Post Graduate Masters in Outdoor Education
Proposal for Dissertation

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Seeing through their lens:
Participants' perspectives on an environmental education curriculum objective for a 90-day wilderness course.

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Abstract

This paper outlines a research proposal that aims to explore participants' perspectives of wilderness ethics throughout a 90-day wilderness expedition with the National Outdoor Leadership School (NOLS). Specifically, the research questions seek to understand participants' wilderness ethic, in the context of an outlined environmental education objective, and what experiences, if any, are affecting the development or change in such an ethic. A methodological framework and project plan are discussed for action research within the constructivist research paradigm and a timeline for the enquiry is laid out. Previous environmental education research related to Leopold's land ethic and expedition research is outlined and reviewed, in the context of this proposal, and the call of the emerging body of knowledge for more work that explores outdoor education through the eyes of participants' addresses the need for this enquiry.

General Introduction

Connected to my role as a learner and an educator on expeditions with the National Outdoor Leadership School (NOLS), and clearly linked to my passion for understanding the way extended wilderness journeys can affect the way people perceive themselves in relation to the natural world – this is a proposal for a dissertation exploring participants' perspectives of an environmental education curriculum objective that exists on all NOLS expeditions.

Specifically, the curriculum objective I hope to explore through the lens of the participants is,

> By the end of the course we expect each student to make plans for the transference of wilderness ethics and practices into daily personal and professional life. (IN PRT 3040 – NRL, appendix A, p. 1)

Based on research done on the NOLS student experience (Freimund & Hammit, 1995), discussed in more depth in the literature review, there is a gap between the 'minimum impact camping' experiences on NOLS courses, which are said to affect student's development of wilderness ethics, and the notion of a 'land ethic' proposed by Aldo Leopold. Leopold's 'land ethic' deals with 'man's relationship to land and to animals and plants, which grow upon it,' (Leopold, 1953, p. 239). Other research in the fields of outdoor and environmental education (Key, 2003: Loughland &Reid et al., 2003: Martin, 2004: Raffen, 1993: Slattery, 2001), connected to the human-nature relationships Leopold (1953) refers to, indicate that an acknowledgement and/or awareness of human beings relationship with the natural world is a major step in promoting more a sustainable wilderness ethic. As an instructor for NOLS, aiming to meet the curriculum objective stated above, I am intrigued by this gap in the literature. This research has been designed to explore the notion of wilderness ethics through the eyes of NOLS students, in hopes that the curriculum objective noted above can be understood more completely.

The enquiry will focus on asking students that are participating in a 90-day NOLS

wilderness expedition how they interpret the term 'wilderness ethic'. Furthermore, I am seeking to understand how the participants' ideas regarding the term evolve throughout their wilderness experience and what aspects of the course, if any are contributing to the development of their wilderness ethic.

In addition to the gap noted above, this investigation draws on the call for more research in outdoor education that extends beyond the perspective of practitioner or researcher (Barrett & Greenaway, 1995) towards the students' perspectives, and heeding to Martin's (2004) call that 'outdoor education which seeks to promote a positive relationship with nature needs to carefully monitor student learning.' (p.26) It will begin at a point where 'the nature of experience is seen as emergent rather than predictable.' (Patterson et al., 1998, p. 426) Explored through a constructivist research methodology, a learning circle method and written questionnaires will be used to explore participants' perceptions of their 'wilderness ethic' throughout the entire semester.

In the role of a researcher, there will be a unique opportunity to join participants for the 90-day wilderness experience as the semester's proctor (see methods for explanation). As such, this is a type of action research, sometimes referred to as practitioner research, meaning that I will be inside the situation, seeking to develop a deeper understanding of my role as an outdoor educator. (McNiff & Lomax &Whitehead, 2003).

Questions

In seeking to understand participants' perspectives and ideas towards one of the NOLS environmental education curriculum objectives, I will begin the enquiry with the main questions driving this research.

1. How do participants make sense of the term 'wilderness ethic'?
2. What types of experiences (physical, mental and spiritual) are contributing to participants' interpretation of the term 'wilderness ethic'?

Review of Literature

This section will begin by setting the stage for this research project through a look at NOLS, the participants, the curriculum and characteristics of the NOLS semester

course. Moving on, I will delve into literature regarding wilderness ethics, specifically from an educational perspective. Recent research on sense of place and human nature relationships will be reviewed in an effort to understand ways that outdoor educators are seeking to promote the development of an interdependent land ethic with participants.

In conclusion I will explore some notions surrounding expedition experiences *per se*, in order to clarify our understanding of what expedition experiences involve. Specifically I will draw on previous expedition and environmental education research to explore the background to the questions driving this research enquiry. Furthermore, a gap in the literature regarding student perspectives and interpretations of curriculum objectives on wilderness expeditions becomes clear.

A The National Outdoor Leadership School

This section will set the scene for the research by outlining the NOLS organisational background, the student body that participates in a NOLS 90-day semester course and the undergraduate university course educational objectives, set out by the University of Utah.

NOLS is a non-profit educational organization that has its' roots in extended wilderness expeditions in North America. The first of these expeditions was in 1965, and the founders' goal for the school 'was to train leaders to serve the growing number of people using the wilderness.' (Gookin, 2003, p. 1) Since 1965 the school has expanded, growing to more than 60,000 graduates from around the world, and it is presently offering wilderness education in seven countries.

Presently, all of the school's adult (18 & over) courses are linked to undergraduate university credit courses offered through the university of Utah. The curriculum lists the following course names and codes for the four credits participants obtain upon the completion of a full semester with NOLS.

1. Environmental Ethic, Leave No Trace & Leadership Curriculum (appendix A) Course Code: PRT 3040

2. Risk Assessment &Management & Decision Making
   (appendix B) Course Code: PRT 3043
3. Wilderness Skills Practicum and Leadership Curriculum
   (appendix C) Course Code: 3042
4. Natural Resource Learning: Group Leadership Techniques
   (appendix D) Course Code: 3041

For more detail of each course, the university's specific course outlines are included in the appendices of this research proposal. Of specific interest for my exploration, will be the curriculum objectives for the environmental ethics course found in appendix A.

The student body for a NOLS semester is 18 and over, both males and females. There is no requirement of previous wilderness experience and many participants have never slept in a tent before. Regardless of any prior experience, it is correct to say that no participants enter their NOLS semester with a previous 90-day experience in the wilderness with NOLS.

B Leopold's Land Ethic

The land ethic described by Aldo Leopold during his efforts to redirect the conservation movement in the United States in the early part of the 19th century was a response to a lack of 'ethic dealing with man's relationship to land and to animals and plants which grow upon it.' (Leopold, 1953, p. 239) In his work, he defines an ecological ethic 'as a limitation on freedom of action in the struggle for existence.' (p.238) Furthermore, Leopold's discussion of ethics moves on to make clear that his definitions of ethics rest upon the premise that the individual is a member of a community of interdependent parts. (p. 230) In support of Leopold's work, it has been suggested that an emphasis on the understanding of ecological relationships, specifically the acknowledgement of a connection between humans and the environment, can positively influence a person's environmentally sustainable actions (Capra, 1983: Key, 2003: Loughland &Reid et al., 2003: Martin, 2004: Raffen, 1993: Slattery, 2001).

