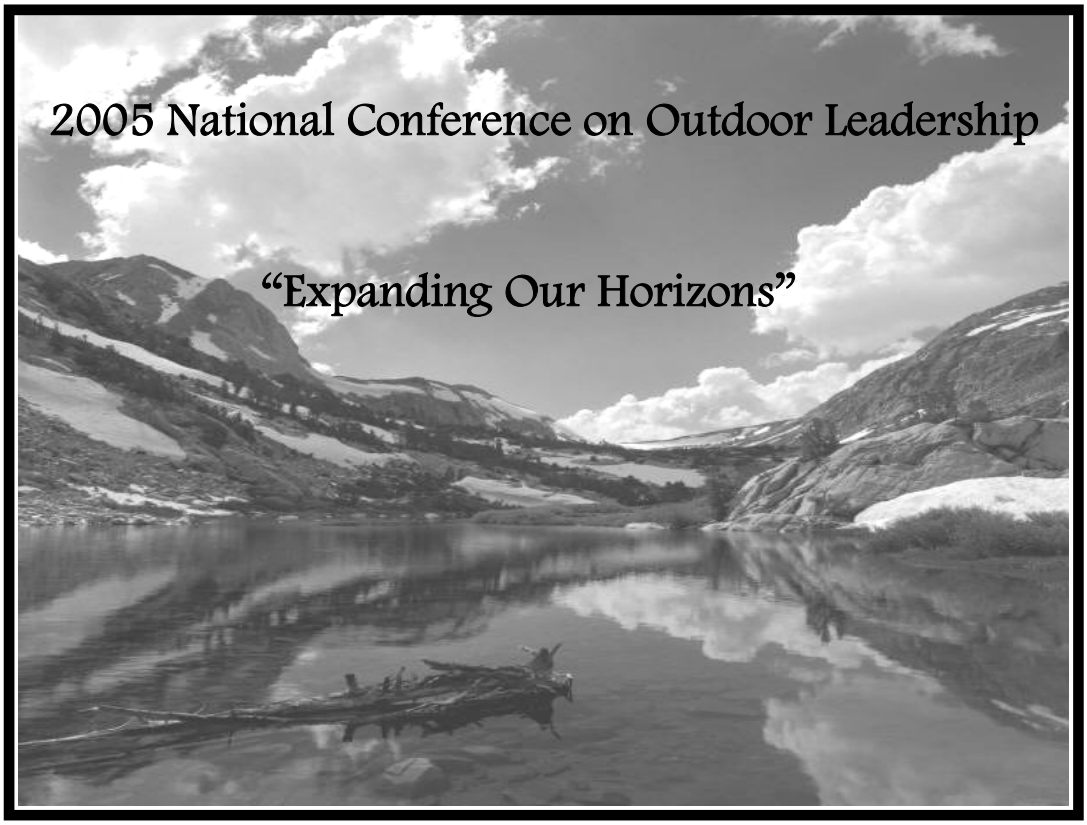
Wilderness Education Association

Proceedings of the 2005 Conference

February 18-20, 2005
YMCA of the Rockies – Estes Park, CO



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"Wilderness Preservation Through Education"

Wilderness Education Association

Proceedings of the 2005 National Conference on Outdoor Leadership

"Expanding Our Horizons"

February 18-20, 2005
YMCA of the Rockies – Estes Park, CO.

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Introduction & Acknowledgements

To all WEA Members, Conference Attendees and Outdoor Professionals:

Thank you for your continued support of the Wilderness Education Association. Special thanks and gratitude go to this year's 2005 Conference Committee (Bruce Martin, Scott Robertshaw, Jay Zarr & David Schmid) for coordinating an outstanding five days of workshops, training, guest speakers, awards, vendors, socials, discussions, debates and networking at the YMCA of the Rockies in Estes Park, Colorado.

In the following pages, please find the WEA's 2005 National Conference on Outdoor Leadership Proceedings. WEA truly appreciates the time, effort, research and practical field application of our workshop presenters and their willingness to share their work to improve our profession.

My hope is that the invaluable information contained within will further the growth of the WEA both as an organization and as an outdoor leadership curriculum provider. Furthermore, I look forward to a larger and larger Conference Proceedings in the years to come.

Lastly, I wish to thank Dr. Maurice Phipps and Aya Hayashi for compiling, editing and formatting these proceedings.

Jim Lustig
WEA Board of Trustees Vice President

A Brief History

The Wilderness Education Association helps people enjoy and protect our nation's most precious resource: our wilderness areas. The WEA has been training and certifying outdoor leaders around the world for nearly 30 years, teaching students safely and effectively lead groups in the outdoors without harming the environment.

In addition, working with national conservation groups and government agencies, the WEA educates the general public in how to appreciate and conserve the wilderness through special curricula and public service information campaigns.

Legendary mountaineer Paul K. Petzoldt, Chuck Gregory, Robert Christie, and Dr. Frank Lupton, founded the WEA in 1977. The organization's mission includes "...promoting the professionalism of outdoor leadership and to thereby improve the safety of outdoor trips and to enhance the conservation of the wild outdoors..."

The WEA founders set out to develop an organization which could train outdoor leaders, instill a sense of stewardship the wild outdoors, and provide the skills and knowledge necessary to lead and teach public in the appropriate use of wildness areas. The result is one of the most comprehensive wilderness education and outdoor leadership training organizations in the country.

The WEA 18-point curriculum emphasizes experiential teaching in the field with a primary focus on judgment and decision-making. WEA course graduates not only know their abilities, but also learn to respect their limitations.

WEA courses are offered thought a network of 40 accredited affiliates around the world. Many WEA courses earn college credit.

Consulting and program development services are an integral part of the WEA mission. Contact the National Office regarding curriculum development, risk management, instructor recruitment, and standards for outdoor leaders.

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Building the Adventure Community

Ray Aberle
Colorado State University

Abstract

This paper outlines several paradigms of the adventure and experiential education fields and their relevancy in forming a community of people. While there is little in the way of "new ideas", it is the coming together of different foundations of the adventure field in a usable way for a variety of different groups. This approach has been successfully implemented for school, corporate, family, and expedition based groups.

Key Words: Community Building, Adventure

The Adventure Community

No matter if you are operating in a corporate board-room or in a remote Wilderness, there are core components of group formation, motivation, maintenance, and process that enable a spirit of adventure, mutual support, and growth to be present. The Adventure Community embodies these components.

Basic Definitions Used in this Paper:

Adventure: we define adventure as an experience that is voluntarily entered into, has intrinsic motivation, and an element of risk resulting in uncertain outcomes.

Community: A body of people bringing a diversity of experience, views, talents, and liabilities gathered for a common purpose.

Sustainability: The ability to remain in a state of balance and health for a very long time. This can be applied on the personal, communal, and planetary level. The sustainability we talk of is not a state of homeostasis, but one that adapts to support health and balance.

Appreciative Inquiry: A problem solving strategy that employs an examination of the positive elements of an issue and possibilities for its solution. It is also used as a method of evaluating any experience; whether positive or seemingly negative.

Basic Theories:

Expedition Behavior
Adventure Paradigm
Ecological Sustainability
Games and Play
Competency Quadrant

SECTION 1

In 2003, four experienced adventurers set off to explore the 400 mile Legenda River in Mozambique. The last explorations by the outside world took place in 1860. This was an adventure of the highest form. Miles of braded, and confused channels, dangerous fauna, strange illnesses, and the greatest threat to any expedition: being together in a group…

Expedition Behavior can be defined *as the key emotional and social elements needed to empower success in an adventure endeavor*.

Beginning with the selection of a team of people to participate in the adventure, expedition behavior is the NUMBER ONE determinate of expedition success. Within the setting of YOUR Adventure Community the team is more than likely pre-determined or already existing. While this certainly presents challenges different from those adventure communities selecting team members, establishing a norm for expedition behavior, no matter where you are in team formation will help ensure success.

"Team members…must be able to live harmoniously with others in close quarters under stressful conditions."(Mountaineering, 1992)

Sound like your classroom or office?

Let's look at how behavioral expectations can be set for any group, using the metaphor of an adventure expedition.

Step One: Team Formation

Regardless if you're building from scratch or employing a team that's been together for years, proper team formation starts with one simple step: GOAL FORMATION. Until the goal or goals of your community is clearly stated it is impossible to establish norms for expedition behavior. Here are some examples of broad goals that might work for your community:

"Create an atmosphere of learning and inquiry predicated on respect, playfulness, and possibility"

"To deliver services and goods with unique flair, and professionalism."

"Innovate, assess, deliver, and respond"

Each of these statements of purpose is concise, have stated goals, and also allow for group diversity. Words like *possibility*, *unique*, and *innovate*. What the adventure community realizes is that diversity is needed to be successful. Without it we always come up short in a critical situation because the thinking that led us to the problem can rarely get "out of the box" to solve it. Sometimes it works to have the team help you form the goals, sometimes it makes sense to determine that for yourself or with a limited amount of input.

With a goal established, now you can form a new team, or invite participation by members of an existing community. Here, people are allowed the decision to join up or check

out. It's a good place to be. Sometimes the only similarity that any member of the group shares with others is a commitment to the goal. Often, that is enough.

Step Two: Climbing Style or Corporate Atmosphere

Based on who makes up your team, you now have to develop a sense of how you will "move towards the mountain of your goal". Some groups are "stormers". They attack the mountain with a driven mentality. Some are plodders. They hold to the slow and steady axiom. Most of us find a team made up of a mix of "*stormers"* and "*plodders"*. That's good! If the hair and turtle teamed up, they would have had the zip of going fast with the introspection of taking time.

A mixed style of operations requires thoughtful expedition leadership as well as periodic "check-ins". Check-ins allow the stormers to ask if a speed up is possible or the plodders to request a slow down. If mutual goals, and a sense of community are developed, there may be periodic tension, but there will also be understanding and respect. The questions "Who am I" and "Who will I be" are the questions of this step. You can never ask these questions enough as you establish a climbing style.

Step Three: Communal Equipment

Where does it all break down? When the zipper is broke and not repaired. When the dirty dishes are never done. When the library book is torn and page 24 is missing. No single piece of expedition behavior can trigger it all coming unglued like misunderstandings over how communal space and equipment will be used.

In a climbing application your ropes and your harnesses are your life. Without their proper care your life is in jeopardy. Similarly, without proper care of copy machines, and coffee pots your goals may slip away as your team loses efficiency and moral. There are a few simple steps that help make this sticky spot less adhesive.

First, get a list going of communal areas and equipment. Second, brainstorm how these areas and items benefit your group and goals. Third, establish norms and expectations. Fourth, build time into your group's expedition to take care of these areas. Fifth, allow people flexibility, where possible, to do it their way. Tri-folded versus bi-folded towels should not be a deal breaker (but it can be!). Let your neurosis go unless they have CONCRETE relevance.
P.S. Because you're the boss or teacher is NOT a relevant point in an adventure community unless life or limb is in danger.

Step Four: Personal Care and Conditioning

There's no "I" in team, but if you rearrange the letters there is a "me". The me in team is a very important component of expedition behavior. Basics concerning dress, hygiene, language, and personal space should be discussed and some practical points set forward. Again, diversity of colors, expressions, and personal uniqueness should be encouraged. For most people, a simple (and logical) explanation of how behavior affects group and goals does two things: makes the group or leader examine if it really is a problem, and connects the dots for the offending party. When people feel safe and respected, they can make incredible change in a very short time.

