclusion was that we needed to ... have better environmental education for kids... When you can reach someone when they're young and try to get some kind of connection with them and with their environment...[by] incorporating environmental education in like elementary school.

This participant has since become a professional environmental educator working for public school program. He continued by saying, it "gave me some more focus as to my career path and where I would want to go. Thinking about meeting my [instructors] and thinking how they were role models.... Yeah I think that course shaped what I am doing and how I live today for sure." Class discussions and instructor role models were often cited as important influences through out this study. I discuss these influences in more depth in the last section of this chapter.

Another participant remarked, "Meeting all the different [guest speakers] and how they relate to the land, really urged me to go looking at environmental conflict resolution."

After the course this individual worked as an intern at a national non-profit focusing on environmental conflict resolution in the Western United States and is now contemplating going back to school for a graduate degree focusing on this subject.

Other participants spoke of the connection with the environment they developed while at WRFI as being influential to their career paths. One participant reflected on her time on the Missouri river remembering how the connection to rivers and fresh flowing water inspired her to work to protect waterways in her home state. “I wanted to do something with my life that wasn’t going to be against the things that I really believed in. The thing that I really care about is rivers and that course, [Montana] Afoot and Afloat, solidified that for me and now I work for a river advocacy group.” Vaske and Korbin (2001) remark how interaction and attachment to a local natural resource leads to a higher level of environmental behavior. It is this ethic that leads to behavior but also to pursuing careers and activities that benefit the environment.

A related outcome of having a positive association with experience in nature is the desire to work in the outdoors. Living outside for extended periods of time on a WRFI course impacted career trajectories of some participants. One interviewee commented on how her course influenced her to follow a more nomadic and seasonal employment. “I went and worked for [a conservation corps], for nine months, I was a crew leader for them. That’s what got me into trail work, and I’ve been working [for the Forest Service], this is my second season... It got me in, which opened up the seasonal thing for me.” The wish to work outdoors was echoed by other participants as well. Often Instructors were cited as a

major influence as walking examples of “cool people doing really cool jobs in the outdoors,” as one participant described it.

Some jobs are stepping-stones on a path towards an eventual goal. One participant was using her experience from her cycling course on climate change to work at a bike shop during the summer.

I work at a bike shop now. I think that this course, to be able to say that I have been on a long tour was kind of my in, one of my in's into working at this shop... [I am] definitely a beginner, but totally passionate about cycling now that I have been on that course... [The course] was really an experience that allowed me to say, I have spent a month on my bike and I really love it, let me learn more.

As one can see, career impacts range from inspiring river activists and environmental educators to summer jobs working on wilderness trails or fixing bikes at a shop in town. Some jobs may only be a part time summer break employment for a college kid, but experience of fixing bikes may translate down the road to a life and career dedicated to making the planet a better place.

Not all career related outcomes are environmentally or outdoor focused. One interviewee remembered his course as being a freeing experience and how it inspired him to pursue his love of art as a career. “I felt a sense of being able to make my own path as opposed to be a sheep in society, following the herd... It was a completely inspiring experience.” Perhaps the feelings of empowerment, confidence, and energy gained from an experience

like WRFI is significant in regards to careers by showing that one can forge their own path and follow their dreams.

As with academic influences, career impacts vary from individual to individual. Again it is hard to say if WRFI was the direct cause of these participants following their chosen professions. No one participant stated that WRFI was either the sole influence or had no impact on his or her career goals or path. However it does seem evident that for numerous reasons, WRFI seemed to instill an academic curiosity and the confidence and empowerment to find fulfilling careers that help the planet. WRFI courses not only impacted participants' academics and career paths, but also influenced larger lifestyle and behavioral choices.

C. Lifestyle/ ERB change After discussing specific outcomes of career and academic effects, I asked participants to discuss how their course experience impacted broader aspects of their lives. Lifestyle choices include consumption practices, transportation methods, and awareness of environmental impacts. In this section I highlight participant perspectives of how their lifestyle choices were affected by their WRFI course. This section covers a major component of what researchers agree as fundamental to environmentally responsible behavior (e.g. Hungerford, 1996; Kollmuss & Agyeman, 2002). I refer to the theories that I outlined in the literature review, especially Hungerford and Volk's (1990) Theory of Responsible Environmental Behavior and Ajzen (1991) Theory of Reasoned Behavior (see also Ajzen & Fishbein, 1980, 2010), to illustrate chosen quotations and themes.

When asked about WRFI's effect on his lifestyle choices a participant reflected, "Yeah, it absolutely changed the way I live because it changed the way I think.... It definitely did change my life, not so much in the sense of daily habits but in outlook and how I think about things." This shift of perception and awareness led many participants to question many of the social norms of modern culture. Another participant noted, "You go back a changed person; you realize you don't need all these things that you are told that you need. And that makes you wonder if all these people tell me I need this and that, what else is not true." This shift of awareness was shared by many participants and often spotlighted the environmental impacts of overconsumption.

Despite the fact all respondents reported some level of pre-existing awareness of how consumption impacts the environment, all participants discussed some level of awareness change after their course. This varied from participants realizing how consumption leads to environmental impacts or becoming reinvigorated in beliefs or being inspired to become politically active on environmental issues. Consumption awareness often focused on how individual actions impacted global environmental issues in such areas as food and agriculture, water conservation, and energy use.

Becoming aware of the larger ecological impacts of consumption helped participants understand the chain of environmental effects that a seemingly simple item has from production to waste. One participant told in his interview, "I went home and made a bigger effort to be less consumptive... it made me really think about everything I bought,

where it came from, what it took to produce that, the energy involved, all of the big sequence of what it takes to make [something like a] water bottle.” This “action-impact” awareness was seen in many interviews across this study. It also extended to many areas of consumption practices especially in regards to food and agriculture issues.

A participant addressed WRFI’s effect on her feelings towards food issues. “It did a very good job of highlighting your diet.... I think it definitely influenced me. I knew some information but not the extent that I was given on WRFI. I didn’t turn around and become a vegetarian but... I eat meat sparingly. As much as I can I buy local[ly].” She also recalled how her new attitudes influenced her home life. “When I initially came home I got my parents to join a CSA (community supported agriculture), which we are still a part of.” Several other participants reported influencing their parents to become more aware of environmental issues and even getting them to join CSA’s. Encouraging ERB in others seems to demonstrate a level of empowerment and knowledge about an issue as well as an ethical belief in caring for the environment.

Awareness of energy issues was often was talked about in terms of consumption awareness. Several WRFI courses focus to some degree on climate change, energy consumption and the larger ripple effects throughout the environment. One participant discussed some realizations from her course,

There was a huge connection that water and energy are so linked. In the sense that if you think about places in California where Google’s headquarters are, they have buildings and buildings full of computers and then use water to cool

them all. So when you use the Internet you are also using a ton of energy and [therefore] water. And when you turn on the light it's using up water, even if it's not hydroelectric power that's bringing the electricity. It's all linked.

Realizations of larger connections between seemingly innocuous activities like surfing the web in Montana and water use in California led some participants to strive for a simpler life with less use of technology.

Many participants shared the desire to strive towards simplicity and how to live with less in materialistic society. Some interviewees discussed how the nature of backcountry camping and travel showed them benefits of living simply and how they have transferred that notion into their lives. One participant remarked on his thought process about finding the need for simplicity.

I got a desire for... looking around and really minimalizing, and [discovering that] you don't need a lot of stuff in your life. Being in this situation where all you can have is what you put in your backpack, and then you couple that with the kind of philosophical beliefs that are built on, what a person needs, [like the] belief that bigger is better. That is definitely altered. Not only from the reading you do, but you do it because you spend sixty days not having anything.