Evidence from a study, looking at how students understand the environment, suggested that the majority of students displayed 'object' conceptions versus the few who expressed a 'relation' conception of the environment (Loughland & Reid & Walker & Petocz: 2003). Using the data obtained Loughland et al (2003) explored ways a relational view of the planet may be developed with both primary and secondary students. In both cases they acknowledged the importance of students who understand the ways environmental and social issues are interrelated, as a significant factor contributing to seeing our 'relation' with the earth. They concluded the study by suggesting that the current environmental curriculum in Australia 'may not be very effective in creating opportunities for young people to integrate ecological values into their thinking.' (Loughland & Reid et al., 2003, p. 14) Although potentially informative, conclusions from this study are lacking depth in areas such as descriptions of the educational experience, teaching methods used and the type of so-called 'knowledge' being portrayed.

Working with university students in Australia, Martin (2004) has explored how outdoor education influences human/nature relationships, through the use of journals and interviews, over the course of a three-year degree programme. Among other things, his work delved into the role that adventure activities play in shaping human relationships with nature.

> The most fundamental finding from this research was that the process of outdoor education, as experienced by these participants, helped to shape their relationships with nature towards an increased sense of connectedness to, and caring for, a nature. (Martin, 2004, p. 21)

The responses of students drew a range of factors that helped shape their relationships with the natural world. Significant themes that emerged were emotional responses to nature, knowledge and skills, with specific reference to the use of language that 'enabled formulating and discussing a relationship with nature and knowledge and skills for comfort and competence in the settings favoured by the programme.' (p. 22)

Building on the work of Loughland & Reid (2003), Martin's work is particularly useful in the development of my inquiry. The age of his students is similar to the

participants at NOLS and the journeying component is also present in both cases. Obvious differences include the difference in the length of the programs and the proportionally different amount of field time versus class time. Martin's (2004) conclusions discuss how 'relationships with nature lead to changed actions with respect to nature for all participants…they were felt relationships and influenced behaviours directly.'

As such Martin's work supports Leopold's (1953) earlier mentioned discussion of a land ethic. The intention of the proposed research is to explore the evolution of participants' ethic towards the land in order to see what aspects of their wilderness experience is affecting it? Do they link a relation-conception of the land, or experiences that promote it with their wilderness ethic?

Past research at NOLS explored changes in responsible environmental behaviour following a NOLS course (Freimund & Hammit, 1995). Specifically, this research emphasizes the organizations minimum impact camping technique, and addresses the question of 'how effective these courses are at enhancing an environmental ethic that might be applied in a daily lifestyle' (p. 1) Similar to the study of Loughland & Reid (2003), this study is limited in its' description of experiences that influence a shifted ethic towards the land. Their findings indicated changes in environmentally responsible behaviour following their NOLS course, connected to a metaphoric transference of minimum-impact ideology. This research is pertinent in its' exploration of the way NOLS student experiences are linked to environmentally responsible behaviour, but I have questions surrounding how minimum impact camping practices link to Leopold's notion of a land ethic. They (Freimund & Hammit, 1995) call for more research at NOLS, particularly work that focuses more on educational experiences participants are having in the field. My research questions should provide some insight to this request.

In concluding this section of the literature review, I would like to review the key points of this section. It appears that notions of an interdependent land ethic, described by Aldo Leopold are linked to the 'relation' conception of the land explored by Loughland et al. (2003), and the human nature relationship that Martin (2004) looked at with University participants. Past research at NOLS connects a minimum impact ideology with a shift in environmentally responsible behaviour among participants. There are clearly gaps

between the research on NOLS courses and some of the themes emerging regarding the development of a 'relation' conception of the land as a way to promote the land ethic Leopold speaks of. It is my hope to explore the evolution of wilderness ethics on a NOLS course in order to narrow this gap. The next section of the literature review will explore the concept of sense of place as one way to increase participants 'relation' conception of the land towards the development of Leopold's interdependent land ethic.

C Sense of Place in Environmental Education

The concept of 'sense of place' is thrown around frequently in the field of outdoor education, usually in reference to our connections with a particular place. These connections can be influenced by the place itself and by experiences we have there (Stewart: 2003). Furthermore, within the context of outdoor education, developing a 'sense of place' is seen as one way to "expand the conceptual world of students, to give them a glimpse of what it means to be merely a member of the biotic community." (Stewart: 2003, p. 19)

> I think the important thing to remember is that sense of place, any degree of sense of place, is essential in discovering the interconnectedness of life. (Stewart: 2003, p. 21)

In looking at the aims of 'sense of place' as a component of environmental education curriculum, it is important to acknowledge that the subjective nature of the term often makes it difficult to conclude how to best develop 'sense of place' relationships (Stewart: 2003). Some thematic similarities exist throughout the literature, and in many ways, the large-scale 'relation' conception of the land (Loughland & Reid, 2001) I explored in the previous section mirrors the development of a 'sense of place' relationship, discussed in the work of Stewart (2003). The most obvious distinction between the two is that the 'sense of place' relationship usually refers to a connection with a particular place, and the 'relation' conception of the land is linked to a perception of how one sees the environment as a whole.

The distinction I noted above planted the seeds for a new garden of insight, with regards to where a 'sense of place' might fit into the realm of outdoor education, aiming to provide experiences that will promote the development of an interdependent wilderness ethic. Through this process of understanding, towards student development of a 'sense of place' relationship with a specific environment, we start down the road, in the direction, of large-scale perceptual change in relation to the environment as a whole.

> It deals principally with their relations to each other, their relation to the soil and water in which they grew, and their relations to the human beings who sing about 'my country' but see little or nothing of its inner workings. This science of relationships is called ecology, but what we call it matters nothing. The question is, does the educated citizen know he is only a cog in an ecological mechanism? (Leopold: 1949, p. 209-210)

D What is an expedition?

The term expedition is very general, and can be understood very differently from a variety of perspectives. This section will outline the subjective nature and complexity of the term expedition, and move on to provide a framework for our understanding of expedition experiences in the field of outdoor education.

Depending on whom you ask an expedition could be a trip to an unknown area of the world, an individual or group challenge of physical endurance, a scientific research exploration or perhaps a nice long walk. Regardless of one's understanding, Allison's (2002) doctoral thesis described three common themes or foundational criteria that emerge and are present to varying degrees on all expeditions (see figure 1).

Figure 1 - Three foundational criteria of expeditions.

1. Expeditions are journeys.
2. Expeditions have some degree of uncertainty
3. Expeditions have some degree of self sufficiency

(Allison, 2002, p. 52)

The first of the three criteria addresses the journeying component, which exists to some extent on all expeditions. Specifically, a number of characteristics can contribute to the experience of a journey, such as some form of physical exertion or psychological challenges. As such, regardless of whether you are heading on an overnight canoe trip, an urban cycling adventure or a multiple week arctic exploration, your trip can have characteristics consistent with the journeying themes Allison (2002) described.

The second of the three criteria acknowledges that all expeditions have some form of uncertainty associated with them. Whether it is the destination, decisions along the way, weather, environmental learning or group dynamics or whatever else the case may be, to some extent there are things that occur during the expedition that influence its' outcome. As such, there is some degree of uncertainty prior to and during all expeditions. Having said that, the degree to which subjective uncertainty contributes to Allison's (2002) foundational criteria is not clear from his work, although he does make mention of psychological uncertainty as a valid component of this criterion.