Personal conditioning takes on many levels in any adventure community. But here are a few suggestions for your community. First, give people time every day –five or ten minutes – to stretch. When asked, "What's your advice for us youngsters grandpa?" my 80 year old grandfather responded, "Stretch everyday." Second, give people the chance for professional

development. If you can't pay for the workshop, at least encourage them and compensate them with time off. If you can't buy them the book, then make them a personal bookmark. Finally, safe, lighthearted competition that mimics your goals or company product and includes the winners and losers in celebration helps people keep a keen edge, practice thinking on their feet, and creates a play community.

On day fifteen the four adventurers, at mile 391, begin their final day of kayaking. Diarrhea, rapids, lions, armed encounters, had met them along the way, but humor, the four steps of expedition behavior, and the goal of both traveling the river, and getting home ensured success. Calamities will befall all efforts grand or small, success remains for those who take the journey with a diversity of friends, holding a thousand keys to the unlocked door of your goal.

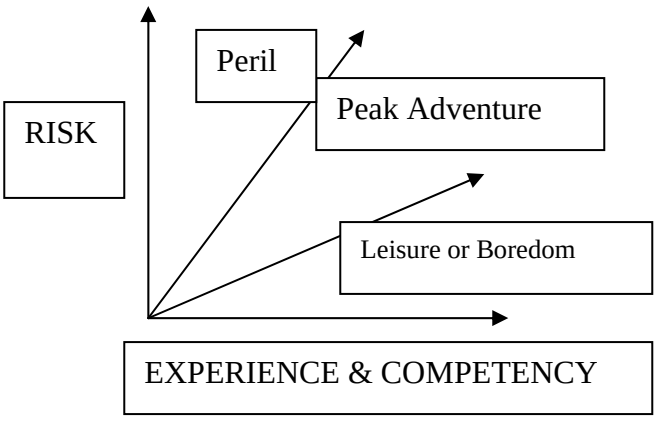
SECTION 2

"Hi honey, how was work today?" "Oh, just another day at the office." "Hey buddy, what did you do at school." "Nothing." Dinner tables all over the country are BEGGING for a little adventure to talk about!

Once there was biker that got tired of biking, but she stilled liked it, just not every day. So she started swimming, and then, after awhile, took up running to stay in shape for biking. Soon, she was doing all three and competing in triathlons. For some boredom is a prison, others the fertile ground of invention. The simple fact is that if someone is bored long enough they will make changes or someone else will – a spouse, employer, parole officer.

In an adventure community you are always keenly aware of where your individual members are concerning their level of interest, commitment, and creativity. By looking at the Adventure Paradigm, a theoretical model constructed by Priest and Martin (1986), the adventure community has a tool for innovation, creativity, and growth. In this model the ability to keep people at peak adventure is a core component of program effectiveness. Failure to keep people motivated or safe alienates them from the experience. The greater the risk, the greater the need for experience or competency. Giving people too much risk without proper tools can result in high stress. Contrarily, low risk combined with high levels of competency or experience can create boredom.

The Adventure Paradigm (Priest and Martin, 1986)



The benefits of getting and keeping people at peak adventure is retention of community members (students, clients, employees), innovative and creative production, community harmony, and transcendent experience. In this model the ability to keep people at peak adventure is a core component of program effectiveness. Failure to keep people motivated or safe alienates them from the experience. The greater the risk, the greater the need for experience or competency. Giving people too much risk without proper tools can result in high stress. Contrarily, low risk combined with high levels of competency or experience can create boredom. The benefits of getting and keeping people at peak adventure is retention of community members (students, clients, employees), innovative and creative production, community harmony, and transcendent experience. Maslow's work with Peak Experiences lists 25 outcomes. Here are a relevant few:

Universe Integrated and Whole, Tremendous Concentration/Attention, Detachment from Routine Concerns, Egoless/Unselfish, Experience as a Centering Point, Self-Validating, Lack of Time or Space Awareness, Polarities and Dichotomies Cease to Exist.

Imagine a community of adventures (workers, learners, families, neighborhoods) operating from these outcomes. There is no reason for us to believe that these experiences are the sole domain of professional athletes and religious visionaries. Our daily participation in an adventure community CAN afford us the same possibilities.

Practical Applications

The two variables in the adventure paradigm are **risk** and **experience/competency**. Let's define these:

Risk can be defined as the very real possibility of losing something of value. It could be money, a paradigm, social status, emotional stability, or personal security.

Competency can be defined as having sufficient means for ones needs.

Hmmmm…. it seems that the perfect place for the many benefits of peak experiences come from a very fine balance of putting your skills to work in an environment that is just barely within your reach. Let's look at some common situations/components that can lead people into each of the three levels of adventure participation.

Peril/Burnout

1) Embarrassment in front of peers.
2) Asked to complete a task without proper material resources.
3) Asked to complete a task without proper personal/emotional/intellectual resources.

Leisure/Boredom

1) Asked to perform the same task day after day with little to no variation.
2) Lack of available personal and professional development opportunities.
3) Low motivation for success of company/community

Peak Adventure

1) Opportunities for new experiences.
2) Supportive and encouraging community.

3) Skills development training and testing opportunities.

Even in the best of adventure communities we spend a bit of time in each of the three areas. As a leader of an adventure community it's hard to always get it right for each person. But, spending too much time in either the boredom or peril area is sure to decrease the sense of community, the effectiveness of the individual, and the overall productivity of the group.

Dinner tables, the country over, will be abuzz with, "Let me tell you about the adventure I had today…."

SECTION 3

In 1804, Meriwether Lewis and William Clark led an adventure community into the frontier of the American West. Through two years of intense challenges, stark odds, and thousands of miles they charted the future, for good and bad, of the United States. Their journey is a vivid example of sustainability.

"Have ascended to a great height since we entered mountains. Do not believe the world can furnish an example of a river running through such a mountainous country."
– Meriwether Lewis

Sustainability informs not only forests and mountains, but all natural functions. As members of this larger adventure community, we benefit from looking at these principles and how they can benefit who we are and what we do.

Ecological: Dealing with living organisms and their environment.
S*ustainability*: To keep in existence; maintain or prolong.

Ecological Sustainability is looking at how we can keep in existence the people and communities that support us. Ecological Sustainability also recognizes that all communities are, to varying degrees, linked and dependent. Applying this to our Adventure Community makes sense based on our desires to keep the community together, healthy, and growing. Let's look at a few of the basic premises of the Ecological Sustainability, its function in the wilds and in our communities.

Adaptability

Look at a zone of life and you will see that the members living there are constantly adjusting for variances in temperature, moisture, disturbance, and their interplay with other organisms. The rule of the wild is that you adapt or decline.
Adaptability in the Adventure Community is dependent on the ability of the group to make changes along the journey. Sometimes how things are done, old assumptions and even goals, mission statements, and visions must be changed in order to survive.

Diversity

Modern agriculture has been caught in a quandary with the monoculture farming that consumes most farming practices. In a monoculture, disease and disturbance are much more likely to devastate an entire crop than in a field of diverse life. *Diversity in the Adventure*

Community allows for creativity in production and assessment. Diversity allows a variety of adaptations to take place at the same time, lending witness to what does and does not work.

Interconnectedness

Anthropologist Margaret Mead speculates that as human beings it was not until very recently the nuclear family isolated itself from a larger clan of 12 to 36 people. Only in situations of desperate crisis did the band dissipate into smaller groupings. In the forest you see the dependence of the newly fallen seed on the decomposing log, the rodent on the seeds that are created from the new plant, and the hawk on the rodent. *Interconnectedness in the Adventure Community* recognizes that despite the diversity, there is a need to remember the deeper connections that draw us together. Be it the goal and mission of the organization, or more personal connections, an Adventure Community is both an organization made up of individuals and a single system.

Conservation

"A frog does not drink up the pond he lives in." The Native American wisdom tradition lends this poignant proverb to our discussion. Conservation is not a frugal minded approach to life, but a view in which there is always enough, if it is used with thought and consideration.

Conservation in the Adventure Community extends to many levels, but it asks questions of the use of resources for the production of your goals. It closes the "waste" loops. It imagines solutions to energy uses. With this view some projects are forsaken in hopes of allowing what is being done, to be accomplished, with more intentionality and integrity. Conservation is about being able to say, "no" to some things, because the "yes" for others is so strong.

Integrity

"An eagle need not be the crow." Sitting Bull's words remind us that each organism fills a niche. When all fill their role, the rest of the model works.

Integrity in the Adventure Community means that both the larger organism and the smaller parts are all being true to who they are, their responsibilities, skills, and limitations. When an organization or individual works from a sense of who they are, they do so with integrity. Scandals and corruption are mitigated.

Forcing Questions

Ecological Sustainability forces a community to ask ongoing and poignant questions. Use these to guide your Adventure Community in its development and ongoing sustenance.

Does this choice allow all members of the community to be healthy? (Diversity)

Does this choice allow the satellite communities we are connected to be healthy? (Interconnectedness)

Where, for positive and negative, does this choice predicate our community will be in the near and distant future? (Adaptability)

Is this choice consistent with our goals? (Integrity)

Does this choice allow our community to make the best use of its resources? (Conservation)

In the midst of their journey, Lewis and Clark realized that their hope for a "Northwest passage" did not exist. They adapted by focusing on creating connections among the native nations, deepening their focus on natural discovery, and getting home safely. Their ability to allow for the diversity of leadership to emerge, from slave to native woman, the integrity of their leadership, and their conservation of resources created a most memorable adventure community.

SECTION 4

In 1973 6,000 people gathered to play games. There were no winners, no losers, just people having fun. An incredible kaleidoscope of diversity attended this play day in the Sierra Foothills. A new era of games, for the sake of play, was begun. The implications of this mass movement of play may never be known, because its effects were so far reaching. Each of us,at one time or another, has played one of the games developed that day and been drawn into a community of play because of it.

Play and Games form a basic foundation for family life. The old adage goes that, "the family that plays together, stays together." Further, Plato speculated that he could "learn more from an hour of play than a lifetime of discussion."

Defining what play or games are is an important concept for us to uncover. Dutch Philosopher, Johan Huizinga wrote an important work on play in the 1930's, *Homo Ludens: A Study of the Play Element in Culture*. In his study and reflection on play he identified the main characteristics of play. They are:

1. Play is voluntary.
2. Play is separate from "ordinary" life.
3. Play is "played out" in limits of time and space.
4. Play creates an "absolute and peculiar order"
5. Play fosters social gathering.

Within the Adventure Community, play takes on a whole new level of importance. Play allows us the freedom to explore who we might be. It exposes new sides of our-selves to others, it open lines of communication, it breaks down barriers. A game introduces a mystery, an unknown result. Rules define a games, but in true play also encourage a process that unfolds is somewhat unknown and unpredictable way.

Playing a game exposes us to the risk of encountering unidentified elements often times outside of the player's control. By encountering these situations, the player is challenged with finding out more about themselves and others.

Games can help groups understand the thinking and behavioral patterns of individual members. Sometimes it exposes the "darker" side of the "nice" person. This is just the kind of knowledge of the "other" that creates bonds. Games engage possibilities in thought and behavior, group culture, mood, ideas, etc. in ways that can potentially resound to our deepest levels. Group-based games introduce new intricacy and possibilities. Almost anything can happen and often does. That's the risk. The gain is the creative fizz and "information" thrown

off by physically and psychologically engaging and moving people through various states of emotion, awakening, and cognition. This game-provoked energy provides for positive energy for tackling many other kinds of task, such as personal and group development.

Games are the sustenance of the 'Adventure Community'. In thoughtfully creating games, the adventure leader can put the community in situations to hone skills in preparation for use in more "formal" settings. In taking this approach to research and development, training, and product delivery, a community committed to common values and purpose is created. It just happens! The possibilities for what games can do for all sorts of communities has barely begun to be speculated, much less realized.