The act of living simply is a good example of the third variable described by Hungerford and Volk's (1990) because it demonstrates knowledge of issues, skills to act and empowerment to feel that one can effect change. Turning intention to live in a particular manner into action is a function of attitudes, social norms and behavioral control (Ajzen,

1991). Meaning the success of living simply not only relies on the individual's attitude and perception of how easy the action is, but also larger social pressures to, or not to complete an action.

WRFI seems to do a very good job in promoting awareness of consumption both through academics but also through the experiential component of backcountry travel. It should not be too surprising that students frequently commented on consumption and the need for simplicity in life. Many participants spoke about the need for simplicity both for ecological reasons as well as for mental and emotional reasons. Awareness of consumption covers a broad range of environmental issues but was well illustrated by a few specific areas.

In a logical step from consumption awareness, many participants reported the course reinvigorated them to use alternative transportation. Bicycling was the most cited transportation choice to help reduce ecological footprints. The choice to bike instead of drive is a conscious choice for many participants. One participant made the decision, "I bike every day. I've decided not to buy a car," while another discussed a sense of moral obligation to bicycling:

I definitely feel almost a responsibility to be riding my bike because of the stuff that I know, like I know how easy it is and I know that I can get someplace just as fast and just as easy and all it takes is a rain jacket... I feel almost a responsibility to these people too who I know are out there riding their bikes. Like [my instructors] are... riding their bikes, they would be so mad at me!

The moral imperative to act in an environmentally conscious manner was apparent in numerous interviews and across the several themes. Often participants connected the knowledge of environmental impacts with the need to act in an ethical manner. However it is interesting to note the difference in what participants believe is a reasonable reason to travel in a carbon heavy fashion such as air travel. Interestingly airplane use was a subject not many participants discussed in terms of transportation choices, perhaps because of the perceived need to use them, the infrequent use, or simply because traveling to far off places necessitate planes and can be interesting and fun.

One participant talked about her extensive travels overseas after her WRFI courses as being significant for her own mental and spiritual awareness. “That is definitely one thing that I have learned though traveling... is being open and using your intuition and the experiences and the people in front of you.” She continues by saying, “It is important in life to make sure that you are positively affecting those around you. That is part of being mindful, socially, physically of my own body, spiritually being connected to the land of being conscious of the things around me; academically to continuously push myself mentally.” The ethical dilemma of resource use of travel versus individual growth from the experience is an interesting conundrum in the realm of environmental behavior, especially when one considers the emphasis placed on critical thinking and understanding multiple perspectives.

Participant experiences such as this raise the question of does WRFI provide a consumptive experience for students? In other words, is a WRFI course simply taken

because it provides an incredible experience in a magnificent natural setting? These deeper ethical questions and how they relate to the organization's mission are important questions to discuss. I address these and other organizational dilemmas in the conclusion.

Others linked transportation choices like biking to larger lifestyle choices like being mindful of individual impacts and being a role model to others. One respondent remembered "thinking that I want to be a better example of... what I feel like is an important lifestyle choice that is a sustainable way to live. I think being mindful... you are less likely to consume so much and riding [your] bike more. I got back [home] and started riding my bike all the time."

Once a level of knowledge about an issue is achieved, like climate change, and an individual has a certain level of ownership towards a solution, such as biking, it seems natural for an individual to migrate towards educating and influencing others. It is of course a stretch to say that an individual will necessarily take these steps directly, depending on a network of actors (see Ajzen, 1991). However, several participants noted the importance of acting in a responsible manner as a way to be a role model to others.

Being a role model and a leader at home included riding bikes or taking public transportation, but also included larger efforts of encouraging positive environmental behavior in family and friends. One participant reflected on encouraging his peers to be more aware, "I guess with friends I am much more like, I am not obnoxious about it, but at the same time make sure that if some of my friends don't recycle I definitely, just

joking around, but I will give them a hard time. You know, just start recycling or whatever it is.” He continued by discussing WRFI’s impact on this behavior, “I think [I am] more involved with my friends and family to make sure that they are more aware too. I may not have done that without the course, I don’t know if I would have been quite so, like ‘look think about where your energy is coming from’, or ‘where your waste is going to.’”

Others have committed themselves to teaching environmental education as a profession because of realizations on the course about the need to influence sustainable behaviors of younger generations. A few participants discussed becoming inspired to work as outdoor educators because of their experience at WRFI. One recalled “I think the biggest actual impact in terms of my behavior was leading me and cementing me on my path to my occupation by getting into environmental education”

Besides inspiring individual action, many participants commented on how WRFI’s place based education style inspired a deeper connection to the environment. One participant was volunteering on a farm in the Southwest United States at the time of the interview through the World Wide Opportunities on Organic Farms (WWOOF) program. WWOOF helps travelers find organic farms to volunteer or work for food and a place to stay for a while (WWOOF, 2010). Max discussed the importance of being grounded in a place, “I have lots of friends who have gone to Australia and New Zealand [to do WWOOF], but really only stayed two weeks [in a place] and to compare that to working [here], the experience is like a season so you get to see plants change, and animals come and go, and

you just become a part of the place.” He reflected on WRFI’s attention to the importance of learning about place as influencing his decision to stay another season at the farm.

A different participant commented on how learning about one place in depth as he did on his Utah course, helped him learn and become better connected to other locations. “The WRFI course taught a lot about [Utah]... but I think I gained more about how to learn about an area. Not just about the Colorado Plateau but how I could do that somewhere else. I think I have gotten to know [my area] a lot better since that course.” He continued by saying he now looks “at things with a different set of eyes. Not just looking, [but] smelling and tasting and hearing and kind of feeling it.”

Hungerford and Volk (1990) outline a series of variables that lead towards environmentally responsible behavior. Participants entered into WRFI at varying points in these variables. Some were educated about issues and were aware of sustainable lifestyle choices while other were not as informed. Others had committed to making environmental concerns their career, while others simply had an interest in living sustainably. Whatever level of ERB participants entered into WRFI with, there was some growth that occurred due to the course experience.

The perceived changes that participants discussed of course range in relation to that individual’s level of awareness, beliefs, control, and general demeanor. It is difficult to lump participants into different categories. All participants at some level reported being

impacted and changed by this experience, however there was a range in ability to articulate and amount of self-reflection.

In relation to behavior before WRFI compared to this post-course interview, participant ERB could be divided into three camps: Those who reported elevated pre-course ERB and reported significant growth from their course, those who had elevated ERB and did not report change, and the group that did not have as highly developed ERB pre-course and did report change. The fourth combination of lower ERB and no reported change was not seen in this study, but of course could be a possible outcome with other participants.

D. Ethics WRFI courses utilize the relationship with place to teach not only about the ecology, geography and human history of a locale, but also as a conduit to address ethical questions. Much of WRFI's focus is on the importance of understanding a place.

One activity that has been a mainstay on many courses is the land ethic paper. This assignment builds off the notion of a land ethic outlined by Aldo Leopold (1949) in his seminal book *A Sand County Almanac*. Usually done at the end of a course, the land ethic assignment asks students to reflect and come up with their own environmental philosophy. Many participants in this study remembered this assignment as being significant. One commented on the paper's impacts, "At the end of [the course] we wrote like a land ethic paper. That definitely helped me clarify in my mind what on the ground actions I was going to do. So I try to live the land ethic and continue on with what we learned and read about and saw." Transference like this participant described is a

powerful event when an experience excites ethical development. Sometimes this development translates into action, while other times it serves to living a more examined life.

In addition participants often felt the course pushed them to reflect on their own personal philosophies. One interviewee reflected, “That philosophical question that was offered to me by WRFI, what is your land ethic? How do you view your role? What is the way you live? That voice has never been louder in my life and has never really left since Montana.” This participant also talked about how these questions challenged him to think deeply about his own philosophy, which he said, “raised a huge interest... in ethics in general and the personal nature of that... I frame a lot of things in that context now and I think that is a result of what we read and talked about out there.”