It is also important to note that the uncertainties each individual deals with on an expedition may be very different, even if they are there together (Allison, 2002). For example, one person's fear of heights may provide a psychological uncertainty while another person is dealing with the physical uncertainty of whether or not they are strong enough to climb the mountain.

The last component of Allison's (2002) foundational criteria addresses the need for expeditions to demonstrate 'some degree of self sufficiency.' This refers to the way expeditions 'enable them to use this (themselves) as a source of power to generate activity.' (Carver, 1996, p. 10) This may mean carrying lunch and warm clothes for an afternoon hike or many pounds of food, gear and clothing to provide for months in the wilderness.

To conclude this section, Allison's (2002) foundational criteria of expeditions have been used to clarify our understanding of the term expedition. Having laid the groundwork I will move on to explore previous expedition research.

E Previous Expedition Research

In the context of this proposal, it should be noted that this next section is by no means an exhaustive review of all the expedition research literature. At this point, I have aimed to review the previous research that directly relates to my exploration of students' perspectives of an interdependent land ethic throughout a 90-day, semester long, NOLS expedition.

To begin, Kaplan and Talbot's (1983) investigation of the *Psychological benefits of a Wilderness Experience*, was a groundbreaking 10-year longitudinal research study that looked for evidence 'that extended wilderness experiences (2-weeks) do offer considerable and lasting benefits for a variety of individuals.' (p. 169)

Specifically, they began referring to the wilderness experience as a 'restorative environment' that results from fascination.

> A listing of what people find fascinating would be long and varied. …But it would also include much of what is found in nature, and especially what sustains nature. Fascination is important to the restorative experience not only because it attracts people and keeps them from getting bored, but because it allows them to function without having to call on their capacity for voluntary or effortful attention. (p. 98)

They move on to suggest a series of components of the wilderness experience that have an increasing impact on participants. The sequence begins with fascination, then coherence, and finally compatibility. These three steps are referred to as 'primary factors' in the wilderness experience. For clarity, fascination involves the sensory enjoyment of the environment one experiences. Coherence refers to the connections between information that helps participants to understand their immediate environment (mental, physical and psychological). And, compatibility specifically connects participants to the natural environment and can lead to a contemplative state regarding the natural world that may lead to a spiritual event. Their conclusions address the need for more research

regarding the influence of such experiences in the 'restorative environment,' but they did identify four factors of the wilderness experience,

1. Being away from one's everyday environment
2. Being interested in the activities
3. Learning to function in an alternative environment
4. A strong link between what is necessary to do and what is desirable to do.

When considering the nature of the NOLS wilderness expeditions I am enquiring about, Kaplan and Talbot (1983) have provided a framework for us to begin understanding some depths of expeditions that take place in the wilderness context. As such, their work is a key stepping stone for my exploration. One major distinction between their work and my enquiry interests involves the length of the wilderness experience. Their participants were involved with a 2-week wilderness experience, and the participants I am interested in will be involved in a 90-day wilderness experience.

As such, I went looking for research that involved longer time in the wilderness. I was able to find research and literature (Allison, 2000: Barrett & Raffan, 1989: Beames, Brymer, 2002, Greenway, 1995: Potter, 1998: Stewart, 2003) on wilderness experiences up to 12-weeks in length. Useful as some of these studies are in my enquiry, it should be noted that as far as I can tell, the 90-day wilderness experience I wish to study is unique and there is minimal published research on the nature of wilderness experiences of this length. Beames' (2002) research explored participant's views on what makes an expedition, 'an expedition', through free flowing conversation, over a 12-week program with Raleigh International in the United Kingdom. The preliminary results helped the researcher gain insight towards the critical elements of an overseas youth expedition. Despite not being a wilderness expedition, these elements are worth listing below.

1. A once in a lifetime opportunity.
2. Being immersed in a foreign culture
3. Working with a diverse group of participants.
4. Being in a supportive environment.
5. Having equal opportunities to contribute

6. Having opportunities to make decisions
7. A high level of intensity
8. A variety of projects
9. Being challenged.

Beames' findings are specific to overseas expeditions in the UK. As such, the findings have limited links to my enquiry. For example, NOLS students are not on their semester in the southwest United States will not be immersed in a foreign culture in the same way Beames' participants would be. The main connection between our enquiries is the length of time his participants spent on their expedition and his findings should be noted in connection to this study for that reason.

Similar to the findings of Beames (2002), Expeditionary Learning Outward Bound (ELOB) is an educational program in America. Their main belief is that 'expeditions draw together personal experience and intellectual growth to promote self-discovery and the construction of knowledge.' They list ten guiding principles as: self-discovery, having wonderful ideas, responsibility for learning, intimacy and caring, success and failure, collaboration and competition, diversity and inclusively, the natural world, solitude and reflection, service and compassion (ELOB, 1992).

Continuing with my look at research on extended wilderness experiences, Allison (2002) explored areas of growth on a 6-week wilderness expedition to Greenland through student perspectives. In many ways his constructivist approach to understanding personal growth on expeditions through student perspectives has provided useful insight in response to Barratt and Greenaway's (1995) critique of outdoor education review.

Specifically, he heeded to their call

> …for new research that focuses on young people themselves. Young people's accounts of their outdoor adventure experiences and their views about what most influenced their learning and development are almost entirely absent from the literature assessed… (Barratt & Greenaway, 1995: p. 54)

In his conclusions, Allison (2002) discusses four areas of personal growth within expedition participants. They are listed below.

1. The relationship with one's self
2. Relationships with friends, team-members, colleagues
3. Relationships with the natural world
4. Perspectives on education/career

Of particular interest for me, in my enquiry into participant's perspectives of their wilderness ethic is the area of personal growth connected to participants' 'relationship with the natural world.' Consistent with Allison's findings, Barrett & Raffan (1989) explored the use of journaling on a 7-week expedition to the Kazan River in Canada's Northwest Territories and one of their conclusions involved 'the shift from people-centred thinking to land-centred thinking.' (p. 36)

So, the potential for extended wilderness experiences to encourage relationships with the natural world is supported. But, questions remain regarding what key elements of these wilderness expeditions elicit the growth in relationships with the natural world? Continuing on from Allison's (2002) work on student perspectives on a wilderness expedition I am interested in accessing participants' perceptions and ideas regarding learning and growth related to wilderness ethics on a 90-day NOLS wilderness course.

D Summary

By providing a framework for our understanding of the NOLS expedition experience, the curriculum and the student body, I have explored some useful research and literature linking wilderness ethics and human/nature relationships in outdoor education. A gap between research on NOLS expeditions and the themes in the broader outdoor education literature surrounding how we can promote the development of an interdependent land ethic emphasizes the niche this inquiry may fill. The work of Kaplan and Talbot (1983) and Barret and Raffen (1989) and more recently through the work of

Allison (2002) and the preliminary work of Beames (2002) has been helpful in understanding expeditions and their potential educational benefits.

Prior to Allison's investigation, in support of Barrett & Greenaway's (1995) review of outdoor education literature, he (Allison, 2002) acknowledged that,

> The perspectives, which are taken on the phenomena (adventure education in general and expedition experiences in particular), are almost exclusively from the perspective of practitioner or researcher as opposed to the perspective of the participant in the experience. The majority of studies are concerned with testing a hypothesis of some type, and rarely account for the inevitable individual nature and interpretation of expedition experiences. (p. 87)

The next section of my proposal will begin to describe some logical steps for this enquiry to take in order to address the questions guiding this research. As such, it will commence by looking at the environmental curriculum through the participants' lens.