Practical Suggestions for Play in Your Adventure Community:

1. Put a puzzle out (break room, central location, copy room, corner of classroom) and allow people to come and go in the process of "creating" a finished product.
2. Set aside a day or time each month for scheduled play. This can be focused play (mimicking an upcoming or current project) or simply allowing a chance for encounters and stress relief.
3. Develop a play committee or group to work on designing and creating opportunity for play encounters.

Be Careful….

- To keep most play noncompetitive
- To keep play available to everyone, regardless of physical prowess
- To encourage connections between ALL individuals through play (avoid ongoing teams and cliques)
- To make at least some of the play transferable back to what you do as a company or classroom

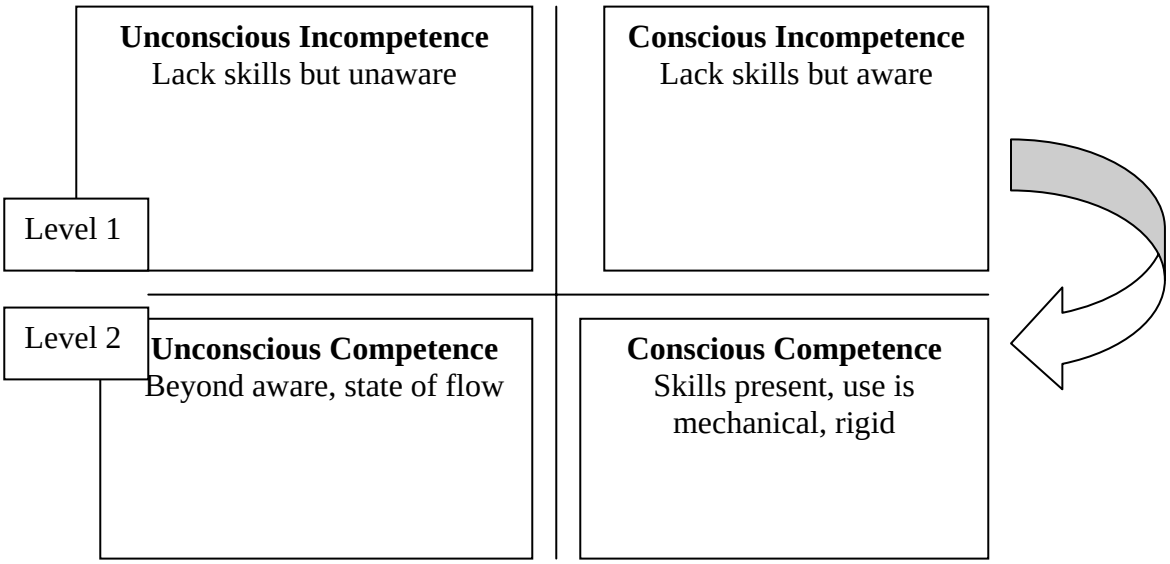
By 1976 over 14,000 people had been trained in the New Games philosophy. Since that time the games have spread, been adapted, modified, and played in schools and meeting rooms all over the world. Games and play, not war and hardship, regained its preeminent role as the universal language.

SECTION 5

In the Southern Rockies the nightly news reflects the seasons: "Skier missing in avalanche" or, "Hiker killed by lightening strike." In most, not all, of these cases someone would still be alive if they had aligned their competency with the degree of risk involved with what they were doing.

The Competency Quadrant (Raiola, 1986) is an effective tool in helping us assess where we are regarding certain skills. In the case of the skier it could help them in assessing their skills regarding snow types, slope angles, and current conditions. The hiker could review their competency concerning alpine weather, storm patterns, and effectively mediating the risk of lightening when "caught" exposed. In assisting people in reaching **Peak Experience**, the Competency Quadrant, allows the community to assess one another and the overall group.

The Competency Quadrant (Raiola, 1986)



Looking at the model, you can start in either Unconscious or Conscious Incompetence, depending on conditions. Some of the factors determining this may be:

1) Prior experience/knowledge/observation
2) Ability to be self-reflective
3) Feedback from others
4) Trial and Error

I know I am a bad swimmer for several reasons: I've tried it. I've watched others swim. My wife told me. Now, if I only swam by myself, had no outside information, and possibly an inflated ego, I would never know how bad of a swimmer I am.

To move from the first level to the second, several things MUST be in place:
1) Security in the community - must feel safe enough to receive truthful feedback.
2) A feedback loop - must have a system for informing others of their abilities in relation to the community.
3) Time , space, and resources to develop. - must have structures to support ongoing development.
4) Intrinsic motivation- must have a sense of wanting to get better that comes from within the individual.

One of the key items in helping people and organizations travel the Competency Quadrant, is the role of Appreciative Inquiry(AI)**.** AI is like the old song, "accentuate the positive, and eliminate the negative." This brings up a good point. Appreciative Inquiry starts by looking at what the strengths and available resources are and THEN begins a project. If the tools aren't present, it is obvious that the job should not be undertaken, or at least not in that way.

A frequent review of the assets, strengths, and tools of a community, a focused Appreciative Inquiry, helps you know where to begin in the process of new projects. It can be as simple as asking:

"When our community is focused, working well, vibrant, and at its best, what are the essential components?"

AI would look at a new project and say, "Ok, I know where are currently limited by our incompetence in this area, but I recognize the skills our community has. If they are provided with these tools, time, and training, I am certain they will be successful."
In the adventure community, there is an ongoing cycle of incompetence to competence, because you are inviting people to change, grow, and develop. New skills are introduced, and new goals are developed.

The benefits of truthful, thoughtful, respectful group and individual introspection using AI is an increased opportunity for the community and its members to spend more time at the peak of adventure and less in peril and boredom.

Maybe someday there will be more nightly news broadcast with the following headlines, "Hiker avoids lightening strike through conscious competence" or, "Skier avoids avalanche, because partner questions competency level of skier. Skier responds by staying home."

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Colorado State University
Knowledge to Go Places

Post–Expedition Adjustment: What Empirical Data Suggest?

Pete Allison Ph.D. FRGS
The University of Edinburgh, Scotland

> *I met most of my friends the day after I got back, I went into the pub brimming with confidence with an "I've just got back from a major expedition" feeling. Nobody asked me how it was, nobody was really interested when I told them where I'd been. The big news was all about who "got off" with whom the night before. That's when I really landed, from the high of the expedition. (Frank: 6 months)*

The UK has a long history of exploration and expeditions, as a result several organizations offer overseas wilderness expeditions every year for young people. The oldest organization offering this kind of experience is the British Schools Exploring Society (est. 1932) based at the Royal Geographical Society who focuses on science and adventure for educational purposes. This field of youth expeditions has seen significant growth since the early 1990s.

This case study reports on an expedition with the above-mentioned organization to Greenland in 1997 with 72 young people between 17 and 20 years old. The research took a constructivist epistemologist approach to explore the meaning and gain an understanding of the structure of the experiences (phenomenology) of the young people on the expedition. Following the six-week expedition all young people received letters six, 12, 18 and 24 months later asking them to write about their experiences (both positive and negative) with regard to the expedition. Data were received by letters and e-mails and used as part of a hermeneutic cycle involving interpretation and member checking. Themes emerged from data through the process and were analyzed using philosophical literature. A total of 19 participants were involved throughout the research process. Further details of the research methods are detailed in Allison (2000).

Among other things, on return, young people experienced difficulties in adjusting back to their home communities, this is one of four categories that emerged and is the focus of this paper. The quotation at the start of this paper was typical of many young peoples' experiences. Before detailing the findings, some discussion of pertinent literature is appropriate. MacIntyre (1981) noted the importance of narrative in making sense of experience and understanding ones places in the world with the Aristotelian concept *telos*. MacIntyre (1981) comments,

> When someone complains — as do some of those who attempt or commit suicide — that his or her life is meaningless, he or she is often and perhaps characteristically complaining that the narrative of their life has become unintelligible to them, that it lacks any point, any movement towards a climax or a *telos* (p.217).

The experience of young people on expeditions to wilderness environments is often conceptualized as about making meaning, young people report their reflections on everyday life and on their plans for the future. In this respect they can be understood as understanding past narrative and gaining greater control over their lives and planning their future narrative.

Complementary to MacIntyres concepts of narrative is Taylor's (1991) theory of authenticity. It is possible to identify two aspects of authenticity, first, the relationship with the self and second, the relationship with others and the environment (both social and physical).

These are often seen as in tension with each other but this is a necessary tension. *Who I am* can only be meaningful if set against a horizon of significance, other people or places. One can have a relationship with other people but also with environments and places. Only in these relationships can one test ideas, examine concepts and experiment with who one is, where one's boundaries are and gain feedback on the accuracy of perception of self and the moral relations one has with others. It is possible to see that the two aspects of authenticity alone are inadequate as neither provides a sufficient moral framework. However, when the two aspects are together and in tension this is sometimes referred to as the third sense of authenticity and provides a more useful framework for understanding or meaning making.

To be authentic is to be true to self — to one's calling of what one ought to do in life, how one ought to behave and how one ought to be. To understand authenticity it must be seen within different contexts, one of which is relationship with others. In this respect, to be authentic one must recognize a moral relationship with self and with others and be in moral deliberation — contemplating how one ought to be and what one ought to do. Authenticity is about identity — an integration of relationship with self and with others. Further, authenticity is concerned with the degree to which an individual has control over directing their life, it is concerned with creating what might be, as well as what is.

Bearing in mind these two philosophers' concepts of narrative and authenticity the following section briefly summarizes the findings of the study in the area of post–expedition adjustment. Four main themes and some sub themes emerged from data.

The Natural Environment

The first aspect of this theme relates to grieving for the natural environment, the intimate contact with the natural environment, and the participant's relationship with that environment. The first, and not surprising, aspect of this is the grieving for the beauty of the environment. This is usually manifested in comments about "awe and wonder" often only noticed on return to the UK,

> ***I missed everyone a lot*** *in the first few days back. It felt as if we were finally really getting to know each other after six weeks and then it was* ***suddenly all finished****. I would have really liked to spend another six weeks there - as there was so much to see and do, that I felt we barely touched upon the surface of what has to be the most spectacular and beautiful area that I have ever been to. (Brian: 6 months)*

While this theme appears in many peoples' comments, it appears to be closely linked with comments describing the geographical space on the expedition and the comparison of this with the home community. For some the adjustment was more difficult and took longer,

> *I also noticed how still and* ***quiet I was inside****. For at least two weeks I slept with all* ***my windows open****. It took until October for me to stop waking up and thinking how odd it was that I wasn't at ground level! (Elizabeth: 6 months)*

From this comment it appears not only that the adjustments have physical manifestations such as sleeping with the window open, but also that some of the adjustments were related to the calming, perhaps spiritual, aspect of the environment of the expedition which leads to the *still and quiet inside*.

There are at least two aspects to the grieving of the natural environment, the aesthetic aspects and the influence of the natural environment on the overall well–being of the individual, whether this involves geographical space or, quite simply, fresh air. This theme can be seen as providing some aspects of Taylor's (1991) concept of horizons of significance whereby the environment helps individuals in their exploration of themselves, their place in the world and their relationships with other members of the expedition.

Being True to the Self

While it seems that for some there is a degree of grieving various aspects of the expedition experience, on initial return, many seem to go through a period of adjusting their perspective. This appears to be in two primary themes. The first relates to tangible perspectives on objects while the second is more concerned with social adjustments and values. On immediate return some people recount stories of reflections on their belongings and on consumer culture.