Reflecting deeply on beliefs and ethics was insightful to many participants. Just as with the moral awareness that participants brought up with bicycling, general ethical awareness is noted as being the essential step towards intent becoming behavior.

Many participants remarked on the need for personal ethics as an important link between, as one participant said, “talking the talk and walking the walk.” In addition, most all at least implied the need for personal responsibility to act in a conscientious manner. One interviewee encapsulated this theme well by saying, “After that class I definitely felt more of an obligation towards myself to do things, rather than just relying on the people around me to, provide opportunities for me to be more sustainable.” The feeling of

personal responsibility to act were echoed in many areas such as feeling a responsibility to be riding bikes because of information learned on course.

Along with the course challenging their thinking, some participants challenged others on the course. One participant told of a guest speaker who worked for a large international environmental group; “we expected a lot out of him,” but she was astounded by some of his lifestyle choices such as not car-pooling to work, flying across the country for short meetings. She remembers, “We really challenged him to be... why aren’t you doing these basic things that we are talking about in your lifestyle and you should be, because people look up to you.” This illustrates the belief that many participants alluded to, that personal responsibility to act in an environmentally positive manner is a leadership trait.

College students sometimes have the reputation of being idealistic and zealous in their beliefs. One participant reflected that, “When you’re in college or younger just learning about these things ... [you] get really worked up about it, and want to do something, and you want to change stuff.” However, some participants commented on how the course pushed them to be, as a respondent put it, “less preachy,” an outcome that is likely related to pushing students to see environmental issues from multiple perspectives.

Another participant noted her change of attitude: “[I] kind of realiz[ed] that you can do a lot on your own... I feel just like I kind of just mellowed out after the course.”

“Mellowing out” may be a product of maturing, but it became a trend in a number of

interviews. Sometimes participants realized this level of awareness a number of years after their course, expressing lament for their youthful intensity.

One such respondent recalled her initial behaviors after her course: “For a while I wouldn’t touch something if it wasn’t organic... I would time my showers and kind of I got really into whatever they told me at WRFI. I was nagging my mom constantly about leaving the water on in the sink and ‘you could compost that’ and that was the kind of stuff that came out of my first two courses.” She continued by saying after some reflection “I think that it kind of helped me to get some perspective... [Realizing] you do live in a human world, you can’t eat air, you can’t sit in your house the whole time and pray that you are not being impactful on the environment or on somebody.” She reflected back on how her mother must have felt from her current perspective of now having a child. She also spoke about the impact a particular instructor, who served as a mentor to her, had on her outlook.

I understand what it was like a little bit for my mom for her 19 year old daughter to come home and be like you are doing everything wrong, because it is hard to know in your day to day life. I try every day to think about my decisions. I think that is one thing that WRFI helped me with: if you are not going to do something the way you think it should be done, at least you can think about every choice that you have and do the best that you can.

That is one thing that [my instructor] really taught me... I think that was a really powerful message that I got from him, you can’t be perfect, but you can do the

best you can everyday. Just remembering that life is good, life is really a blessing even to have it. So like punishing yourself about decisions that you are making or not making isn't as useful as you actually appreciating life and doing the best that you can. I think that resonated with me.

Other participants reflected on the importance of realizing the reality of not living in a perfect world. One interviewee recalled reading a poem by Mary Oliver entitled *Wild Geese*. A few lines became almost a mantra on the course and have stuck with her since; “You do not have to walk on your knees for a hundred miles through the desert, repenting. You only have to let the soft animal of your body love what it loves.” This participant recalled this line as being a reminder, “Because I think that sometimes, and I certainly was a case of this when you are in your early 20's, you're so idealistic... you're judgmental about everyone else and I think one of the things [that] opened my eyes and the other students as well was this: you know you do your best and life isn't perfect, but the important thing is to be mindful of what you're doing and realize that you are not perfect, so therefore limit your judgment of others.” The concept of being mindful of one's actions was reflected in almost all interviews. Many participants alluded to the understanding that no one is perfect, but by at least realizing and owning the contradictions they can strive towards more sustainable behavior.

It is interesting to note that much of the ethical development described in this interview is focused on how an individual should influence the world around them. Ethics, mindfulness and the importance of individual action are broad categories of personal

development. The individual nature of this kind of behavior change led many participants to comment on how they felt more grounded in their beliefs and being self-assured in beliefs led many respondents to comment on feeling empowered to make change both intrinsically and extrinsically.

E. Empowerment Empowerment is the crucial last variable in environmentally responsible behavior as described by Hungerford and Volk (1990). Researchers believe empowerment is a critical indicator of intention to behave in an ecologically minded manner becoming action. In particular empowerment is a major factor in an individual's perceived behavioral control. When an experience allows students to walk away with the feeling that they can make a difference a positive association is built and the intention to act is more likely to occur again (Ajzen & Fishbein 1980, 2010; Ajzen, 1991). Many of these interviews demonstrate that WRFI accomplishes these kinds of outcomes.

Empowerment can occur in different manners; it can include general self-confidence or a feeling that ones actions can effect larger change. A number of participants commented on how their course left them feeling empowered. This varied in several ways. Many reported feelings of physical enrichment from backpacking or kayaking; others discussed feelings of confidence from gaining in-depth knowledge about environmental issues they cared about, allowing them to feel comfortable voicing their opinions.

I directly asked participants if they felt the course empowered them to make change on an issue they care about, to which many replied it did. Answers varied in their levels of

intensity; some reiterated the need for personal action and awareness, while others found a confidence to become politically involved. One such participant discussed feeling so empowered after her course that she joined a charity ride for climate change awareness on the east coast. “I went home and signed up and raise[d] \$3000 to do the thing and... I went home and I did that and I raised some money and I went to this ride... I went to Washington DC to talk to my representatives, I would never have thought about that before [my course].”

However, not all participants left their course and joined major charity rides. One participant had this to say: “I would like to say that after the course I went out and was hired by the Sierra Club and became an [activist]... but that didn’t happen. I didn’t turn around and become this big advocate of grass roots organizing or anything like that.” She continued by noting that on a “broad level I think it was very empowering.” Several participants shared this feeling in terms of general empowerment. Others commented that they already felt empowered to make a difference before they came to WRFI.

Interestingly, as I noted before, participants noted feeling more relaxed about their feelings of having to save the world, realizing that personal lifestyle choices are also important ways to effect change.

In contrast to feelings of empowerment to make social change, some participants recalled leaving their course with an increased feeling of self worth and general confidence. A larger number of female participants (joined by a few males) reported leaving the course with a deeper level of self-awareness and self-confidence. For some the act of being

pushed out of their comfort zone was enough to spur change. One participant said of her course: “[It was] the most positive experience I had in college as far as having that comfort zone of people that I was with and really brought and made me feel comfortable to express my opinions and thoughts... So I think that it helped me... to be able to speak up more.”

Another participant recalled, “I think this course made me so much more independent. I just remember coming back after not showering for a month and being totally gross and disgusting and looking in the mirror and never feeling more secure, stronger, just more set in who I was. It definitely gave me the strength that I needed to, and I was happier, I was never happier than when I got back from that trip.” She continued, addressing a recent trip during law school to study and travel in eastern Europe and the middle east: “It just gave me the power to push me to the right direction. This trip to [the middle east]... I went by myself,... and I traveled weeks before and after both by myself. And I think if I didn’t have that experience [at WRFI] I don’t think that I would have trusted myself to do that.”

Empowerment can be as simple as feeling confident to speak up, or to travel solo; it can also be as grand as being inspired to lobby congressional delegations about global climate change. However students reported feelings of empowerment, it is clear that feelings of confidence multiply the possibility of intention becoming action.