My research plan: Seeing through their lens.

A Methodological Justification

Martin O'Brien (1993) used the metaphor of a kaleidoscope to answer the question, what is theory? For me, O'Brien's image provided clarity in my understanding of the need for more research from the perspectives of participants on wilderness expeditions.

> A kaleidoscope….is the child's toy consisting of a tube, a number of lenses and fragments of translucent, coloured glass or plastic. When you turn the tube and look down the lens of the kaleidoscope, the shapes and colours, visible at the bottom change. (O'Brien, 1993, 10-11)

Each different way you shift and turn the kaleidoscope results in a new pattern of lenses and an altered view of the world. When linked to my understanding of learning connected to the natural environment on expeditions, it became evident to me that there are a wide variety of lenses we can choose to explore through. None of the lenses are more or less real then the others, but in support of Barratt & Greenaway's (1995) call for more research from student perspectives my research questions support the need to look through the participants' lens in order to understand how participants' perceive environmental education objectives throughout a 90-day wilderness expedition.

In revisiting my questions with the purposes of determining a logical method of enquiry an approach emerged that is grounded in the constructivist research paradigm.

As such, the constructivist research paradigm accepts three principal assumptions.

1. Reality is constructed differently by different people – relativist ontology.
2. Personal experience is the sole source of knowledge – a subjectivist epistemology
3. The research occurs in a natural setting, findings are interpreted by the researcher and verified for accuracy with the participants – a naturalistic methodology. (Stake, 1995)

The above assumptions connect with earlier discussion of the expedition experiences specifically through the way they accept and embrace a certain degree of uncertainty regarding the interpretation of an experience. Furthermore, as an educator researching the depths of my own practice, the research questions lend themselves to an action research inquiry, where,

> …action research is a term which refers to the processes of people conducting their real-life enquiries, as they ask, individually and collectively, 'how do I improve what I am doing for our mutual benefit?' (Lomax & McNiff & Whitehead, 2003, 7)

As such, within the context of the NOLS curriculum (see appendices), where there is a spectrum of curriculum objectives to prioritize, I will use participant's input during learning circles, questionnaires, day-to-day living and conversations to intentionally respond to their thoughts of my enquiry.

The next section will discuss the emerging methods of the proposed enquiry.

B Methods

Having articulated the research questions that will drive my enquiry below, and accepting the assumptions of an action researcher in the constructivist paradigm I will begin to outline the evolution of my project plan.

1. How do participants make sense of the term 'wilderness ethic'?
2. What types of experiences (physical, mental and spiritual) are contributing to participants' interpretation of the term 'wilderness ethic'?

Gathering Data with Learning Circles

In seeking to find a methodology that made sense for the questions guiding this research, Key's (2003) exploration of his own experiences with the natural world addressed my objectives and provided a logical starting point.

As such, my methods are designed to get information in a way that enables,

> …drawing findings from such complex whole or 'field-like' experiences that can be done through the use of themes, which hint at important structural components without destroying the integrity of the experience as a whole. (Key, 2003, p. 17)

In deciding against using positivist methods of data collection, which operates on the general assumption that methods of physical science (e.g. measurement, search for

general laws, etc) can be carried over to the social sciences (Jary et. al., 1991), and wanting to explore curriculum through the participants' lens, the use of learning circles emerged as an exciting and logical way to expose participants' ideas, thoughts and perspectives.

Learning circles have evolved from first nations' communities that have used the circle as a way of bringing people of all ages together for the purposes of teaching, listening and learning (Baldwin, 1998). Learning circles draw on the life experiences of all the participants to understand the question at hand and to devise workable solutions (Lovett & Gilmore, 2003). The distinction between a learning circle and a discussion and/or focus group is not great, but there are some common differences worth noting. I have listed them below.

1. Individuals speak in turn.
2. There is a respected space for every voice to be heard.
3. The learning circle is more reflective and is a slower pace.
4. A learning circle is intended to have action outcomes – which may not be the case with a discussion group.

(Learning Circles Australia, 2005)

There is process involved in facilitating a learning circle that created clarity regarding the fitting role they may play in exploring my research questions. In preparation, Baldwin (1998) describes a necessary preparatory step that occurs prior to each circle. It is setting intention, where intention is the statement of the circle's purpose, and setting intention involves engaging the group in what the circle is about? Why am I calling it? This generally happens the day before the actual learning circle takes place.

The process continues (usually on the following day) by gathering the learning circle participants into a circle. The circle begins with a reflection, and then an explanation of the process by the facilitator. During the explanation of the learning circle process an object is identified as a talking object, and as such you can only speak in the circle when you are holding it and you cannot speak a second time until everyone has spoken. Every individual in the circle has the right to pass if they choose to. The

explanation also outlines the learning circle as a place where all ideas are accepted and valued. There are no right or wrong answers (Rickard & Wolfe, 2003).

The more I read on learning circles, the more appropriate they seemed as a way to access participants' ideas regarding my research questions in a semi-structured, inclusive way. So, starting on day one of the participants' 90-day semester I will introduce the learning circle with a 'statement of intention.' (Baldwin, 1998, p. 87) The following day we will form a circle that is introduced with a reading of the environmental curriculum objective followed by ten minutes of quiet reflection time in the circle. Following the reflection I will begin by asking my first research question to the group. The talking object will be passed, and each individual will have the opportunity to share ideas and perspectives. Following the first round, I will ask the second of my research questions and the object will be passed again. A third round will follow, with a chance for participants to share any new or emerging ideas as a result of others thoughts. I will repeat the learning circles at the mid-point and at the end of the semester with the exact same structure. Each learning circle will be audio taped, with the permission of the participants, for transcription after the semester. NOLS has volunteered the use of a digital voice recorder and transcription programme to aid in my data collection.

In conjunction with the taped learning circles, the use of a questionnaire will give each student a chance to reflect on the research questions in a written format. The questionnaires will be given to participants at the 'statement of intention,' and they will be submitted prior to the learning circles. This serves the purpose of seeing what individuals think before hearing other participant's opinions. The questions on the questionnaire will be the same three questions that are driving this research inquiry and the same questions participants' explore in the learning circle. Similar to the learning circles, the questionnaires will be used three times during the semester and one time following the semester's completion.

This, process of writing things down is useful for two purposes. First, it shall provide a form of 'methodological triangulation' (Mason, 1996, p. 25) that may improve the reliability of the overall enquiry. That is, the use of questionnaires will aim to hear participants' perspectives towards the environmental curriculum objective in a written format.

> The process of triangulation is a means through which multiple types of data are related to each other to support or contradict the interpretation…of a state of affairs. (Eisner, 1998, p. 110)

Furthermore, 'a methodological basket of approaches allows both the experiences described in writing and the writing process itself to be legitimate parts of the data' (Key, 2003, p. 16). As such, the questionnaires can also be seen as a tool to promote critical reflection connected to the research questions, which has been noted as a component of the learning process (Kolb, 1984).