> *When I returned from Greenland and had the nice warm bath I had been longing for **I immediately wanted to go back**. I looked at all the junk in my room and wondered what I used to do with it all. After all, everything I needed for the last 6 weeks had fitted in to 65 liters. (Elizabeth: 6 months)*

The second theme was considerably more common in data but broader in content and concerned with an adjustment of perspective on society. For some individuals, it involved adjusting their values and priorities,

> ***Life seemed boring** and full of (although it sounds terrible) young people who had done nothing with their lives and valued Eastenders and alcohol as important in their lives. (Frances: 6 months)*

This comment illustrates how Frances developed a new perspective while away on the expedition, but is cautious to criticize the lives and values of others on return. The time on the expedition had led Frances to reassess her own values in light of others and changed somewhat during the expedition, hence the difficult readjustment. This is in line with findings by Kaplan and Talbot (1983, p. 184) who reported "increased ability to distinguish the significant from the trivial" as one aspect of the post–wilderness experience. Another individual clearly struggled with the adjustment and indicates that the expedition raised some "meaning–of–life" questions,

> *I thought at one point maybe after Greenland **I had actually lost the plot** somewhere along the line — because a lot of **normal teenage things lost importance**. I finally figured **I'm either crazy or the rest of the world is**. Maybe that's a bit extreme, but you get the gist. (Amanda: 12 months)*

Clearly the expedition experience for Amanda was profound and perhaps a pivotal time in terms of personal and spiritual development. The timing of experiences in relation to personal and / or spiritual development is difficult if not impossible to "measure". MacIntyre (1981) would probably explain this adjustment of perspective as a loss of narrative. In this instance, narrative can be considered to be an individual life story and the context within which that story is couched. In the comment above, Amanda is re–scripting her interpretation of her past narrative

and also “writing” her future narrative. In other words she is reconsidering what her life is, and will be, about.

This readjustment phase on return is also connected to authenticity. During the expedition experience individuals are exploring their essence of being and becoming more true to this. Individuals are unlikely to describe the expedition in these terms or be aware that these changes were occurring during, and possibly some time after, the expedition.

It seems that on returning to the home environment many expedition participants and explorers experience a struggle with the complexity of everyday life, the lack of clear purpose and cause–and–effect relationships which are so evident in the expedition environment (physical and social). This has been observed by many, but is particularly well articulated by Spencer Chapman (1953), in his account of *Watkin’s Last Journey*, in 1931,

> Many explorers have written of the intolerable period of reaction between expeditions. In our case we returned to civilization full of enthusiasm and optimism, after a year of glorious life, to find a cynical, damping world, peopled mainly with business men, whose outlook was entirely different from our own. There were other difficulties too. Out in Greenland we had led a life of complete freedom, hunting, and contriving with all the joy of a Robinson Crusoe, and at the same time feeling that our work was of real value. Everything we did had some tangible object: if we shot a seal or seagull, we had it boiled for supper; a short sledge journey might disclose new mountain ranges; a captured insect might be new to science. But in England, after the joy of the first long–looked–forward–to bath and the reunion with old friends, everything tended to fall flat … Personally, I find the greatest difficulty in getting any sleep for the first week after returning to England; after living so long for one object, more or less, life suddenly becomes so terribly complicated. (p. 14–15)

Relationships: The Dialogical Contribution

Friends from the expedition

Many participants reported that they missed people on returning from the expedition but did so in different ways and suggested different reasons for missing them. For some participants this was the only aspect of post–expedition adjustment that they reported,

> *It wasn't really a struggle to adapt after the expedition, but I did **miss the constant company of like–minded people**. (Edward: 12 months)*

For others this was just one aspect of post–expedition adjustment, but one which was particularly difficult,

> *On a friendship level, **the first four weeks back were very difficult**. Friends made in Greenland now seemed miles away and no amount of phone calls seemed to make them any nearer. (David: 6 months)*

This comment is in the same vein as those that were articulated by a majority of participants who expressed difficulties in adjusting to the lack of company.

Many researchers have studied groups with an objective of creating models to articulate various stages of group development. The majority take a similar approach to Tuckman and Jensen (1977) who identified five stages known as forming, storming, norming, performing and adjourning. One way of interpreting the texts above (friends from the expedition) is within this framework. This would suggest the adjourning stage of group process, which is the time when group members acknowledge that they are returning to their home environment, and some miss the deep level of connections and friendships that have been made. This is more difficult for those individuals for whom the group held emotional significance (Priest & Gass, 1997, p. 64). The emotional significance is undoubtedly a contributory factor to the "friends from the expedition" sub–theme, and there are aspects of the individual texts which articulate the adjourning stage of group process. However, the adjourning stage in the Tuckman and Jensen model occurs towards the end of group experiences, as opposed to post–group experiences. Post–expedition adjustment, as the name suggests, refers to the time **post**–expedition. Seen in this context, the adjourning stage of group process is an important aspect of the expedition during which time leaders can prepare participants (and themselves) for the transition to the home environment and the features of post–expedition adjustment, which may accompany this transition.

Friends at home

One aspect of adjustment on return is the adjustment of perspective in relation to friendships, which are from the school and/or home environment,

> *After we all got back from Greenland **it was strange being back with other people**. (Helen: 6 months)*

This *strange* adjustment is described in more detail by others who reported difficulty in relating to their friends when they got back,

> *It took me a while to get to know my school friends again and **I feel a little bit more distant** from them than before except for Jane who was also on the expedition and another friend who applied but failed to get a place to Greenland. (Elizabeth: 6 months)*

> *My friends have gradually become more interested in what I've been doing and two even applied to BSES this year. I remember that it took a while to adjust back to them but things are all back to normal now. (Elizabeth: 18 months)*

It is not surprising that people take time to adjust back to their friends and to reconnect with them back in the home environment. This may be seen as a change or a need to develop further shared experiences and narrative together. Kaplan and Talbot (1983, p. 184) describe this as the seeing of the "superficiality in their friendships". This realization may be an important part of developing deeper relationships.

These comments demonstrate the influence of the expedition in relation to friendships and the home community - which may not be anticipated. The friendship has moved to another depth previously not experienced. It is possible to make a naturalistic generalization (Stake, 1995, p. 20) regarding people experiencing difficulties in relating and adjusting to friendships on return to

the home community. These friendships grow and are helped by the experience rather than "damaged" or changed in ways that are negatively perceived by those involved.

Self–Education / Career

Some people reported difficulties in re–adjusting to the home environment in relation to school or university. For the majority, this involved some difficulties in getting back into the habit of studying again and remaining motivated to study.

> *I was a little **distracted in lessons** remembering things we used to do. I also decided on taking a gap year and so couldn't be bothered with university predictions. It was a little worrying as I am normally over–conscientious. This lack of work continued until just before Christmas and then I thankfully snapped out of it. I worked hard in the holidays. Meeting everyone at the AGM somehow unmotivated me again but I feel that **now I'm doing better than I ever have before**. (Frances: 6 months)*

In this comment it can be seen how Frances appears to have struggled to remain interested in schoolwork. Once interest has been regained, the AGM (also referred to as the reunion) has triggered the distraction and lack of motivation again. Frances offers some leads to explain why she was distracted,

> *I had to go to school 3 days after getting back. Almost immediately I was thrown into a uniform, a routine, small classrooms and lots of people who had no clue what I had experienced. I can honestly say that for the first few days **I totally resented being put back** in England. (Frances: 6 months)*

For Frances it appears to have been difficult to adjust because of the change of routine and the structure that she had to fit into. There are several possible elements to consider, first the behavioral expectations. These include the uniform, the requirement to conform and a routine that perhaps did not acknowledge her individuality and offer opportunity for self-expression. Second, the *small classroom* perhaps served to highlight the large amount of geographical space in the expedition environment. Finally, the lack of understanding of the people around her was a part of the difficulty in adjusting. That no one had a *clue* may have led to a feeling of isolation and loneliness despite the relatively large number of people within that community.

Guy told his past narrative in order to illustrate how important his decision was regarding his future career,

> *I was **considering** degrees in engineering, physics, economics or even sports studies but none of it was very clear. Sport had always played a very large part in my life but in the year up to the expedition, was clearly changing to adventure sports. Climbing had literally taken over, mountain biking, canoeing, camping and skiing/snowboarding coming up strong on the side–lines. My A–level in sports studies was becoming the most interesting and successful by far. But it was whilst in Greenland that **I finally made up my mind**, much to the **disappointment** of my parents who wanted me to follow in my brother's footsteps (a degree in physics and engineering), that **I chose** sports science with outdoor activities at Leeds University (hopefully). (Guy: 6 months)*

This passage illustrates how Guy has taken time on the expedition to contemplate his motivations, realized that some of this was about pleasing his parents as opposed to being true to himself and this changed his university application. This example encapsulates some aspects of the previous themes regarding past narrative and authenticity but clearly involves him taking control of his future narrative. He has decided that he values his contentment and a personally fulfilling career over pleasing his parents and that being true to his ideals is a valuable and worthwhile end, or *telos*, to work towards.

Concluding thoughts

It seems reasonable to conclude that some adjustment post–expedition might be expected for the majority of people. If there were no signs of some type of post–expedition adjustment then one could question if there had been any changes or examination of values during the expedition experience. This study found four main themes regarding post-expedition adjustment with some further sub categories. It also found that some people reported post–expedition adjustment only in certain areas while others reported aspects in a variety of the themes detailed.

This area of research in outdoor experiential education has received little attention and has potential to be a fruitful area of further research. Further research might explore, in no particular sequence, the kind of expectations people might have of what they are going to do (media images, marketing, peer group discussions etc), how long they are doing it for (one day experience … 3 month experience) the kind of environment they are in (ropes courses ... pristine wilderness), the leadership (facilitators agenda, pressure to learn specifics) space and time to sit and think balanced with activity, forms of reflection (for some young people in my study articulating what was happening at the time was close to impossible but sitting on a rock and contemplating looking over the icecap led to important insights that they later managed to articulate). Another thought about the adjustment phase is how much people are prepared for return, how it is framed and to where they are returning (are they returning to the same community or to a different one and thus can enjoy some degree of existential freedom on return). One final area for further discussion and perhaps philosophical inquiry could focus on the roles and responsibilities for support and follow up on return to the home environment and the ethical issues associated with preparation for return.

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Sea Kayak Navigation: Course Plotting, Tidal Currents, Weather and More

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Abstract

A hands-on experiential workshop, participants developed a navigation plan for a sea kayak trip in the San Juan Islands of Washington state. Topics included: Charts, point-to-point navigation, compass bearings, weather-related issues, tide tables and currents. Photographs from previous trips to the Islands stimulated the participants' "sea kayaking genes".

Keywords: sea kayak navigation, tidal currents, nautical charts, tides, trip planning

The Role of Navigation from a Kayak

Sea Kayak Navigation is not so concerned with getting lost as in wilderness hiking. Navigation focuses on avoiding hazardous areas that could threaten a paddler's safety including strong currents, winds, waves or ships. Once underway with a well-planned route, navigation consists of keeping track of where you are along that route. You should always be able to look at a chart and point to where you are.

Nautical Charts and Chart Reading

Charts (p.29) show water depths, shoreline composition, tidal range on shore, rocks, navigation aids (buoys and such), compass directions and shore side buildings, etc visible from the water. One 7-inch hand span = 1 nautical mile at 1:10,000 scale; 4 miles at 1:40,000, this is the smallest scale good for kayak navigation.

The following lists markings on the charts and technical terms.

Water depth (**soundings**) are measured in fathoms, feet or meters (Canada). It may combine fathoms and feet up to 11 fathoms.

Foreshore (uncovers and covers with tide) is **green** on a chart.

Choosing a Landing site – Check the width, composition and slope of the foreshore and beach from the chart. Wide foreshores provide a gentle slope, but will require a long boat haul at low tide. Composition may be mud, sand, stones or rocks.