F. Political Action The last question I asked participants was how the course affected their political activity or awareness. Many respondents expressed that they did not change their political beliefs as a result of the course, mainly due to their already existing worldview; instead most participants reported an increased awareness of political issues and several recalled feeling an increased inspiration to make change on a political level.

One assignment in particular stuck out in many minds that addressed political action. On almost all WRFI courses students are given an assignment to write a letter to a decision maker about an issue they care about or are interested in. One participant discussed the assignment, “Towards the end [of the course] we were really inspired and part of our assignment was to write a letter to a policy maker... which I had never done. And kind of put your self... outside of the comfort level that I was used to. That was my first experience of with that sort of thing.” This assignment helped her realize that “We do have a voice and we do need to use it.”

The seemingly simple act of writing a letter to a policy maker inspired some participants to continue their citizen lobbying. An interviewee recalled writing his congressman about the 1872 Mining Act:

I guess my letter didn't make a huge impact... it definitely made me feel empowered, because it is like I do have a voice, I do have a say. It was a clear example of [WRFI] giving me a push to do something like that [and] make sure

that my congressman hears about it.... I definitely [still] contact my congressman and let them know what is going on or what I am concerned about.

As for the participants who did not notice a change in political activity some were already engaged and aware, while others reported being no increase or change in political activity but had an increase in overall awareness. One such respondent reflected:

It's hard for me to say if the course has affected [me]... it made me a lot more aware of what is happening... But I don't know politically, necessarily that it changed my views. I think my views were probably what they were before hand and I am sure that it heightened them a little bit. I don't think that it made [me] anymore politically active, or differently politically active.

Another participant noted that "it's one of those things you definitely come away with as being totally inspired to go away and do a bunch." However, this participant reflected that, "I don't think that I necessarily kept that flame under my butt for an extended period. I know when I got back I definitely felt reinvigorated to not be an apathetic person just hanging out and do more [but] I don't know if I necessarily followed through." Perhaps due to peer influences, a lack of empowerment, or perhaps simply busy life schedules, some participants did not report much change in their political activity.

Some participants walked away from their course changed, ready to act politically on environmental issues, others did not. The group who remained unchanged or only

reported a slight change; some already had an elevated degree of political awareness and therefore did not experience much change.

The cause of student perceived behavior change is obviously a complex interweaving of a vast array of experiences, reflection, thought, and action. A course of two weeks, or two months pales in comparison to a life of experiences in terms of shaping behavior. In this next section I discuss a few of the major themes that emerged as significant factors for behavior change.

III. Contributing factors

The perceived outcomes of a course evolve from a process of experience and reflection. I asked participants to reflect on what elements they perceived as being important to their course outcomes and behavior change. Specifically, I asked questions about instructor influences as well as overall student group impacts. The course factors that affected or influenced behavior change fell into four major categories: guest speakers, instructor influences, student impacts, and self-reflection.

I asked participants if they remembered any lessons, readings, or class discussions as being influential to their course. Outside of only a few references, participants by and large did not recall many specific readings or lessons, however a number of participants discussed the importance of an end of course term paper such as the land ethic assignment. For the purposes of my analysis and because of the personal nature of these papers, I address these papers in the section on self-reflection. It may not be too surprising that participants often cited their instructors as being important influences on their course. In addition, the group culture and other students on the course was oft-discussed as a significant factor. All participants at one point mentioned that visiting with guest speakers and hearing from their point of view on an issue was a very impactful event on the course.

A. Guest Speakers Meeting with diverse guest speakers from a wide range of ideological positions is a central component to WRFI courses. Speakers vary from wheat

farmers, to coal miners, to environmental activists, to state representatives. Guests are chosen to help illustrate the multiple and often complex viewpoints on contentious environmental issues. Participants often remarked that guest speakers helped put a human face to complex issues.

Some guest speakers discussed ways they are making positive environmental change. These guests ranged from wind farm operators to farmers turned environmental advocates, to green architects, to ecologically minded business owners. Participants reported feelings of empowerment and inspiration after meeting with, as one participant said in her interview, “ordinary people who do extraordinary things.”

A respondent remembered hearing from guest speakers as being important in helping her understand how social change occurs.

Many of our guest speakers were inspiring in that they were kind of explaining an issue to us and how it came up and what they did about it and why... I think that by hearing these stories over and over again about people who were trying to do something it helped show that behind every accomplishment are people... I think that it gave these complex issues sort of a human element and I kind of grew to understand a little bit more that people can make change happen, or people can work at an issues and understand it... I remember being pretty impressed by our guest speakers by what they were doing and what they were accomplishing.

The importance of showing that social change does not happen in a vacuum and that real people are behind the motions of politics and history is significant. Knowing that regular people with regular lives who along with many others can effect change seemed to be a boost to participants' perceived behavioral control, theoretically adding to the likelihood of behavior change occurring.

Several participants remember time on Native American reservations as being important. An interviewee recalled a highlight from his course, "we spent time on the Hopi reservation and talking about their historical farming practices that they still do today. I have probably mentioned that as far as giving myself credibility to talk about the issue more often than any other topic." He continued by noting, "Because there's a lot of foodies around that love to talk about you know, the small scale farming and polyculture and how connecting with the land and it's like sure but these people did it better. I guess I took a lot from the time spent with the Hopi and the Navajo...the most." Sometimes guest speakers help convey a lesson in a way that no textbook can. Experiencing and hearing from people first hand in its own right is empowering and can lend credibility to an individual's beliefs.

Some guests were remembered more for their negative impacts. One respondent remarked on a memorable guest speaker, "We met with this crazy environmentalist guy; he was really wacko, just over the top, where it made environmentalism look bad... he was just such a flaming hot head." She commented that this interaction caused her to realize "We all have to come together for things to work, you can't [be] totally opposed

to things.” Hearing from multiple viewpoints has numerous impacts perhaps demonstrating unhelpful strategies, however, sometimes guest speakers serve to challenge student’s thinking.

Some guest speakers seemed to be chosen with the expressed outcome of challenging beliefs and preconceived notions of students. One interviewee, who was enrolled on a course focusing on climate change, recalled meeting with workers at a coal-fired power plant.

Our first experience [was] to go to talk with four or five people whose lives, life work has been to supply energy, something very noble, they are supplying energy and power to a city, to the United States, something they thought was really patriotic, they really thought they were doing something wonderful and stirring on the economy and you know all of a sudden they are the villains in the new thing... I guess they are trying to figure out what to do now, now that they have realized that this thing is not all that good... We really got to see a fleshed out version that had before been a cartooned stereotype of a villain, I don’t know if that makes any sense. And so we went to a coal-fired power plant, we went to an oil refinery and then we got to immediately go and see how those places and those people who are making their living doing that were affected by this new data of climate change and this new thing that was affecting them.

Hearing from people that may at first be dismissed as having opposing views is vital in developing students and citizens who are able to understand and work on today’s

complex problems. In a world dominated by “us” versus “them” issues it seems crucial to develop not only an understanding of the intricacies involved, but empathy for all involved as well.

B. Instructor Influences Sometimes guest speakers affected students solely by themselves, but like all types of education a good facilitator helps focus the experience back towards the goals of the course. At WRFI two or three instructors accompany students to serve as guide, risk manager and of course teacher. Participants often cited their instructors as major influences on and after their course. Sometimes instructors were remembered for their inspirational life experiences, others for their knowledge, and others for pushing and challenging students.

Pushing students outside of their comfort zone by having their thoughts challenged seems to be a long-standing part of WRFI’s teaching philosophy. Participants often recalled being challenged by instructors to think deeply about why they believe what they believe. Questioning one’s beliefs was new to many participants. One participant remembered, “Your instructors are with you... within 25 feet of you the entire course, so you’re bound to ... be pushed to [ask]... ‘Why?’ and ‘How?’ and not just what the issue is but how can it be changed, and what can be changed to make it better.”