In addition to the data collection methods described above, that will serve as the primary sources of research data, as a researcher, I will keep a reflexive research log throughout the semester. It will include details of the NOLS environmental curriculum as it is carried out on the semester, self-reflective writing (i.e. analysis) and narrative or story writing (i.e. descriptive) that will be divided clearly in the log. Field notes and quotes from participants based on my field observation will also be recorded in the reflexive research log. The reflexive research log will contain things that I see, hear, observe and experience with participants that relate to the research questions. The purpose of this is to maintain consistency in the reflexive research log, made by the researcher. There is also a general course log, as mentioned earlier, kept on all NOLS courses that will contain course details such as daily activities, weather, and travel information and general curriculum progression throughout the semester. The researcher will not keep the general course log. Another instructor will write it, and as such it can be used for verification of the reflexive research log kept by me, the researcher. All of these documents will be used to confirm and triangulate data that is discussed in learning circles and through the questionnaires.

My role as a Proctor and Researcher

As a proctor on a NOLS semester, I will be the sole instructor that is with the participants for the entire length of their course. Beginning February 2006 at the schools'

branch in Tucson, Arizona - I will join a group of 15 participants (exact numbers may change based on final enrolment) for a 90-day wilderness experience. In the role of the proctor I will work with other instructors to plan and carry out the semesters' curriculum. As the proctor, I become the liaison for the participants, the only instructor who is present for their entire semester. As such, it seems like an incredible opportunity to explore participants' wilderness ethics and a great way to access the questions that are guiding this proposal. I have included the semester outline and description in appendix E.

I have acknowledged my role as an action researcher, and accept that my presence on this course will in someway affect the courses outcome. Some of the methodological limitations include 'tensions and contradictions inherent in completing collaborative action research within a graded course' (Preston & Griffiths, 2005, p. 7). There are inevitably inequalities related to my role as a researcher (Preston & Griffiths, 2005). These issues can be addressed, but they should also be acknowledged. I intend to continually stress that my research is in no way connected to participant's overall course assessment.

As such, the goal of this enquiry remains 'driven by educational values that need to be explored' (Lomax & McNiff & Whitehead, 2003, 19) and it values 'respect for other people, meaning that those peoples' views and values must be accommodated.' It is also driven by the call for learning as 'an interactive relationship between the educator, the learning and the natural environment' (Nicol, 2003, p. 18) Similar research in outdoor education (Preston & Griffiths, 2005) used action research as a means for studying how experiencing a place over a period of time can shape how people respond to, and make connections with nature. The relationship I develop with the participants is aiming to help all learn and grow through their wilderness experience and the formation of such a relationship has the potential to add depth to the enquiry (Lomax & McNiff & Whitehead, 2003).

The limitations of this sort of researcher role extend to its' ability to transfer and speak for NOLS experiences as a whole. I do not want to aim to generalize the NOLS experience based on my research. Rather, this enquiry has the potential to provide a depth of understanding about the ways participants' experiences on one NOLS course influenced their wilderness ethics. Themes from this study may be useful in a variety of settings.

Project Timeline

For clarity, I have divided my project plan into four sections, preparation, research plan, research verification, possible limitations and ethics.

A Project Preparation

November 2005

- Pilot learning circle format and questionnaires on NOLS participants during Fall Sonoran semester (October-December 2005).

B Research Plan/Data Collection

January 2006

– Submit Second draft of research proposal.

February – May 2006

- Collect data through learning circles, questionnaires and reflexive log.
- Learning circles will take place on day 2, day 44, and day 88 of the semester.
- Questionnaires will take place on day 3, day 45, and day 89 of the semester. Also, one follow-up questionnaire will be sent to participants 30 days after their course. Participants will complete their questionnaires prior to the learning circle.

C Research Verification

This section of the research plan involves extending the credibility of my work by verifying the findings with the participants.

Member Check

Following the extensive analysis of data, that I anticipate will take a few months, I will ask the NOLS semester participants to read my interpretations of the data to see if they are accurate.

D Possible Limitations

As indicated in the review of literature, some degree of uncertainty is a component of all expeditions. This research plan shall provide a framework for certain aspects of my enquiry, and some specific days will be important for maintaining consistency in my research. Having said that, I must accept that certain things on any expedition cannot be predicted (i.e. weather, injuries) and may present themselves in a way that restricts certain aspects of my research plan. The importance will be to maintain a log that keeps track of the research progression and addresses the limitations, which may, for example, cause a learning circle to be postponed for a day due to an unforeseen event.

E Ethics

Ethical issues specific to this research relate to issues of consent and confidentiality. Both of these issues involve the individuals and the organization being studied. I have written and signed an Ethics statement (appendix F) regarding my own commitment to ethics as a researcher during and following data collection.

In terms of consent for my research and data collection methods, a consent form will need to be signed by all participating participants' prior to starting any data collection. The consent form is be designed to protect the identity of all individuals and it will be clear to describe the ways in which the data will be used following the completion of the semester, including the potential for publication if that seems appropriate. Furthermore, the participants will have the option to withdraw at any point from the research (see appendix G).

Connected to ethics is the issue of consent from NOLS, I have obtained consent to move forward with my research from the headquarters of the school in Lander, Wyoming. John Gookin, the curriculum director and research advisor for the school has read and accepted my draft proposal. He has also had outside journal editors read the proposal for verification. He has signed the letter of consent (appendix H) for NOLS, under the condition that he will read and approve the final proposal following its' acceptance at the University of Edinburgh.

Concluding Comments

In narrowing down my enquiry to hear from participants about one curriculum objective, I hope to expand my understanding of participants' perspectives and ideas towards wilderness ethics.

More then anything, I am excited about the direction of my research and the questions it has continued to raise in my head, and I look forward to the exploration, the challenges and the insight it may provide.

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Appendix A

PRT 3040 – NRL: Environmental Ethics, Leave No Trace, and Leadership Curriculum and Syllabus
National Outdoor Leadership School with the
University of Utah, Department of Parks, Recreation, and Tourism
Natural Resources Learning Program

Course Curriculum Description: Second only to safety, wildland ethics and management is central to the curriculum of both NOLS and the University of Utah's Natural Resources Learning program within the Department of Parks, Recreation, and Tourism. The objective of preserving the lands we use for the future affec every moment of our courses. Understanding the complexity, diversity, and fragility of these wildlands guides h and where we teach, eat, sleep, travel, and learn skills. Based on scientific and empirical understanding of ecosystems, an ethic evolves to guide how we manage our field courses. Students learn the guiding principals behind land manager's decisions and regulations. Students take from these courses the knowledge, skills, and ability to lead others in wild places in an ethical way.