Blue is shallow water, White is deep water, Yellow (Tan) is land.

Nautical mile = 1.15 miles, 6080 feet, 1852 meters (exactly), 1' of latitude.

Longitude at equator, 1' = 1 nautical mile, at 45 deg latitude, 1' = .66 nautical miles.

Compass Rose – Outer scale is true scale, inner is magnetic and points (1 point = 11.5 deg)

Heading – Direction the boat is pointed

Course – Direction you want to go

Bearing – Direction to some landmark

Aids to Navigation – external to vessel, lights, foghorns, etc.

FL 6sec 27ft 10M – Flashing white light every 6 sec, 27 ft above MHW, visible 10 Miles

Topographic maps provide information not available on charts such as specific terrain contours on land.

Compass Use

Magnetic north in the Pacific North West is about 20 deg east of True north, in New England it is about 20 deg West. True/Magnetic north is equal along west coast of Florida and northward. The difference between true and magnetic north is the **deviation**

To get true readings from magnetic in the NW, **add** the deviation to the compass reading. Unlike hiking compasses, Marine compasses have no adjustments for magnetic variations. **Note**: true bearings are seldom used in kayak navigation, all bearings are given in magnetic readings. A Marine compass is usually mounted on the front of a kayak between 3-6 feet ahead of the cockpit. It must be mounted so that the **Lubber's line** of the compass is parallel to the boat center line.

The Effect of Wind on a Kayak

A 15 knot headwind exerts equivalent pressure to paddling 3.5 knots with no wind. To maintain a 3.5 knot speed, you must paddle twice as hard, or you will slow to approximately 2.5 knots. With a 20 knot headwind, you will slow to approximately 2 knots. A 15 knot tailwind will increase your 3.5 knot speed to approximately 4 knots. A 20 Knot tailwind will increase your speed to approximately 4.5 knots. A 15 knot wind will cause you to drift at approximately 2 knots

Beaufort wind scale

4+ knots – feel the wind on your face

7-10 knots – scattered white caps

11-16 knots – numerous white caps, small waves becoming larger

17-21 knots – many white caps, some spray, moderate waves taking longer form

22-27 knots – whitecaps everywhere, more spray, larger waves forming

Sea Breezes – generally blow from the area of most water to most land. They increase in strength rapidly after mid-morning, peak about 2 hours after mid-day and die off by sunset. Routinely, they build to 20+ knots in some areas. Wind in the morning or night is not from a sea breeze.

In Northern latitudes, fair winds are usually from the NW quadrant, foul winds from the South. A shift of winds from NW to W to SW to S indicates a coming storm. However, along a coast, the afternoon sea breeze will tend to blow toward the land, possibly shifting the wind to the West on the West coast. A lack of sea breeze or dying in the afternoon, may indicate an approaching system, especially if accompanied by a change in cloud type.

Tides and Currents

Tidal bulges are created by the moon circling the earth and the earth rotating around the sun. The suns gravitational pull is considerably less than that of the moon. There are typically two tidal bulges (high tides) per day. The average tidal bulge in mid-ocean is only about 18 inches, however, in specific locations along the shore, it may be up to 40 feet. A lunar or tidal day is 24 hours, 50 minutes long.

Semidiurnal tides – two highs and two lows of similar height, US East coast, most common worldwide.

Diurnal – One high and one low each day, northern Gulf of Mexico, some places in BC, least common.
Mixed – Two highs and two lows, but one is a high-high the other a low-high or low-low and high-low, typical along the north American pacific coast (e.g., the San Juan Islands).

Mean range of tides tends to be larger in inland waters at Northern and Southern Latitudes (Alaska and Chile). Tide tables often do not reflect daylight savings time, so in the summer, you may have to add one hour to the tidal predictions. Tide tables include primary and subordinate stations. Find the subordinate station nearest your location to get the value to add or subtract from the height and time predicted at the primary station. Primary tables have entries for every day of the year. Subordinate stations only include the differences. Spring tides occur at full and new moons, neap tides at ¼ moon. Spring tides are about 20% higher than average, neap tides 20% lower. The largest Spring ranges occur near the solstice (June 21, Dec 21). Tide heights determine how much beach is exposed when landing and launching. This is also important if planning to cross-tidal flats and other shallow waters. Tidal currents are impacted by the tides, but land shapes and water depth impacts the timing and intensity of these tidal flows. Logic would suggest that slack currents correspond to low and high tides. This is true in some cases, but just as often, it is not the case. In some complex waterways, the current may ebb or flood continuously, regardless of the tides. The strongest tidal currents occur at constrictions in inland waterways that lay between large bodies of inland water and the open ocean. Winds, atmospheric pressure and river flows may impact actual tides and currents from predictions.

Tidal currents include a longitudinal and latitudinal point to the nearest minute (one mile), this is not very accurate so written descriptions are much better (.8 miles NW of point Roberts). Tidal current time predictions are usually within 30 minutes, speed within 30%. Most tidal references are at mid-channel and do not represent flows closer to land where kayakers tend to paddle. Don't forget to add one hour for daylight savings in the summer. Back eddies develop in bays behind points protruding into the waterway. Shallow underwater banks can increase current flow and create tidal rips as can points of land jutting out in to the tidal flow. Steady winds blowing for ½ day or longer create surface flows of approx 3 % of the wind speed. A 20-knot wind can create a .6 knot current. When wind blows in the flood (or ebb) direction, it will both strengthen and lengthen the flood flow. Waves move at .7x the wind speed and are about 25x longer than they are steep. If a 10 knot wind generates waves into a 1.5 knot current, the wave shortens to 7x its height. At this steepness, the wave can break.

Crossing Tidal Currents

While navigating a kayak, it is not imperative to know the exact speed of the current, just knowing the direction and its relative speed is usually sufficient. Strong (over 1.5 knots), Moderate (.5 to 1.5 knots) or Weak (less than .5 knots). A GPS can often give you a good idea of actual current as it is affecting your travel speed. Once you benchmark your average cruising speed in various non-current conditions, the difference between your actual GPS speed and your known benchmark speed is a rough estimate of the current. For most intermediate paddlers, the benchmark on flat water with no wind is between 3 and 4 knots.

A crossing current will cause you to drift off course. The amount of drift (called set) is equal to 6 degrees for a current that is 1/10 of your paddling speed. So, if your paddling speed is 3 knots, a .3 knot current will set you 6 degrees, a 1.5 knot current will set you 30 degrees. To

complete the crossing, adjust your course 30 degrees up or down from your pre-calculated course.

Ferrying - Usually the best option to deal with drift is too ferry into the current. The ferry angle in the above scenario with a 1.5-knot current will be 30 degrees into the current. Although it is important to calculate an estimated ferry angle before starting to cross, it is not usually necessary to rely on your calculations once the crossing is initiated. The preferred option is to use two range markers on the shore ahead. Set your ferry angle so that **the two range markers remain lined up** and you will have the perfect ferry angle for the current and paddling speed you are working with. If the current speed changes during the crossing, simply adjust your ferry angle.

As current speed approaches paddling speed, ferrying puts you in the channel for an extended period of time. If the current is equal to the crossing speed, the ferry angle is 60 degrees and the crossing time will double. In this case, you might want to consider reducing the ferry angle to say 30 degrees, allow yourself to drift downstream and then either paddle back up stream in the eddy on the far side or on the departure side. Timing the crossing – the safest time to cross or traverse a channel is at slack water. The time and duration of slack is listed in the NOAA Tidal Current Tables. When traversing downstream, you may choose to go with the flow. Currents of up to 3-4 knots can provide a fun, fast ride as long as the wind is calm or blowing with the current. If the wind is blowing against the current, dangerous standing waves can develop very rapidly while in the middle of a channel.

Marine Radios – are limited to line of sight. Between kayak communication usually is limited to 3-4 miles.

Channel 16 – Emergency calls or Coast guard (switch to 22A if non-emergency)

Channel 9 or 16 – to contact other vessels, then switch to 68, 69, 72, or 78

Channel 13 or 14 – monitor ship traffic, port operations, visibility reports.

Channels 24 to 28 or 84-88 for marine telephone operator, varies across locations.

EPIRBS – Class C, uses Channel 15, limited to line of site, farther than voice, less expensive. Class B, for ocean crossing and isolated water with no VHF. You must register your personal identification code when purchasing.

Rules of the Road.

If you are being overtaken by another vessel (defined as within 67 degrees of your course from the stern), you have the right of way. In this case, it is usually best for you to maintain your course and allow the other vessel to alter his. Otherwise, the only rule is that other vessels do not have the right to run over you. In all cases, you must take whatever action you feel is necessary to avoid a collision.

In **Narrow Channels**, kayaks should stay as close to the right side of the channel as reasonable. You may not impede large vessels in the channel, to impede means to cause them to alter course. When crossing defined **traffic lanes,** do so at right angles to the traffic. Kayaks have no right of way in traffic lanes. If a large ship sees you in a potentially hazardous situation, it will sound one long blast of its horn. Five short blasts indicates imminent danger

Night Rules – Kayaks must carry a bright white light to shine at approaching vessels. It is a good idea to have a lesser white light on your hat or back of life vest so others can see you at all times. Red and Green lights are not legal for kayak use since they may be confused with power-boat running lights. In addition to a bright light, all vessels must carry three coast guard

approved visual distress signals at night. Hand-held flares or aerial flares are preferred by most kayakers. On Inland waters, a strobe light is considered a distress signal.

Navigation Planning.

Float plans should be filed with a friend before every trip: Where you plan to go, when you plan to be back, the number of people in the party, a description of the boats, contingency plans, where you will be parking, car make, model and license. Be sure to call when you return.

Chart preparation before departing is the key to good navigation. Mark the chart with the following items:

Magnetic course bearings

Mileage along the bearings

Estimated time of day for each departure, crossing, arrival, etc., then when paddling, note the actual time on the chart when you reached each point.

Other Interesting Navigational Facts and Tricks.