Other participants recalled heated debates with their instructors.

They really ask you to think critically about the things that they are teaching you... I got in this two-hour argument with [my]... instructor about hunting. I

was like I don't believe its ok to kill something else... [We] argued for an hour and half about this and it didn't change my mind and it didn't change his mind but it was really just the skill of knowing this is an adult... [that] you both are able to hash out your opinions and stand up for them. That kind of thing was really valuable to me.

Not only is it important to have thoughts challenged, it is also important to stand up for what one believes in. This tenacity of belief is crucial as it helps solidify the ethical foundation that behavior is grounded on. It is also an important realization that even if one does not see eye-to-eye on an issue it cannot be discussed in a civil fashion.

Besides pushing students to think, many participants remembered their instructors as role models. An interviewee remarked, "Besides being in class, going on hikes and getting to talk to, not just the other students, we could talk to these, like older role model adults that were kind of like great, great people. You just wanted to kind of learn as much as you can from them."

Many participants remarked on the unique role instructors played as both being a teacher, but also a friend and mentor. One said of his instructors, "They were really approachable, super friendly, really passionate, encouraging. They treated me like an equal you know. It wasn't like they were the teachers and I was the student, it was like we were all in this adventure together." The feeling of friendship with instructors struck a chord with many participants. I would venture to argue that it is a major reason why participants respected instructors and viewed them not only as role models but also as friends.

A participant recalled the importance of knowing “people who are further down the life path to tell me about their own experiences. I think that’s what helped me the most is like I saw all of my instructors having these really cool lives, not the 9 to 5.” She also remembered her instructors “telling me this is how I did it, this is what I did... I think that was the first time that I was exposed to people doing what they wanted to do and not kind of doing what society says. I think that probably is what set me on my own path because they showed me that was a possibility.” She continued by noting one instructor with whom she remains in contact with, who became a mentor to her. Other participants also commented on staying in touch with instructors after the course as being important.

Of course, not all participants recalled having a deep lasting relationship with their instructors. Those individuals usually responded by saying, yes the instructors were influential, but did not give more details. No one participant commented negatively about their instructors, some simply did not comment much perhaps indicating that they were not a significant influence.

In my experience as an outdoor education instructor, the relationship with students is vital in achieving positive course outcomes. It allows instructors to push and challenge students to think critically, it also allows friendships to develop that last long after the course is done. Mentorship is something that not all young people in our society experience. Research such as Lousie Chawla’s (1998, 1999) studies on significant life

experiences of environmental advocates, point to parents, teachers, and other adult role models as being very significant in overall environmental behavior development.

C. Student Impacts Besides instructors, fellow students on the courses influenced participants in numerous ways. Most commonly, participants remember having a great time with peers on an incredible journey. One participant recalled fellow course members, “the group of people that we were with was such a band, such a group of connected souls... I felt that we were all best friends from the moment we met and it wasn’t like there were two people who got along better than other people... I’ve never had before or after where one group of people really, that were such a unit.”

Another interviewee remembered, “We had such a great group of people.” When asked about what specifically she replied “Diversity of opinion was a big one. I kind of expected all of us to be in the same mind set on a lot of issues and in a way we were... But I was constantly amazed about all the ideas people would constantly new solutions, new complexity to problems that I would never ever have considered.”

Spending significant amounts of time with a small group of people, living, thinking and learning together in close proximity helps build strong bonds between students. Sharing ideas helped students process the experience as one participant remembered, “I just remember that feeling of sharing and seeing what my other fellow students had come up with throughout this course of growing and changing over two months and all the things that we tried to critically think about and challenge ourselves with.”

Some participants remember the interactions with their fellow students as a learning experience itself. One respondent remarked,

After two weeks a lot of the social barriers that would still exist for years amongst a group of friends are gone. When you spend every hour of the day with someone for two weeks you are not afraid to be like, hey, that annoys me. Its like that annoys you? I do that around my friends all the time back home, but we have the ability to go away from one another for a little bit. Oh so maybe I shouldn't do that when I go home now. It speeds up the process of learning about your self. It's very black and white after a while, it's like, no that doesn't work, don't do that anymore.

Experiences like this can either prove to be a positive learning experience or make the whole experience go sour. In these cases, much like with instructor influences, most participants did not discuss student impacts in depth when the experience was negative.

One participant noted the age difference between him and his course mates resulted in challenging situations. "It was challenging with the students that were on [the course]. Yeah it was an interesting group of students that were on it... I was one of the older students on the course... I think I was [in my late 20's] at the time and probably the average student was 18 or 19." When pressed to reflect more on this, the participant simply said, "it was a maturity thing." Overall participants rarely made it seem like the group interaction was much of a negative impact in terms of behavior change.

Student and instructor influences impact a course during the experience, but also years after. As participants reflect on the experience, sometimes a decade or more after, the positive interactions and behavior development become the memories that most easily float to the top. Taking time for reflection is vital in the years since the course, but is also an integral part of the course itself.

D. Reflection Like many environmental education models, WRFI asks students to reflect on their experiences and relate what they have learned to life in the “real world.” Participants recalled writing assignments on their courses, such as the land ethic paper, that required introspection of one’s core ethical feelings. Having to take the time for reflection was talked about by participants as something that they liked, but often do not get the time to do in every day life. Having a component of critical introspection in an academically focused class was a new experience for many students.

One participant spoke about how the course was “a very reflective time in a lot of ways. I mean how often in life do you get to go out for two months and basically just be outdoors, be with a group of people where you’re studying these topics, these subjects and getting to basically live what you’re reading.” He continued by saying the course asked him to reflect a lot about “finding out what I want to do with my life, what is my next step, where am I going and basically how can you make a big enough change, impact as you can.”

Time for reflection helped some students develop understanding and build connections between what they were learning and the world around them. One participant remarked, “Constantly as you were hiking, or cooking dinner, or reading your assignments you would gaze around at your surroundings and you would be like oh yeah that’s kind of just like over there and that’s like that example from class the other day or like that’s like what they said in the book.” The space for reflection, whether facilitated or not, is vital in students’ having positive perceptions of behavior change and beliefs.

Being in nature was also an important influence for some participants. I however found that most participants discussed other aspects of the course as being more significant than simply being outside. As one participant put it “What I tell most people is that is was an academic course but [we were outside]. There wasn’t a huge emphasis on [living outside], obviously we learned how to... along the way... the emphasis was really on the academic leaning.” Of course traveling and living in beautiful landscapes can be a significant influence, however, it seemed that being outside helped facilitate deeper transformations by allowing activities like reflection.

Reflection does not stop when the course is over. As I stated above, participants have obviously reflected to a varying degree on what their experience meant to them. For some it had been a while since their course and maybe they have not taken much time to reflect on it for a number of years. Some commented on how the course is still having an effect on them. One interviewee reflected, “I feel every once in a while I hear [my instructor] in

my head reminding me of seeking a true path, a pure way of going about stuff...

Thinking about that course sometimes, has this grounding effect, it's pretty amazing."

Conclusion

Having poured over 20 interviews, pulling out major themes and ideas is a challenging process. Each participant had their own unique course; their own special moments where their thoughts changed, perceptions of behaviors were influenced and actions empowered. Choosing common themes and shared experiences, of course leaves many particular experiences hidden. I attempted to cover the main themes that emerged having to do with long-term behavior change.

To recap the results and discussion that emerged from my analysis I refer to the set of research questions I developed for this study:

1. Has student perceived ERB changed or developed as result of the student's experience on a WRFI course?
2. What aspects of the course were significant in changing or developing a student's ERB? How did instructors influence development of ERB?
3. Why did these experiences develop (or not develop) ERB?