Over 30 hours of specific classes and demonstrations in addition to the modeling of behaviors by instructors will guide students in their understanding and application of wilderness ethics throughout a course. Every instructor has the academic freedom to arrange the learning process to custom fit each environment, to se each group of students. Most instructors offer the following core information:

- An historical perspective of environmental thought
- A Wildland Ethic based on ecology
- A Wildland Ethic applied to outdoor recreation
- Personal Responsibility: implications of a land ethic and leave no trace
- A Global Perspective: widening the circle of awareness to other cultures and environments
- The Role of Wilderness Education in the Evolution of an Ethic – NOLS and LNT
- Federal Land Management in the United States
- United States Forest Service – National Park Service – Bureau of Land Management
- National Wilderness Preservation System – The Wilderness Act of 1964
- Citizen Involvement – Beyond the backcountry

Leave No Trace (LNT) is a guideline of ethical use and behaviors in wild places developed by NOLS in collaboration with Federal land managing agencies. LNT core principles are:

Plan ahead and prepare
Travel and camp on durable surfaces
Dispose of waste properly
Leave what you find
Minimize campfire impacts
Respect Wildlife
Be Considerate of other visitors

Course Objectives: By the end of the course we expect each student to:
– consistently demonstrate sound minimum impact living and travel skills on personal and group levels; be able extrapolate knowledge to varied settings
– understand the history of, and consider potential solutions to, pertinent environmental issues
– understand the function, organization, and local concerns of state and federal land managers
– make plans for the transference of wilderness ethics and practices into daily personal and professional life

Appendix B

PRT 3041 B Natural Resources Learning: Group Leadership Techniques Curriculum and Syllabus

National Outdoor Leadership School with the
University of Utah, Department of Parks, Recreation, and Tourism
Natural Resources Learning Program

Course Curriculum Description: Educating students to become leaders of their peers and their larger community is central to the curriculum of both NOLS and the University of Utah=s Natural Resources Learning program within the Department of Parks, Recreation, and Tourism. Leadership begins by first educating oneself with fundamentals, forming a foundation from which to step forward with the skills and knowledge to lead others toward a common goal. The extended outdoor field-course environment provides an ideal opportunity for developing leadership skills through a progression where each student observes, discusses, and applies leadership techniques.

Over 30 hours of specific classes and demonstrations in addition to the modeling of behaviors by instructors will guide students in their understanding and immediate application of leadership techniques throughout a course. Every instructor has the academic freedom to arrange the learning process to custom fit each environment, to serve each group of students. Most instructors offer the following core information:
Expedition Behavior, leading by being a good follower B taking responsibility for oneself
Outdoor leadership and judgement B reflecting on experiences as a group and individually
Hazard assessment B outdoor environment specific B technical skills gained by experience
Communicating ideas B being heard and listening for understanding
Conflict Resolution B solutions with dignity and growth for all
Student teaching B most students make opportunities to prepare and present material to the class
Leader of the Day B responsibilities and expectations, a practical step toward formal leadership
Expedition planning B organizing for the group: permits, food, equipment, participants...
Time control plans B the endless possibilities for the day: route finding, timing, hazards, vistas...
Leadership decision-making styles B fit your style to the people and the situation
Small group expeditions B many courses will reach the leadership maturity for a leading few days without instructors being immediately present
Teaching a leadership progression begins with good role modeling. Instructors model instructor-team cooperation, public decision-making, and constructive feedback. Instructors pair up with students to specifically mentor each student. As the students develop, the instructors back off, allowing students to make choices and live with the outcome unless safety is compromised.

Course Objectives: By the end of the course we expect each student to:
participate in the decision-making process;
effectively communicate and problem solve on interpersonal and group levels
take responsibility for health and safety of self and others
demonstrate sound expedition behavior, including commitment to group decisions and positive attitude
show initiative in leadership/teaching roles with peers
employ leadership styles appropriate to the situation; support others in the leadership role
work effectively as a team member; initiate participation in group tasks and camp work
take responsibility for learning; set and attain personal goals

Appendix C

PRT 3042 B Natural Resources Learning: Wilderness Skills Practicum and Leadership Curriculum, Syllabus

National Outdoor Leadership School with the
University of Utah, Department of Parks, Recreation, and Tourism
Natural Resources Learning Program

Course Curriculum Description: Educating students to become leaders of their peers and their larger community is central to the curriculum of both NOLS and the University of Utah=s Natural Resources Learning program within the Department of Parks, Recreation, and Tourism. Leadership begins by first educating oneself with fundamental skills, forming a foundation from which to step forward with the skills and knowledge to lead others toward a common goal. The extended outdoor field-course environment provides an ideal opportunity for developing leadership skills through a progression where each student observes, discusses, and applies wilderness skills and leadership techniques.

Wilderness Skills begin with the safety of the students. Recognition of the inherent environmental hazards and the diverse limitations in experience and skill levels of each of the students is the first step toward safety management. After recognizing the potential hazards, both environmental and human, a student must learn the wilderness skills to cope with or avoid the hazard. Learning the skills of each outdoor activity provides the foundation from which a student then can lead others in the activity. NOLS courses excel in providing the opportunity for extended learning and application of wilderness skills and applying the skills in a leadership experience.

Over 30 hours of specific classes and demonstrations in addition to the modeling of behaviors by instructors will guide students in their understanding and immediate application of wilderness skills and leadership techniques throughout a course. Every instructor has the academic freedom to arrange the learning process to custom fit each environment, to serve each group of students.

Course Objectives: By the end of the course we expect each student to:

B travel competently, using correct wilderness activity skills, judgement, and leadership skills
B master the fundamental skills and demonstrate an understanding of more advanced skills in each activity
B consistently perform techniques taught on the course to reduce or avoid hazards
B understand the use, design, limitations, and proper care of the related equipment
B describe an emergency plan for a group in the outdoors
B accurately assess skills, strengths, and endurance in self and others, and conservatively apply those limits
B live comfortably in the wilderness, able to camp, cook, and dress for a variety of conditions
B take responsibility for health and safety of self and others

Appendix D

PRT 3043 – NRL: Risk Assessment and Management, and Decision Making
National Outdoor Leadership School with the
University of Utah, Department of Parks, Recreation, and Tourism
Natural Resources Learning Program

Course Curriculum Description: True safety on wilderness expeditions is elusive. But intelligent management of risks is central to the curriculum of both NOLS and the University of Utah's Natural Resources Learning program within the Department of Parks, Recreation, and Tourism. Hazards and risks to students are an inherent component of all outdoor courses. To minimize the risk to each student and the group, students are taught to recognize developing hazardous situations. Students are taught avoidance or compensatory actions for mitigating many risks. Students are taught and use several judgment and decision-making tools. Students take from these courses the knowledge, skills, and ability to lead others in wild places in an intelligent way.

Over 30 hours of specific classes and demonstrations in addition to the modeling of behaviors by instructors will guide students in their understanding and application of wilderness risk assessment, management, and decision making throughout a course. Every instructor has the academic freedom to arrange the learning process to custom fit each environment, to serve each group of students. Most instructors offer sessions from the following core information:

- Accident Potential model
- Human factors in accident analysis
- Local weather and climatic hazards, assessment, and mitigations
- Common camp and travel hazards, assessment, and mitigations
- Common activity hazards, assessment, and mitigations
- First-aid for common injuries
- Skills for competent use of equipment
- Defining and developing judgment in the outdoors
- Decision making for students
- Decision making and styles of leadership
- Using a cost/benefit analysis as a foundation for decision-making
- Decision making theories – Classical, Heuristics, Expertise
- Communication skills
- Partnering Control (cause and maintain an action) with Responsibility (to analyze, mange, inform)
- Leadership skills to responsibly analyze, manage, and keep the group informed

Course Objectives: By the end of the course we expect each student to:
Demonstrate responsibility for their own risk management
Demonstrate knowledge of environmental hazards for that course type (rock fall, weather, stream crossings, open crossings, avalanches, etc.)
Demonstrate knowledge of the Human Factors in the Accident Potential model
Consistently perform appropriate techniques to reduce or avoid hazardous situations
Demonstrate first-aid skills to support a patient until help arrives
Demonstrate the ability to develop a contingency plan for a group in the outdoors
Display sound judgment and an awareness of group and self limits
Practice responsible habits that promote health and safety of themselves and others