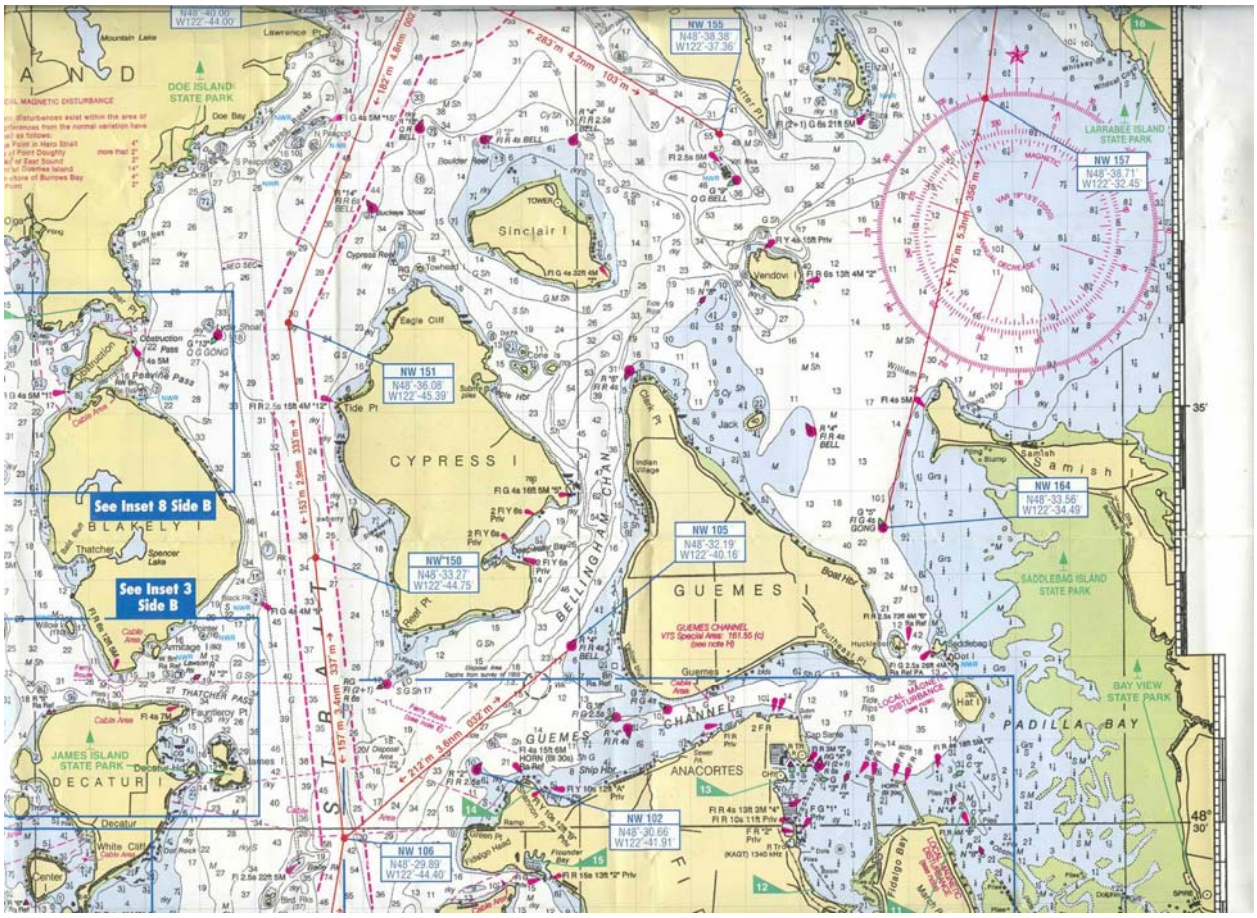
Two or more Lines of Position (LOPs) are required for a position fix. LOPs should be at lease 30 degrees apart. Also, use the closest range to get the highest accuracy. Use a tree and a mountain peak as natural ranges to detect current drift. Use a tree and a moving boat to determine if you are on a collision course with the boat. A 2-foot object (kayaker eye level) can see 1.5 miles to the horizon. 1.5 is the square root of 2. A 100-foot object is visible from 10 miles (the square root of 100 is 10).

Winking is a trick used to figure your distance off of the shore. Hold your finger at arms-length, calculate the distance between objects for your left eye, then right eye. Multiply this distance by 10 for distance off. For example, if the actual distance (from a chart) between winked object is 1.5 miles, your distance off shore is 15 miles. Waves break when water depth diminishes o **1.3 times** the wave height. To interpolate current speeds between slack and peak, divide the time into three stages, during the first step after slack, speed will increase to 50%, during the second step to 90%, during the third step to 100%. Tidal current in shallow water along a shore-line is slower than deep water mid-channel due to the frictional drag of the bottom slowing the water.

When working with Tidal Current Tables, a rule of thumb for calculating the duration of slack below .5 knots is to divide the maximum current speed into 60. For example, if max ebb will be 3 knots and max flood will be 4 knots. You will have a slack window of 60/3 + 60/4 = 35 minutes. The problem is that current tables only provide an estimate of the exact time of slack. These times are often off by +/-30 minutes, so it is always a good idea to arrive 30-60 minutes early and sample the water to determine the actual best time to cross or traverse the channel.

Fog – Radiation fog comes with no wind and burn off as the day progresses. Sea fog comes with heavy wind and may last for several days. Sea fog is especially dangerous because is may move in rapidly and unexpectedly. In Fog, ships will sound two long blasts, one second apart, every two minutes. If you hear a horn, it is recommended to set your stop watch and point toward the sound with all boats lined up single file. You can also cup your hands over your ears. This puts you in the best position to detect the location of the vessel on the next blast. If after two minutes, you do not hear another blast, the vessel is headed away from you.

Personal whistles may be used to keep paddlers together in a fog.



Suggested readings

Navigation

Fundamentals of Kayak Navigation, 3rd ed By David Burch
Sea Kayak Navigation Simplified By Lee Moyer
Sea Kayak Navigation By Franco Ferrero (UK)
Current Atlas: Juan de Fuca Strait to Strait of Georgia (A map of hourly tidal currents to be used in conjunction with the Washburne Tables)
The Washburne Tables (Annual Supplement to Accompany Current Atlas)
By Randel Washburne
U.S. Coastal Pilot: Pacific Coast
NOAA (Detailed weather and navigational information on Pacific coastal waters)
Sailing Directions, British Columbia Coast
Canada Department of Fisheries and Oceans, Scientific Information Publications
(Same as U.S. Coastal Pilot, for Canadian waters)
Nav-Aid for Kayakers (A great item for working with charts on the deck of your kayak.
Includes a little booklet on using the nav-aid for kayak navigation).
To order send $8 to: Chuck Sutherland, 2210 Finland Rd., Green Lane, PA 18054

Marine Weather
Northwest Marine Weather: From the Columbia River to Cape Scott By Jeff Renner

Introductory Kayaking
Sea Kayaking: A Manual for Long-Distance Touring, 5th Ed. By John Dowd
The Coastal Kayaker's Manual, 3rd ed: The Complete Guide to Skills, Gear, and Sea Sense
By Randel Washburne
Complete Book of Sea Kayaking, 5th ed. By Derek Hutchinson
Basic Book of Sea Kayaking By Derek Hutchinson
Sea Kayaker's Savvy Paddler (Interesting tips for setting up your kayak) By Doug Alderson

Safety and Skills
Sea Kayaking: Safety and Rescue By John Lull
Sea Kayaker's Handbook of Safety and Rescue By Doug Alderson and Michael Pardy
Sea Kayak Rescue By Roger Schumann and Jan Shriner
Sea Kayaker's Deep Trouble By Matt Broze and George Gronseth
The Bombproof Roll and Beyond By Paul Dutky
Eskimo Rolling By Derek Hutchinson
Nigel Foster's Surf Kayaking By Nigel Foster

Sea Kayak Trip Narratives
(Note: Each of these is a special gem, well worth your time)
Homelands: Kayaking the Inside Passage By Byron Ricks
Arctic Crossing By Jonathan Waterman
Southern Exposure: A Solo Sea Kayaking Journey Around New Zealand's South Island
By Chris Duff
On Celtic Tides: One Man's Journey Around Ireland by Sea Kayak By Chris Duff
The Hidden Coast By Joel W. Rogers
Outside Adventure Travel: Sea Kayaking (Outside Books) By Jonathan Hanson
Kayaking the Vermilion Sea: Eight Hundred Miles Down the Baja By Jonathan Waterman
River: One Man's Journey Down the Colorado, Source to Sea By Colin Fletcher
Passage to Juneau: A sea and Its Meanings (A sailors tale, but worth your time)
By Jonathan Raban

Sea Kayak Travel Guides
The Cascadia Marine Trail Guidebook
Washington Water Trails Association (You must be a WWTA member to get this one)
Kayak Routes of the Pacific Northwest Coast Edited by Peter McGee
Kayaking Puget Sound, the San Juans and Gulf Islands: 50 Trips on the Northwest's Inland
Waters, 2nd Ed. By Randel Washburne
The San Juan Islands: Afoot and Afloat (Not kayaker specific, but an excellent reference)
By Marge and Ted Mueller
Sea Kayak Around Vancouver Island By Doug Alderson
Island Paddling: A Paddler's Guide to the Gulf Islands and Barkley Sound
By Mary Ann Snowden
Guide to Sea Kayaking in Southeast Alaska: The Best Day Trips and Tours from Misty Fjords

to Glacier Bay By James Howard
Kayaking the Inside Passage: A paddling Guide from Olympia, Washington to Muir Glacier, Alaska By Robert H. Miller
Sea Kayaking in Baja By Andromeda Romano-Lax
River Guide to Canyonlands National Park and Vicinity (the book for paddling the Green and Colorado Rivers through Canyonlands) By Michael Kelsey
Boater's Guide to Lake Powell By Michael Kelsey

Miscellaneous

Oceanography and Seamanship (A real monster, but a true classic) By William G. Van Dorn
Oceanography of the British Columbia Coast By Richard Thomson
Waves & Beaches: The Dynamics of the Ocean Surface By Willard Bascom
Baidarka: The Kayak By George Dyson
The Starship and the Canoe By Kenneth Brower

Web Sites

NOAA Tide Charts http://co-ops.nos.noaa.gov/tide_pred.html
NOAA Tidal Current Tables http://140.90.78.170/currpred.html
U.S. Coastal Marine Forecasts http://www.nws.noaa.gov/om/marine/zone/west/sewmz.htm
Sea Kayaker Magazine Online http://www.seakayakermag.com/
American Canoe Association http://www.acanet.org/
British Canoe Union North America http://www.bcuna.com/
Rocky Mountain Sea Kayak Club http://www.rmskc.org/
Kayak Expert Center –Atlantic Kayak Tours http://www.atlantickayaktours.com/index.html
A lot of excellent kayak information online
Discovery Sea Kayaks – San Juan Island http://www.discoveryseakayak.com/index.html
My Favorite Kayak tour company, Dick and Allan are great people!
Anacortes Kayak Tours http://www.anacorteskayaktours.com/
San Juan Kayak Expeditions http://www.sanjuankayak.com/
Lopez Kayaks in the San Juan Islands http://www.sanjuankayak.com/

Between Eustress and Distress: Walking the Line in Wilderness Education

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Abstract

Stress is inherent in wilderness education settings. Factors that may contribute to stress and signs of stress are discussed. Factors that suggest ethical ways of addressing and countering stress are also addressed. Useful leadership tools are suggested using Simon Priests' risk/competence chart, using emotional intelligence and transformational leadership. Tools are recommended to counter stress.

Key Words: Eustress, Distress, Adventure Education Programming, Ethics

Stress is inherent in wilderness education settings, both positive (eustress) and negative (distress). In order to maximize student learning, it is imperative to recognize stress, assess its level, and have tools for ethically addressing it. This article will discuss recognizing stress, ethical considerations, and adopting stress management as a teachable moment.

An example of stress in a wilderness setting is found in the following story:

The individuals in this adventure include Lightning, Sunset and six students. Lightning is the head-staff and has been working in wilderness for about 1 year. Sunset is Lightning's co-staff and is new to working in a wilderness setting. They are in charge of a group of six students in the desert of southern Utah. On one particular day they set off for what ended up being one of the longest days in Sunsets life. Initially the hike was fabulous, soon the sun came out and it was unbearable to hike, so they took a break to wait for the heat to subside. After a break that seemed too long the air cooled, and they set off again.

While hiking there was a feeling of complete serenity experienced by Sunset. It seemed as though they were all in a trance, enjoying the beauty of nature and the serenity of their own thoughts. The wonderful smell of Juniper trees, desert flowers and sage-brush filled the air, but was soon drowned out by a disgusting smell. As they rounded a corner of Junipers they were surprised to see the water source to be a trough of swamp-like water. The smell got stronger and stronger the closer they got to the water, which ended up being the source of the nauseating smell. Lightning decided that he would try it, as he took a sip he gagged. He let them know there was another water source they could hike to but that they would need to fill up their containers and drink the water until the next source was found.