The first question can simply be answered yes. However as this chapter illustrates there are varying levels of behavior change or development between the participants. In the following table I have outlined the four major possible outcomes:

Table 2:

1a. High level of pre-course ERB and high level of perceived change	1b. High level of pre-course ERB and little or no perceived change
2a. Low level of pre-course ERB and high level of perceived change	2b. Low level of pre-course ERB and little or no perceived change

This table splits the possible outcomes into four quadrants. Using the terms high and low are arbitrary and each individual falls somewhere along this continuum. For the ease of analysis I use this format to illustrate possible outcomes of this study.

The first box (1a) indicates participants who entered into the course with a high degree of existing perceptions of environmental behavior and who experienced a high level of perceived change. This was arguably the most common category for participants in this study. Because of previous life experiences, education, time outside, or any other reason listed in this study, these participants had well-developed perceptions of moral understanding of why acting in an environmentally responsible manner is important. Additionally they had a level of perceived empowerment and perceived behavioral control to act on these beliefs. This developed level of ERB may have been a significant reason for these individuals to enroll in a WRFI course in the first place. This group continued their education with WRFI and seemed to gain a deeper level of personal understanding of how their actions can positively impact the world. According to Ajzen (1991) it would make sense that a person with an already environmentally aware attitude

who is surrounded by a community that supports that action and demonstrates that an individual can influence change, then environmentally responsible behavior should naturally occur.

Box 1b, was not as common an outcome as I originally had thought. This includes students who came into the course with an already developed sense of ERB, who because of that did not report as much change from the course. This outcome was most obvious in certain aspects of this study. For instance, participants who entered into the course with a higher degree of knowledge and experience of political issues tended to report less of an elevated interest or feeling of empowerment to act in a political manner. This particular outcome was seen on an individual level and only in certain aspects of behavior outcomes.

The lower two boxes in the table illustrate the possible outcomes of participants who entered into WRFI with little understanding of environmental issues. It is important to note that these individuals seemed to still have an affinity for acting in a sustainable manner, however their understanding of why, or specifically how to act was undeveloped before the course started.

Box 2a, again was not as common as I would have originally thought because participants usually had some level of college education focusing on environmental issues. This combination was indeed seen in several interviews and tended to be the ones that showed the most dramatic swings in awareness of behavior and action. It is outcomes

like this that as an educator, I get the most excited for. However, they tend to be farther and fewer between than we wish. I believe the reason for this is the original decision to attend a program like WRFI rests on the individual's attitude towards the issues that the course seems to present. In this respect WRFI participants must pass a level of self-screening. To return to Ajzen's Theory of Reasoned Action (1991), attitude is the initial instigator for action. Meaning that if an individual does not have the knowledge or experience to have a positive attitude towards an action, then the chances of it occurring is slim. This is perhaps one reason for the infrequency of this category in this study.

The last possible outcome set described in box 2b, was not seen in this study. This possible student did not have much experience or environmental knowledge and did not perceive that their behavior changed. An outcome like this may not have been seen in this study for several reasons. First, because of the self-screening of participants to pursue a WRFI course it is unlikely that this person would enroll. The other possibility is that this outcome occurs, but these students declined to participate in this study. I suspect the latter possibility is much more likely than the former.

The rest of the research questions ask about why these changes occur and what about the experience facilitates the awareness changes. First, there are numerous aspects of the course that impacted student ERB development. As I wrote in this study instructor and student group influences as well as guest speakers, and time for reflection were the most common themes that emerged in this area.

Instructors were frequently cited as important influences on behavior. In outdoor and environmental education, instructors play a role that includes being a teacher, role model, friend, parent, fellow adventurer, and guide. This position makes the instructor the vital connection between the curriculum, the experience and students. Instructors are the overall facilitator of knowledge, the experience and the overall outcome of the course. Having the position of living with students allows an instructor to know how and when to push and students to encourage learning and such outcomes like personal growth, ethical development and reflection.

Other students on the course did not seem to be a significant influence of ERB awareness overall. A number of participants discussed how the diverse group they traveled and lived with on their course became good friends and shared ideas and thoughts. Fellow students were cited as impactful in terms of learning how to live with a diverse group of people for an extended period of time. However most participants (with the exception of two) did not discuss the other students as significantly impacting their own environmental behavior.

Guest speakers were cited as being influential in terms of helping participants gain insight into the multiple viewpoints of an environmental issue. In addition, participants discussed how some guest speakers were inspirational figures that were living demonstrations of environmentally responsible behavior. The inclusion of guest speakers in WRFI courses is intended to do exactly these things and when used with proper intention are very powerful additions to the experience. In addition to guest speakers,

often the landscape the course operated in served as a teaching medium. As many participants noted, the outside classroom itself served as a significant demonstration of much of the course curriculum as well as a constant source of inspiration.

The last major contributing factor to participant ERB perceptions that this study highlighted is having time for reflection. The reflection process, often facilitated on course by instructors via journaling activities, assignments, and discussions, serves to provide a time to think deeply about an experience. WRFI's unique blend of academics in a natural and often inspiring settings seem well suited for reflective activities.

No one factor can be signaled out as being the one most important reason for positive perceptions of behavior development. All the aspects I discussed in this study influence participants in a multitude of ways, often in combination with each other. However, the combination of strong instructors, engaged fellow students, the inclusion of guest speakers, the landscape the course was in, and time to reflect on these experiences seems to enmesh the most critical factors.

Course length must also be addressed as well as the role gender played in behavioral change awareness outcomes. I did not find any evidence that course length had any significant impact on participant behavior development. All courses seemed to be of equal impact to students, leading me to believe that ERB change is much more about course content than time. However, it should be noted that the shortest course I

interviewed students from was about two weeks, which is still a significant amount of time.

As for the issue of gender, I did not notice major differences between males and females. I did interview more females, as it was roughly proportional to the entire alumni breakdown. The most notable difference was that more females remarked that the courses inspired self-confidence than males. I did not find this to be surprising given my experience with similar aged females on outdoor courses. The notion that completing a strenuous activity increases concepts of self-worth is not new (Bahaeloo-Horeh & Assari, 2008). However that does not decrease its significance. It is important to recognize the general developmental differences between genders and how that relates to change. In particular it seems most important to have a group culture that participants feel is safe to express opinions and thought not only about class related topics but in group decision and leadership.

In this chapter I have illustrated many points of how WRFI courses impacted the perceptions of environmentally responsible behavior of participants. It is evident that the above outcomes and course factors have impacted behavior awareness to varying degrees. For some their WRFI experience supported already existing behavior perceptions, for others it served as a stepping-stone, while for others it was a major leap towards a shift in awareness and behavior. Whatever model is used to measure ERB, I believe these participants moved further towards a matured sense of behavior.

Of interesting note, I found that most all participants discussed their perceptions of environmental behavior change in relation to what the individual can do in their day-to-day actions to reduce the impact on the earth. This is in contrast to what society can do to reduce impacts. What may seem a slight nuance in focus, I believe is a shift of perception about where individual action is best focused. This is the old social change conundrum of grassroots change versus top down, administrative change. It seemed that, while participants were able to articulate the need for massive societal change, they primarily focused on their own lifestyle choices and individual action as most important.

Overall it is apparent that WRFI courses have deeply impacted the lives of students. Each participant I spoke with would not have given up the experience and in fact they all recommended the experience to others. Time perhaps shadowed the negative memories or the fact they were being interviewed influenced participants to speak in a positive light. Whatever the case, the participants I talked with overwhelmingly had positive experiences and walked away from their course changed and more aware of how their behavior affected the environment around them.

Conclusion

Introduction

In this thesis I have laid out a foundation of what environmentally responsible behavior consists of and a few major theories that contribute to the study. To conclude this study I provide a brief synopsis of the major findings as well as what this means to WRFI in particular.