Appendix E

C O U R S E D E S C R I P T I O N
Spring Semester in the Southwest
Features of This Course

• Backpacking, rock climbing, caving, canoeing and student expedition
• Average Pack Weight: 60 pounds
• Minimum Age: 17
• Average group size: 15 Students / 3-5 Instructors
• College Credit available
• Elevations of 3,000 - 11,000 ft.
• Typical male/female Ratio: 50/50
• Average Age: 20
• Wilderness First Aid Certification from Wilderness Medicine Institute of NOLS

The Expedition

A Semester in the Southwest will give you a unique glimpse into the American Southwest's living desert. Your notions of a barren, sandy desert environment will be forever changed as you discover this place alive with plants and animals like coyote, javelina, mountain lions, peregrine falcons, mesquite and cactus. One of the only semesters at NOLS to offer three technical sections, your experiences will vary from the canyons of the Rio Grande to the Ponderosa Pine forests of the Gila Wilderness. You may find yourself jamming your hands and feet into granite cracks, or crawling on your hands and knees through decorated limestone caves. Along with natural history, you'll discover the desert's rich human history and have plenty of time to travel through the areas inhabited by these ancient cultures. In this land of constant sun, you'll also be able to learn the skills—backpacking, caving, climbing and canoeing—and get to finish the semester with a student expedition, the highlight of the semester for many students.

The launching point for your expedition, NOLS Southwest is located on ten beautiful acres dotted with Saguaros and close to national forest land. From here, you'll watch raptors soaring above, listen to coyotes howling at night, and enjoy the famous desert sunsets. NOLS Southwest is a small facility, with tight-nit and friendly staff who live and work at the branch and enjoy being part of the students' experience. Many are former Semester in the Southwest grads, creating a comfortable, supportive atmosphere with excellence personalized service.

The semester is comprised of five different sections. These sections, which last from two to three weeks, include backpacking, rock climbing, caving, canoeing and a backpacking student expedition. Between each section, the course will either pass through the Southwest

branch
facility or stop at a campground in Texas, Arizona or New Mexico. Each semester section will
end with course evaluations.
The transitions between sections are kept as short as possible to allow us to maximize our time
in the wilderness. The bulk of your time in-town will be spent reorganizing gear, meeting new
instructors, and doing personal laundry or other errands. This is the time when mail is received, telephones are accessible, and you may even bask in a little free time.
Different instructors work each section in order to have the most qualified staff for a particular
skill area. One instructor, the course proctor, will remain with the group for the entire semester.
This instructor is the key liaison between you and the NOLS community and will provide consistency between sections.
While you are in the field, you'll live with two or three other students in a "cook" group. These
small groups help disperse the impact on the land and enable you to master the art of backcountry cooking and living. You'll also travel in small groups, usually of four to six.
Initially, these groups will include an instructor, but later in your course—once you know the
intricacies of map-reading, route finding, and hazard evaluation—students often travel in small groups on their own.
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2

Weather and Other Challenges

The Southwest can be host to extremes in temperature and weather conditions. Though warm
mild weather is more typical, students should expect anything from monsoon rains and extreme heat, to snow, wind and subfreezing temperatures. During the months of November,
December, January and February subfreezing temperatures are common, especially at night.
Sometimes these weather changes occur in a matter of minutes, other times storms or cold temperatures can last for days. There will be times when you are cold, wet and tired, but you'll
learn to manage these situations. You might even find yourself smiling while you do. In time,
your personal adaptation to varied conditions will help you understand and appreciate the
remarkable flora and fauna that make the Southwest such a special environment.
Physical challenges of the semester include backpacking both on and off trail in steep rugged
terrain. Spring courses in the Galiuros and Gila may take you through waist-deep snow. All
Gila hiking routes include numerous river crossings that are done by wading through ankle to
waist-deep moving water. Rock climbing is taught on vertical cliffs and the approaches are
often over steep rocky terrain. Some of the caving is vertical in nature requiring the use of ropes

and technical equipment to descend and ascend in and out of the caves. Some caves are muddy and the footing may be slippery. In all the areas traveled during the semester, numerous species of sharp spiny plants are common. Rattlesnakes and scorpions are some of
the potentially harmful animals which students will learn to recognize and avoid. Identifying and managing the hazards of moving water, falling and rolling rocks, weather, animals, and steep terrain will be a constant theme in our instruction. The consistent practice
of risk management techniques and assumption of responsibility for yourself and other group
members will help make your expedition in these wild, beautiful, and untrammeled mountains
and wilderness areas healthy and enjoyable.
The semester is long, nearly three months. One challenge which is difficult to explain, but is
perhaps the most important to the experience, is the challenge of living, working and learning
with the same people day in and day out. You'll become very close to your fellow expedition
members and perhaps some long lasting friendships will be formed. "Expedition behavior," or
the ability to get along with the other members of the group and function as a team is a vital
component of the NOLS curriculum and the semester experience. This aspect of the course will
be a continuing theme throughout the semester.

Student Independence

On all NOLS courses students will be independent (that is unaccompanied by instructors) at
various times. This will include time in and around camp such as while cooking or performing
camp chores. Instructors may allow students to travel away from camp. Away from the field,
students often have independent unsupervised time, usually in town, before and after their
course starts or between sections of semesters.

Independent Student Group Travel

An emphasis of this course is the development of skills that permit you to be self-sufficient in
remote backcountry areas. Our teaching progression for accomplishing this is carefully planned and executed. Initially travel groups, usually of four to six students, will include an
instructor who will teach travel skills and leadership. Gradually, as you gain proficiency, the
instructor will allow you to take on more responsibility and make more of the decisions. When
you have demonstrated the necessary competency to the instructors, you may travel in student-led groups without instructors for a day at a time as you hike from camp to camp.
We call this daily independent student travel and it is an effective educational tool. It allows
you to practice travel skills and leadership and gives you responsibility for the outcome while

still having indirect supervision by instructors and the benefit of the NOLS support systems.
This course may culminate in a Student Expedition. After successful practice with daily independent student travel and if your instructors think your group is ready, the instructors
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will help you divide into student expedition groups (usually three to six students each). With
instructor oversight, each group will then select a leader and carefully plan and execute a multi
day independent student led expedition. This part of the course builds on the skills you've
learned and practiced and allows you to travel without instructors for up to four days. Students are aware of where the instructors and the other student groups are planning to travel and camp. The instructors with emergency communication capability may be up to 24
hours away from the students. Our students often say the student expedition was the highlight of their course.

Solos

On this course you may have an opportunity to do a "solo" when you spend a day and night
alone. There is no hiking during the solo. Many people find this experience a good way to reflect on the course and immerse themselves in the environment.

Sections:

Wilderness First Aid

The first two and a half days of your semester will be spent participating in a Wilderness First
Course taught by Wilderness Medicine Institute. Fast paced and hands-on, this course covers a
wide range of wilderness medicine topics for people who travel and work in the outdoors. This
course is pre-approved by such organizations as: the American Camping Association, the United States Forest Service, and other governmental agencies. It may also be used for wilderness medicine recertification by those with previous training. We recertify current cards
from the following organizations only: WMI, NOLS, SOLO, and WMA

Galiuros Wilderness

During this section you'll practice outdoor living skills, wilderness travel techniques, minimum-impact camping, leadership, and teamwork. Water can be scarce and it may be necessary to carry it from camp to camp. This hiking section will take place in the Galiuros
Wilderness of Arizona. You will hike through one of the many mountain ranges called "sky
islands." This name comes from the fact that these ranges are isolated pockets of alpine vegetation and lush forests surrounded by barren desert basins. Here you will hike through
ponderosa pine, oak, and manzanita while looking out over stark deserts below.