At this point Sunset was feeling very frustrated with Lightning, not only was he not communicating with her, but she felt like she was a student in the program rather than staff. She assumed he called into base and let them know what was going on, since he was on the radio and ignoring the group for the majority of the time. They soon set off again for the next source of water. This time the hike was not so nice. The students made every complaint possible, ("I'm tired", "I'm hungry", "my feet hurt", "are we there yet", "how much farther" etc.). If there was something to complain about they did.

The sun began to set and soon they were hiking in the moonlight. Sunset began to feel she was walking in circles. Out of frustration she finally went to Lightning and asked what was going on. Lightning let her know that they were in the area where the water should be but that he couldn't find it. "Great!" thought Sunset, she now was taking all her frustrations out on Lightning and taking no thought of how the students were doing. Soon they figured out that the water source was dry. Lightning called into base and let them know of the situation. A couple of hours later base came to the rescue. Fortunately because of electrolyte tablets and water purification drops there was no life- threatening problems.

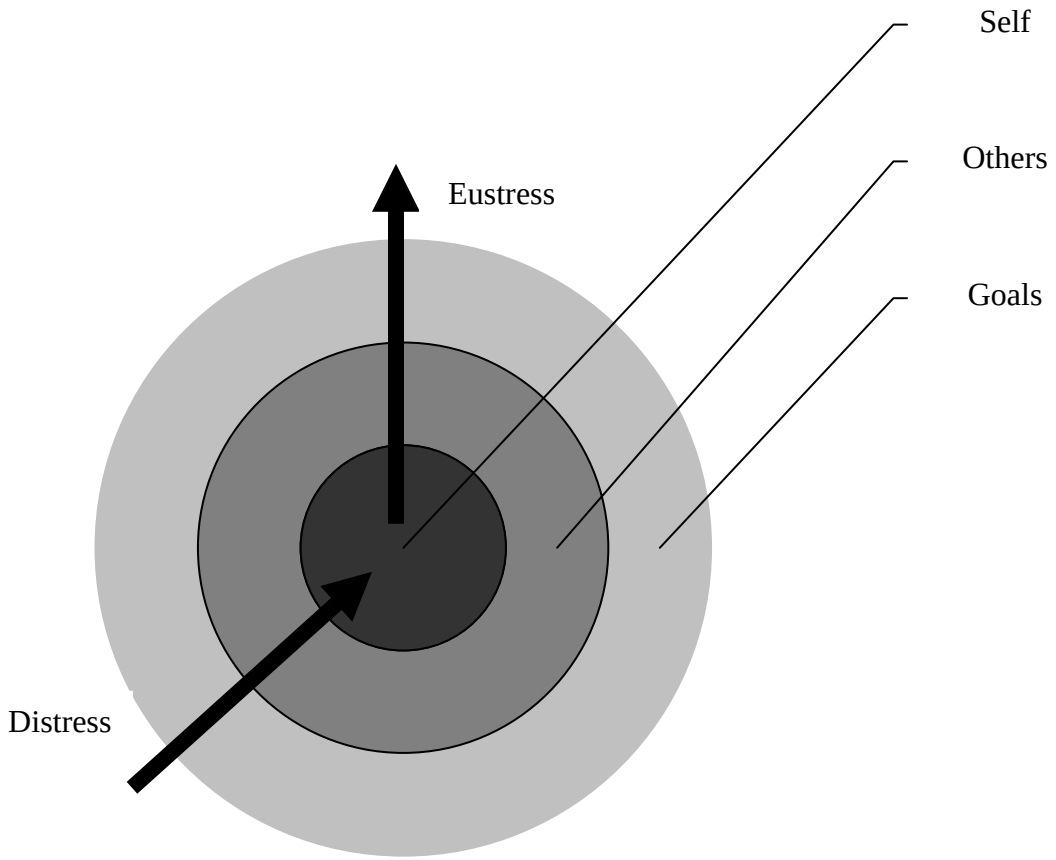
This is a true story - I was Sunset. Many can relate to this situation, the frustrations of little or no communication between co-workers, and feeling so stressed out by a situation that thoughts become unstable and selfish. Years later, looking back at the situation after gaining more experience I am able to recognize the role that stress played in the situation. I have realized that my partner was probably stressed and didn't know how to communicate. Perhaps he was totally oblivious to my feelings. In addition, I have realized that if I was frustrated about not knowing what was going on, then perhaps the students who never knew what was going on probably felt like that often. I have also recognized that my inexperience led me to be thinking more of myself in that stressful situation rather than how I could distract the students and get their thoughts on a positive outlet or use the situation as a teachable moment.

As mentioned earlier it is important to know how to recognize stress. In addition it is important to recognize that there is good stress as well as bad stress. Operationally speaking eustress is described as anything viewed as desirable or pleasurable, yet at the same time forces one into changing (adapting) in some way (McGuire, 2001). The experiential definition could be a state of flow, or when skill equals the challenge plus a little more, but this definition is debatable. One suggestion is that one may experience stress without experiencing flow.

The stress target diagram, (figure, 1), explains what happens when one is experiencing distress verses eustress. When experiencing distress one tends to lose focus on goals and others and focuses almost entirely on self instead. When experiencing eustress the goal and other factors are in focus.

An example of eustress from the above experience is the hike before the water source. Sunset was in a state of flow and truly enjoying the experience, until the water shortage and lack of communication led her into distress. Distress is operationally defined as undesirable and unpleasant, a force that causes worry, anxiety, and a feeling that one has little control, (McGuire, 2001). The experiential definition could be, when level of risk exceeds competence in a manner that causes the individual/group to lose sight of a goal, focus is then on personal discomfort, homeostasis is interrupted which may lead to disaster. This too, may be debatable.

Figure 1: Stress Target Diagram



Level of awareness = where
Focus will be centered

How can one recognize stress when it arises? It is important to be aware of the factors that may cause or contribute to stress so that you will be better prepared to deal with the situation should it arise, and it will. Suggestions of what was contributing to the stress in Sunsets experience included: Inexperience, lack of communication and fear of unknown. Other Factors included:

1. Weather: The desert heat caused mild heat stress for the group.
2. Environment: Being in the desert there is a lot of exposure to the sun, it was unfamiliar for most of the students, and it was not a voluntary situation (students were sent here because they had problems at home).
3. Activity: The students were backpacking many miles each day. Students had to make their own packs out of tarps until they reached an appropriate level, which was uncomfortable and annoying to most the students.
4. Student competence: Most students were not in good physical health, some were coming off drugs, and unfit. There were varying levels of mental competence.

In addition to knowing factors that may contribute to stress it is important to know signs of stress. Some of these include physical; facial tics, cold sweaty hands, tense, headaches, and backaches. Emotional factors include; anxiety, fear, irritability, hopelessness, helplessness, impatience, nervousness, and depression. Behavioral factors include; Change in appetite, sleep disturbance, forgetfulness, angry outbursts, decline in productivity, indecisiveness, and loss of concentration (NASA, 2005).

Being educated and aware of these strains can help you to recognize the stress or potential for distress. In order to address these issues to the students we need to know how to ethically address the situation. According to Goldenberg (2001), the ethical guidelines in adventure education include keeping the physical and mental safety of the students in check. So where do we draw these lines of physical and mental safety? One might say take the risk out of the program, for students' safety and the student will still experience the adventure. For example: Looking back at my story, if the program implemented regular water drops to ensure water always, that risk would have been taken out, yet the students could still enjoy trekking in the wilderness without the worry of dehydration.

On the other hand, another might say if you take that risk out the adventure is gone. An adventure is "an activity of uncertain outcome characterized by risk and consequence" (Wurdinger, 1999). Adventures are "More than perceived competence, they also involve constructs such as fear, anxiety, uncertainty, danger, challenge and perceived risk" (Priest, 1992). If our desire is to have our students experience adventure there is going to be some risk, otherwise the adventure would not be that at all, rather a vacation in which the participants had a safe, fun time, which is ok if that is your goal according to Wurdinger (1999). As outdoor adventure educators there is the assumption that merely having a fun vacation in the outdoors is not the goal. The goal seems rather to teach our students to test the waters of capability, learn the potential, the thrill and joy adventure can bring. Still in doing this, the students' safety must be kept in mind.

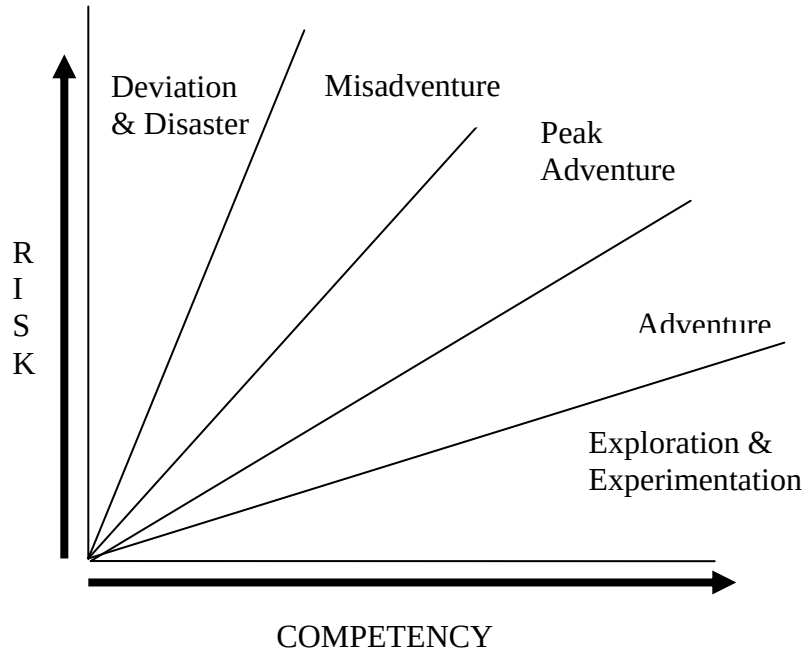
Addressing this ethical dilemma the following is proposed: one basic model designed by Simon Priest combined with emotional intelligence & transformational leadership concepts. Through this we can decrease the stress and increase the adventure that students experience in the outdoors. Through Priests' risk/competency chart (figure 2), outdoor leaders can better help students get the adventure they need and still maintain a safe environment. This is done by assessing the competence level in the students versus the level of risk associated with the activity. Only through this can we then begin to understand where to draw that ethical line. Next, the question that must be asked is: "Have the students been educated enough to be able to make informed decisions themselves?" Such as, "How much can I afford to risk? Or more poignantly, how much can I afford to lose?" (Wurdinger, 1999). According to Priest, it is the perception of risk and competence of the individual that will determine the outcome of an individual's recreation experience. Being educated and aware enough of your students, outdoor leaders will be able to assess their level of competency and adapt the risk involved.

Back to the story, looking at the competence of the students' ability to go without water- there is none, so the leaders need to make sure there are sources of water, if by chance a source of water is dry, have the means necessary to bring in water.

Problems arise when you have a student who is perhaps overly confident and hasn't the skills to meet their visions of grandeur, in addition there those who are afraid and this also poses a threat. In this case it could be wise to allow the student to attempt something beyond her abilities with your supervision and learn through experience that it is wise not to be so risky. For

example: You have a student with the capability of climbing a 5.9 and 5.10 on a good day, your student thinks she is the queen of rock climbing, so you let her try that 5.11 that she has been ranting about, with you belaying. This way, she can be humbled and hopefully will be more realistic about her capabilities. The same thing can be applied to a student who is the opposite only switching the process to meet the individuals' needs.

Figure 2: Risk/Competency Chart



In addition to knowing about perception of risk and the students risk boundaries, it is important to teach the students engagement. It has been shown that when engaged, individuals can be more focused, and less affected by stress and negativities that may arise, (Britt, 2003). As leaders we can teach our students about engagement.