Summary of findings

To provide a summary of findings, it is important to review the research questions I set out in the beginning of the study:

1. Has student perceived ERB changed or developed as result of the student's experience on a WRFI course?
2. What aspects of the course were significant in changing or developing a student's ERB? How did instructors influence development of ERB?
3. Why did these experiences develop (or not develop) ERB?

As I discussed in the previous chapter, WRFI courses developed participant ERB awareness in numerous ways. This included clarifying existing and inspiring new academic and career goals, developing sustainable lifestyle skills, and an appreciation for environmental ethics. It also included empowering self-confidence, locus of control and political action. All of these are indicators of environmental citizenship variables as outlined by Hungerford and Volk (1990). These variables lead from sensitivity to environmental problems, investment in finding solutions, and finally to empowerment and knowledge of skills to enact change.

These findings also correspond to Ajzen's (1991) Theory of Reasoned Behavior, in that most participants interviewed seem more likely to act on their intentions because of their basic attitude towards the environment combined with an empowered sense of behavioral control. Another component Ajzen discussed is the notion of subjective norms such as cultural or peer pressure. Social influences on post-course behavior change only came up in interviews in terms of how the individual's life path had affected their behavioral evolution. However, that question was not a major focus in this study.

In short, the answer to the first research question is yes, however there is a spectrum of how much awareness of change occurred because of this course. As I outlined in the last section of the results and discussion chapter, the amount of change depended largely on what level of ERB participants entered into the course with. The most common combination in this study was participants who entered with an elevated perception of ERB and who reported higher levels of behavior change post-course. This group was

followed by participants who described the most dramatic change: lower pre-course ERB awareness who reported high rates of change. There were a few individuals who fall into the third category: high existing ERB who reported little change. This was the only group that I would categorize as reporting little ERB change in the study. The last category of low existing ERB who reported no or little change did not appear to exist in this study. The case for this may be because of self-selection in the initial decision to enroll in WRFI, or declined to participate in this study.

In respect to the second question, participants reported several course aspects that they thought impacted course outcomes and perceived behavior development the most. Instructor influences were mentioned the most followed by interactions with guest speakers, other students, and time for reflection in the outdoors. Some of these factors challenged participant thinking and beliefs, while others reinforced and inspired behaviors and intentions.

The impact of being in nature for an extended amount of time was certainly a factor for some participants. However, in this study it was not mentioned as a major contributor to behavior awareness and ERB in particular. This was perhaps due to no specific questions asking about the effect of being in nature during the interview. Most of the time, being outdoors was remembered as a highlight rather than a significant factor.

Overall the participants in this study showed an increase in their activity and awareness of environmentally responsible behavior. The manifestation of this behavior differed

from individual to individual. For most participants behavior was focused on private-sphere actions such as consumption awareness, buying organic food, or riding a bike instead of driving. For some participants an increased ERB translated into taking an activist stand, such as organizing a rally or demonstration to change a public policy. A number of participants discussed taking action in non-activist manners that influenced the public sphere (i.e. signing petitions, or voting) (Stern, 2000).

While it is not WRFI's explicit intent that alumni become environmental activists, in some cases that is the result. However, many participants appear to walk away from the course with a heightened awareness of their own actions. How long this lasts and what forces aid or restrict behavior change is a larger question than this study examined and something that could be addressed in further research.

The last research question is the most difficult to answer: why did these experiences develop (or not develop) ERB awareness? I covered several theories of what factors influence behavior and whether or not the intention to act becomes reality. These theories have been the backbone of environmental education and behavior change research. But to be more specific than these generalized theoretical models requires looking at the previous two research questions and asking why.

Instructors served as role models as well as teachers and were not afraid to challenge students to examine their thoughts and assumptions. The physical challenge of living and traveling outdoors with a group of people for an extended period of time was

empowering for many participants. For many interviewees having thoughts challenged and being exposed to new ideas was even more empowering. Along with instructors, living with a group of people challenged many participants socially and mentally. Visiting with guest speakers was also often cited as challenging, but also as important experiential learning opportunities that often inspired.

Why environmentally responsible behavior is inspired during and after WRFI courses depends on many factors. However in this study it is apparent that particular aspects of the course impacted ERB as well as time after the course for reflection. In the years since these participants took their WRFI course many other influences have affected ERB.

While not all participants had the ability or time to reflect on their experiences at WRFI after their course, those who did provided a good insight in to what this all means.

What does this mean?

What does this study mean? It means that outdoor environmental education that brings academics together with experiential learning and a reflective process strongly encourages environmental behavior change. For some, behavior change awareness was introspective and focused on how the individual could live in a sustainable fashion, while for others it meant gearing for a career protecting the environment. In other cases behavior change meant traveling the world to gain a greater understanding and appreciation for diversity and the natural world. Some participants' perception of behavior change meant needing more time for reflection and introspection to better understand one's own ethics.

WRFI is very good at helping participants develop connections between academics and the complexities of real world issues through pedagogical techniques as well as because of the environment the courses take place in. Participants commented almost universally that their course experience helped them develop a better understanding of connections between academics and environmental issues. WRFI's emphasis on gaining insight to the multiple perspectives of environmental issues provides not only academic understanding but allows students to have hands on experience with diverse opinions.

To help answer the question of what this study means for WRFI and other environmental education programs, I return to WRFI's mission statement.

The mission of the Wild Rockies Field Institute is to offer academically rigorous, field-based courses that help to develop engaged, informed citizens and strong leaders capable of addressing our society's complex social and environmental issues. We accomplish this by offering courses that:

- Broaden the nature of a liberal arts education.
- Teach critical thinking about social and environmental issues.
- Foster understanding of and respect for natural and human communities.
- Cultivate a sense of place that encourages personal, social and environmental responsibility. (WRFI, WRFI Mission and Vision)

By stating that the courses develop "strong leaders capable of addressing our society's complex social and environmental issues" (WRFI Mission), one could gather that a

successful outcome would be that participants left the course to become active in social or environmental activists. Certainly being a leader on environmental issues does not necessarily mean being an activist, however the interviews in this study suggest that participants were generally more focused on individual action and lifestyle choices as a way to effect change.

Of course some participants reported becoming politically active on issues. In these cases perhaps students had an interest in political issues prior to the course and some part of the course spurred that development on. It is important to note the effect of preferences on participant outcomes. It is possible that students with a preference for politics are more likely to leave with that outcome than a student who has a preference for personal simplicity.

The question of if WRFI fulfills its mission and vision statements can be answered in several ways. First it is clear from this study that WRFI does teach critical thinking and develops engaged and informed citizens. In these aspects it seems WRFI reaches its goals. The mission could be read in a slightly different tone to mean WRFI strives to develop participants who leave their course and become not only responsible citizens operating in the private sphere, but leaders who know how to make change in the public sphere. If that were the true intent of WRFI, then I would argue that they are not reaching that goal and a rewriting of the mission is needed.

It seems that WRFI misses part of their mission for another reason. Despite the emphasis on sustainable living, WRFI courses are a product that is consumed. Hence, participants may have a great time on a WRFI course, but do not necessarily walk away with core behaviors changed because they viewed the experience as just a good time in the woods. If courses are simply an experience to consume what does that mean in terms of behavior development? Is there the possibility that the course could increase alumni that search out consumptive experiences? Of course that is an aspect of such courses, however it is a question WRFI needs to ask itself, whether courses should produce behavior change or simply provide an experience.

To increase behavior change outcomes WRFI should focus on the aspects of the course that are more likely to produce these results. In this study it appears that the blend that WRFI has concocted in their courses works to produce environmentally aware individuals who are knowledgeable about living in a sustainable manner. This is a probable outcome because WRFI courses focus both on academic learning as well as experiential living in the backcountry. It also works largely because of the individual level of attention students received, inspiring instructors to facilitate the experience, and fellow students, guest speakers and readings to push and challenge thoughts and beliefs. The courses also work because of where they take place.