Caving

The caving section is approximately two weeks long. During this time you'll explore extensive
and world famous cave systems near Carlsbad, New Mexico. Only a handful of permits

are
given out for some of these caves, and we get some of them. As a result, you'll visit caves where relatively few people are allowed. Caving takes you into a remarkable underground
world. Surreal formations, mysterious passages and a delicate ecosystem define this threedimensional
landscape known to few. The curriculum during this section includes
underground movement, technical travel skills, geology and the biology of caves, cave conservation and management concerns, and hazard evaluation. Depending on location and
time considerations, courses may also be exposed to cave photography, or cave survey and
inventory. There may also be an opportunity to participate in a service project for a federal
land agency. This section is a fast paced and exciting learning experience.

Canoe Expedition

The towering canyon walls of the Rio Grande River provide your introduction to canoeing skills
and river travel. The river section launches from Big Bend National Park and the "take out" is
more than 100 miles and two weeks downstream. This Chihuahuan desert region is rich in both
human and natural history. You'll enjoy the true remoteness on this section, where for most of
it you will be many miles away from the nearest road.
This section of the Rio Grande flows in a gradual progression from flat water to occasional
class II or III rapids. Depending on student abilities, some of these rapids will be run in canoes, while the more difficult stretches will be portaged. Portaging around rapids is a

normal and useful canoeing skill. You should expect the vast majority of travel to be on flat
water along this winding desert river. Traveling the river in canoes will give you an opportunity
to experience wilderness travel on water.
Land-based explorations of side canyons and the Chihuahuan desert are integral elements of
this section. Classes will include water risk management, river dynamics, scouting, and river
rescue. There may be potential for a "solo" on this section.

Rock Climbing

The climbing section will make up to eighteen days of your semester. This time is spent exploring Cochise Stronghold, one of the best climbing areas in the country. The focus of the
section is on developing responsible, competent and confident climbers. You'll concentrate on a
series of skills that begin with basic risk management and movement on rock, rope handling,
and knot tying and then progresses to belaying, top roping, multi-pitch climbing, rappelling,
anchors, and protection placement. Each student has the opportunity to progress at his

or her
own speed. The instructors emphasize developing a responsible, positive attitude toward climbing that will help you build upon your own natural abilities. If students are ready, there
may be opportunities to practice lead climbing. NOLS has set standards by which we evaluate
each student's readiness and ability before allowing them to lead climb.
Our emphasis on leadership will continue on this section in the form of personal leadership.
You'll be encouraged to set appropriate goals and to work hard to accomplish those goals,
whether it's learning how to place protection, setting up a top rope anchor, or even learning to
lead climb. It's up to your efforts whether you accomplish these goals.
During "non-climbing days" you might be resting your muscles, but you'll likely stay active
learning cliff rescue techniques around base camp, bird watching or going for a hike among the
many granite domes.
Other popular activities on this section, either before or after climbing, are stretching, yoga, and
jogging with other students or instructors. You'll also learn how to base camp in style so when
you're ready to go on that climbing road trip after your course, you'll have all the skills you
need to live well.

Student Expedition in the Gila Wilderness

The final section of your southwest semester will be focused on doing your own student-led
expedition. Before heading into the field, your semester group will have the opportunity to
plan your hiking rations, gear and route. This component is unique to southwest semesters
and allows you to put to use all of the skills you have learned on your course. Student
expeditions will last anywhere from 3-7 days and the instructors may be up to 24 hours away
from the student expeditions. The Gila hiking section is an exciting adventure spent exploring
the first federally designated wilderness area in the United States. This is home to an unusual
diversity of plants and animals that range from desert-adapted species to those more
commonly found in northern latitudes. The human history of the Gila dates back thousands of
years to the time when it was the home of the Mogollon civilization. Evidence of these
prehistoric cultures can be found while traveling through the area. The Gila also served as a
refuge for Geronimo and his band of Apaches. A highlight for many students on this section is
the opportunity to soak in hot springs along the Middle Fork of the Gila River.
NOLS Southwest reserves the right to make changes to course area locations due to unforeseen
circumstances such as forest fires, permit restrictions and/or other unusual circumstances.

Appendix F

ETHICS STATEMENT

I, Sarah Manwaring-Jones, promise to ensure good ethical practice in conducting my research. I promise at all times to negotiate permission to conduct the research, respect confidentiality, and ensure participants' rights to withdraw at any time from the research.

This means that,

- The permission of the NOLS research advisory board will be secured before the research commences.
- The written consent of the participants will be secured before the research commences.
- Participants will have access to the research report before it is submitted.
- Participants will be kept informed to progress at all times.
- All participants have the right to withdraw from the research at any time.

Signature: _____

Full Name: Sarah Manwaring-Jones

Appendix G

NOLS Student Letter of Informed Consent
University of Edinburgh

I, _____, am a student of the National Outdoor Leadership School (NOLS), and I am registered on the southwest semester beginning in February 2006. I agree to participate in the graduate research studies being conducted by Sarah Manwaring Jones between February and May of 2006.

I understand that the research being conducted relates to the experiences and perceptions of NOLS students in connection to one of the schools' environmental education objectives. I understand that excerpts from my written responses and tape recorded verbal communications with the researcher will be studied and may be quoted in a masters' dissertation, future papers or journal articles written by the researcher.

I grant authorization for the use of the above information with the full understanding that my anonymity and confidentiality will be preserved at all times. I understand that my full name or other identifying information will never be disclosed or referenced in any way in any written or verbal context. I accept that NOLS will obtain access to transcripts of the data following completion of the research.

I understand that my participation is entirely voluntary and that I may withdraw my permission to participate in this study at any point up to and including the last day of my semester course (May 3rd)

I have included two copies of this letter. Please retain one copy for your reference.

_____ _____
Signature Date

Appendix H

Letter of Consent from NOLS giving permission to undertake research.

As a part of my graduate studies at the University of Edinburgh, and in conjunction with my work as an instructor at the National Outdoor Leadership School (NOLS), I am conducting a piece of research studying how I can better understand students' perceptions and thoughts connected to wilderness ethics during their NOLS semester.

My data collection methods will include audiotape recordings of group discussions in a learning circle format, written reflections by students on the research questions, an environmental curriculum and fieldnotes log made by myself and the general course log kept by the course leader.

I guarantee that I will observe good ethical conduct throughout. I promise that I will not reveal the name of the course, the students or the colleagues at any time, unless you inform me in writing that you wish me to do so. If you wish I will keep you informed of progress throughout. My research report will be available for scrutiny before it is submitted.

I would be grateful if you would sign the bottom section of this letter and return it to me at your earliest convenience. Please keep one copy for your records.

Yours sincerely,

Sarah Manwaring-Jones

To whom it may concern,

I, _____, curriculum director at NOLS, give permission for Sarah Manwaring-Jones to undertake her research on the NOLS SW spring semester 2006.

Your Signature: _____

Your Name: _____