If the goal is to develop leaders who are active in pushing broad social change, then WRFI must develop that aspect of their courses. In that case there must be a greater

experiential focus on activism and environmental leadership. There are numerous ways to develop this and I cover several in the next section.

Recommendations to WRFI

It is my intent that this study would provide some recommendations to WRFI and not just exist for academic purposes. As I stated above, the mixture that WRFI has found for its courses seems to be doing a good job in terms of developing participant perceptions of increased ERB. It is also apparent that WRFI does well specifically regarding encouraging sustainable lifestyle choices. If WRFI wants to encourage engagement in public sphere environmentalism, a few aspects must be changed. In this section I discuss several recommendations for the WRFI staff and board to consider.

This study illustrates the need for high level of instructors, as they are a critical link between goals and actual outcomes. It seems that many participants who perceived an increase in ERB reported a continuous relationship with WRFI through taking multiple courses or by staying in touch with instructors or fellow students or even guest speakers.

Having a high level of instructors is a factor of hiring the right people, but also helping them develop their skills as instructors. Annual staff retreats or trainings are something to consider to have a time where instructors can learn from each other and bond as a community. In my personal experience working as an instructor, trainings and retreats have been a very informative and useful experience in terms of picking up skills and tips. They also are important in developing and maintaining consistent course outcomes. Each

instructor brings his or her own strengths and emphasis to a course, which should still be encouraged, but having some level of unified vision is important. Retreats and trainings are a good way of building commitment and developing the highest level of instructors that result in positive course outcomes.

While being a cliché it is however true that a satisfied customer is the best advertising for a business or organization. I would encourage WRFI to continue to tap into their alumni not only for fundraising and advertising purposes but also in creative fashions to keep them involved and thinking about their experience. Keeping alumni involved through social networking sites, which WRFI does is a good step. Perhaps trips geared towards alumni or other ways to keep them involved with the organization could be developed.

Another factor in the success of courses is the students themselves. High quality students are certainly a harder factor to control. It seems that overall WRFI students, from my experience are engaged, and genuinely interested in learning.

As this study shows and anecdotal evidence has been pointing to for years, WRFI has great success in developing perceptions of increased ERB in their students. The reason for this is perhaps based on the type of students who enroll. This study suggests a student with a high level of environmental behavior and awareness has a higher chance of walking away with a greater change than a student who did not present as such. This may suggest that to ensure the highest levels of success that WRFI may want to only concentrate on students with high pre-course ERB. However, recruiting only participants

with high ERB may result in disappointing results, as these individuals may not get much from the course because it is not new or challenging. Also it is important to acknowledge that ERB is only one of WRFI's goals laid out in their mission.

The curriculum for WRFI courses was not a focus of this study, however it was apparent the readings, lessons, and guest speakers worked together well to support the mission of the organization. I say this due to my experience instructing for WRFI as well as what I gathered from the interviews. A curriculum that pushes and challenges students to think and interact with the learning is essential to developing ERB. When considering readings and lesson plans for a course, instructors should think about how the pieces build on each other to develop ERB.

In environmental education, evaluation seems to take a back seat to operational concerns. Developing a long-term way to evaluate students in a consistent manner takes time and energy that often competes with other organizational goals. I encourage WRFI to build off this study and keep tracking student development. This could include having students fill out pre-course and post-course surveys and including more questions on the end of course evaluations focusing on behavior change.

Perhaps WRFI could develop a small set of readings or lessons that can be incorporated on a course that focuses on environmental behavior change so that students can be self-aware of the changes. The more ERB is addressed as an outcome the more aware participants are of how the course is affecting their ethics and behaviors.

There are many findings in this study that I hope will provide some assistance and insight for the leadership at WRFI. I hope the staff, board of directors, and instructors take some of what I have to say to heart and keep improving WRFI.

Areas of future research

Overall I believe this study was successful in addressing my research questions.

However, like all experiences there needs to be some reflection given to how to improve future work. In respect to how this study could be built upon there are several factors that come to mind.

If WRFI developed a quantitative evaluative method to track students who enter and complete their courses, future studies could build off that information as well as this research. A simple pre-post survey could be the first step in a long-term longitudinal study. I suggest surveys primarily because quantitative methods may also serve to be useful in this study. Interviews may sound intimidating (and are time consuming) and could be a reason why some individuals declined to respond to my requests. If WRFI wanted to track students in a controlled and methodological manner, surveys seem to be the most straightforward answer.

Still, there is room for a continuation of a qualitative study like this one. A study like this should include pre-course as well as post-course interviews at the end of the course as well as periodically spaced in the subsequent years. I would also encourage further

research to include more observational techniques. I would have liked to include more personal observation and participation with WRFI students before I interviewed them. One participant in this study was a former student of mine on a WRFI course. Having a relationship with that individual helped make that interview especially insightful because I had an elevated understanding of their experience.

Concluding remarks

I started this thesis discussing the importance of education in finding solutions to the environmental crisis. Programs such as WRFI have the potential to effect major change in student's lives. These changes may be as small and simple as recycling or riding a bike to the store instead of driving or they may be as life changing as discovering a new life direction. WRFI presents a unique opportunity to take students and provide a physically, mentally and emotionally challenging experience during a part of their life when the future seems wide open. According to this thesis and the literature I pull from, this combination of factors is an excellent example of how to develop ERB.

In the end, education is what will make the difference in the environmental crisis. As David Orr (2004) states in his book *Earth in Mind*, education, “the environmental crisis originates with the inability to think about ecological patterns, systems of causation and the long-term effects of human action.” Learning how to think and how to find connections and underlying causes of the environmental crisis is crucial. Having citizens who are not only educated about the environment but are empowered to take action to protect, restore and conserve the world is what will make the difference.

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Interview Guide

Researcher will explain to participant at the beginning of the interview:

Thank you for agreeing to participate in this study. As you know I am a masters student at The University of Montana studying the post-course (long-term) environmental behavior changes of students who participate in outdoor-based environmental education programs. This interview is confidential and anonymous and nothing you say will be connected to your name or be given to your instructors.

Good Probes:

You mentioned that....

Could you tell me more about....

Are there examples of....

In what ways do you think that affected you....

Questions:

1. Which WFRI course did you take?
 - a. When?
 - b. How long was the course?
 - c. Where was it?

2. Can you tell me about your course?
 - a. Do you have a particular highlight(s) of the course?
 - b. What sorts of things did you focus on or learn about?
 - c. Are there particular lessons or readings that stand out?

3. What kind of experiences with the outdoors did you have previous to WRFI?

4. What kind of experience did you have with environmental issues?

5. In what ways do you feel the course affected you?
 - a. How did this course affect your career path?
 - b. How did this course affect you academic path?

6. How did this course empower you to become more involved on environmental issues?

7. Did the course specifically address sustainable life choices?
 - a. If so, how?
 - b. Are there things you do differently now than before the course?

8. As a result of the course, did you change the way you live day-to-day?
 - a. The choices you make as a consumer?
 - b. Were there particular parts of the course that influenced these decisions?
If so, which parts and why were they influential?
 - c. What role did your instructors play in these decisions?

- d. How did the other students influence these decisions?
9. Are you politically active in different ways as a result of the course? If so, how?
- a. Would you like to be more politically involved after your course?
 - b. Were there particular parts of the course that influenced these decisions?
If so, which parts and why were they influential?
 - c. What role did your instructors play in these decisions?
 - d. How did the other students influence these decisions?
10. What else can you tell me about how this course affected you?

Thanks for taking the time to meet with me and telling me about your WRFI experience!