Through the combination of emotional intelligence and transformational leadership leaders can gain the trust of their students, teach them engagement, motivate and inspire them while maintaining the safety of their students.

Definitions

Emotional Intelligence: Have the ability to monitor one's own and others' emotions, be able to differentiate, and use this information to guide ones thinking and actions.

Transformational Leadership: A leader who arouses awareness, confidence and interest in the group, inspires and motivates to achieve higher goals. (Hayashi, 2005).

As leaders step out of their comfort zones and develop both of these and integrate them together, they will be better equipped to lead adventure programs. Outdoor leaders will be able to better help their students reach their potentials, gain their trust, motivate and inspire, and they will be able to do this ethically.

What if you can't develop both attributes? There are certain capabilities everyone has but some just don't have high emotional intelligence. It is hard for some to be a transformational leader as well. It is the suggestion of the author that we can make some of our greatest weaknesses our greatest strengths. We just have to step out of our comfort zones. It is through experience and desire for improvement as leaders that we can develop these attributes. This is what we are trying to teach our students - that they have the ability to achieve what may seem impossible. At the same time realistically speaking it may take the collaboration of two leaders, who together have the desired attributes. The suggestion here is that it is ideal, and even possible for each leader to develop both high emotional intelligence and strong transformational leadership skills.

There is an activity that presents an ethical dilemma for leaders. This activity is called nose to nose. During this activity two individuals step out of their comfort zones by stepping toward each other until their noses touch. Sometimes in wilderness settings it can be hard to know where to draw the line for students. Through the activity it was found that there are varying levels of comfort, perceptions of what is stressful and what is not, so it is important to be able to recognize and assess these levels.

It is important for leaders to be prepared to handle stress among their students. Leaders need to remember that just because the situation might not seem stressful to them, it does not mean it isn't stressful for another. Here are a few ways leaders can counter stress when it arises in their students:

1. Assess the needs of the students. Perhaps one student is causing the group stress, or vise versa. Perhaps one student is becoming a scapegoat for the groups' stress.
2. Keep students informed. Educate students on what they will experience on particular activities or what the agenda of the day is. Sometimes just knowing what to expect is enough to calm a student.
3. Activities. One person commented "one time while working in the wilderness we were experiencing a lot of complaining and frustrations because of a hike, we took a break, played a game of Frisbee tag and then began the hike again, everybody's spirits were high and the rest of the hike was great."
4. Use a stressful moment as a teachable moment. Teach them about what they are experiencing, ask them how they could be better prepared if happened again, ask them what they learned from experience etc.

This article has discussed what stress is, how to recognize stress, ethical ways of addressing stress and ways to counter stress. Through this, leaders can avoid situations like the one Sunset and Lightning experienced; though the lack of water was unavoidable at the time, the way the staff handled the situation could have changed the experience from a negative one to that of a more positive one. As leaders are educated, experienced and aware, they will be able to help their students succeed and avoid distressful situations.

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Cross-Cultural Wilderness Education Experiences
- Collaborative Programs between US and Japanese Universities -

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Aiko Yoshino, Indiana University
Aya Hayashi, Indiana University

Introduction

As outdoor educators, we are always looking for ways to refine our curricula, to find new audiences and to make a difference on behalf of the planet. In 1999 I was explaining the history of WEA to an attentive audience in Tokyo, Japan. That night Paul Petzoldt passed away. In a sense, that was the beginning of a journey that has been thrilling, challenging and rewarding.

During the summer of 2003 seven Japanese students and their professor arrived in Driggs, Idaho to participate in a professional short course sponsored by Oklahoma State University, a WEA affiliate. The 13-day program was designed with all the necessary leadership components but an equally important aspect was to provide all involved with an intense cross-cultural experience. Language, customs and food choices aside, the instructor team of three Americans and two Japanese insisted that if a positive learning culture could be developed then everything else would fall into place.

One year later, three American and nine Japanese students left Nara, Japan for the Japan Alps near Nagano. In an attempt to learn "the Japanese way" a very ambitious route was planned for a short but intense experience. Emphasis was on physical and psychological fitness, learning minimum impact techniques and several principles from the WEA curriculum. There were six staff: five Japanese and one American "yoda" (old, *but* respected person!).

Background

The idea for a combined Japanese/American course turned into a reality as a result of a friendship and shared passion for the outdoors among several Americans and Japanese. After several visits at conferences, workshops, and courses, the idea grew and finally the first expedition was offered in the Teton Range by Oklahoma State University as a Professional-Short Course of Wilderness Education Association (WEA). The second course in Japan was hosted by a professor and students from Nara University of Education and sponsored by Oklahoma State University as a Wilderness Steward Program of WEA.

The mission of the WEA is to promote the professionalism of outdoor leadership and to thereby improve the safety of outdoor trips and to enhance the conservation of the wild outdoors. The WEA places emphasis on developing leadership, teaching, judgment and decision-making skills above and beyond the mastery of technical skills that characterize many other outdoor leadership programs. In addition the WEA curriculum incorporates principles of wilderness ethics, land stewardship, effective group dynamics, and technical travel skills sufficient to move a group through the wilderness safely, enjoyable, and with minimal environmental and social impact.

Cultural Detective™

The idea of the Cultural Detective™ method (Saphiere & Murata, 2004) was introduced to

the attendees at the WEA conference in order to identify and explore different cultural values between the U.S. and Japan. Within the cross-cultural wilderness experience there were language barriers and conflicts related to deep seated cultural differences are almost unavoidable regardless of how serious or little the issue is. The Cultural Detective activity could be a useful activity for future programs because it is designed as a cultural-specific training tool in situation- and values-based conditions.

The Cultural Detective activity helps develop intercultural competence in both ourselves and the group. For example, "Values Wheels" are used in the activity to provide a lens to understand how each different culture has hidden or unconscious values and believes. To elaborate the benefit of this activity, one of our stories will be explained here. On the morning of the 7th day WEA program in the Japan Alps, American students and Japanese students brought up different ideas regarding the basic approach to traveling in the mountains. While, the American students suggested re-forming groups in order to achieve individual goals and safety, Japanese students suggested keeping the same group and resetting the goal. It seems like a very simple event, but the rationales for their decision making reveal the value differences between the two cultures. The decision, reforming the group, might be based on the value of "self-reliance" and individualistic views, which was explained in the value wheels as a typical American value. On the other hand, another decision, keeping the same group although compromising the individual goals, might be based on the value of "ningen-kankei" (interpersonal relationship) and collectivistic views, which was also explained in the value wheels as a typical Japanese value. This Cultural Detective activity helps to identify the different culture values but is also designed for providing a tool to build a bridge between groups or individuals coming from different cultural background.

Lessons Learned from the Experiences

Chris Cashel- I learned (confirmed) that a shared interest and a love of nature can supercede any problems encountered between people. Every one of the participants and instructors learned more about themselves and their ability to handle ambiguous, confusing and frustrating situations. Everyone also learned that with some effort any situation could be handled! I learned how much I love to teach in the outdoors no matter where it is. I learned that I know a lot about handling difficult groups. I learned to trust and depend on fellow instructors in ways that I would have found difficult even ten years ago. I learned that even a teacher learns every day from students. I learned that I am near the end of my career in outdoor leadership and I could not be more proud of the legacy that I leave for others to continue. Cross cultural programs fit into this category. Taito Okamura, Aya Hayashi and Aiko Yoshino have the abilities and the energy to continue the work in the future. Japanese and American students who learn from any of these people are in very capable hands. I learned about how lucky I have been to work with instructors who are willing to embrace my vision. Scott Jordan and Mick Daniel used truly experiential methods to communicate and teach in entertaining and effective ways. It was a joy to be with them over three years of preparation and implementation of these courses. I appreciate and value the friendships that I have developed in Japan and in the American outdoor community. They carry me through each day. I learned that the WEA curriculum is applicable across cultures and even if we view nature from different perspectives, the essence of what we know and believe is shared. It gives me hope for the future of this planet.

Aiko Yoshino - we all know that challenge is an opportunity to grow. I learned that

cultural differences are one of the challenging experiences that both students as well as instructors can learn from. Students felt not only a great deal of excitement but also tremendous amount of stress from the unusual experience. The cultural gaps they found were (besides food), language, weather, geographical environment, other cultural beliefs and their own values. One of the factors was not the main stressor, but combined and sometimes hidden cultural gaps were the challenge as well as the richness of the cross-cultural experiences. I believe this provided us opportunities to learn about others' values, and more importantly values about one-self, which is rarely reflected in own culture. I learned that instructors are able to facilitate learning opportunities by being sensitive, strategic, thoughtful, and creative. It seems just the same as other non cross-cultural programs, but I found that it requires extra cultural sensitivity and common passion towards what we do.

Important themes I found through instructing cross-cultural programs are at least three: 1) **Frustration is okay.** It is important to let students and co-instructors know that difficulties and frustration are very normal and it is okay because we all live in the world of assumptions - that have been created on their own. 2) **Break down our assumptions.** It is also important to be aware that we tend to believe our "common sense" determines the "right" or the "only" way to behave, and assume that others share this belief. But, that is not true. I learned that we, as instructors, have to know that "common sense" is only common to people sharing the same culture. Thus, be sensitive, listening, observing, and discussing what other cultural groups use to determine what they see, how they behave, and how they make decisions. 3) **Share a common passion.** With the feeling of frustration and realizing malfunctions of our assumptions, what will drive us to be together? Sharing common passion toward what we do is essential. I learned that without emphasizing our common passion and love of nature within the group and between the co-instructors, the sense of togetherness would hardly happen.

Aya Hayashi - my challenge as an instructor was to work out how to maximize students' learning using the unique cross-cultural environments. In my experience living in a foreign country, being in a situation needing to figure out things by myself without help has been one of my valuable learning opportunities. I know I missed and misunderstood a lot of information in my early days in the US due to the language problem. However, those experiences really made me look at both myself as well as others and channel things toward specific goals. Although I had responsibility to deliver the accurate WEA curriculum as an instructor as well as a translator, I did not want to take those learning opportunities from students by giving help more than was essential. How much and how to help students was always my dilemma during the programs. Support from other instructors and a strong will for successful programs shared with them helped us to flexibly find appropriate ways during the programs.

One of most valuable achievements we made in the programs was probably building our own community beyond the two different cultures. It was our goal for the course. By pursuing the goal with all group members, everyone learned about self, what each believes and values, what each needs to work on to achieve personal and group goals, how to assess self, and so on. Also, we learned how to communicate with other. The strong desire to understand each other made us develop the skills to really pay attention to each individual and to communicate with others in ways others could understand. We learned that continuous efforts toward a goal by helping each other could make a difficult situation a wonderful learning opportunity. We all learned how much the wilderness environments that we love helped our learning. I see a big possibility to apply this learning anywhere -especially in a diverse society.

I really appreciate those opportunities and would like to thank all people who helped both programs. Without a lot of help and support, both programs would not have happened. Both experiences meant a lot to me personally and professionally.

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Wilderness Education Association History, My Version

Bob Christie, Founder
Jack Drury, Leading Edge
Mark Wagstaff, Radford University

Abstract

A look at why and how the WUEA (now WEA) was formed and the people involved in its evolution. My paper is primarily a personal perspective. Jack and Mark were major players in the development.

The Wilderness Use Education Association, now the Wilderness Education Association was formed to certify expedition leaders. The founders were Paul Petzoldt, Chuck Gregory, Frank Lupton and Robert Christie.

A series of events occurred prior to October 1977 when the founders met at Macomb, Illinois to form the WUEA. Additional events occurred prior to the first course, which was conducted by Paul Petzoldt from his place in Alta, Wyoming. My contribution to this presentation is to tell some of the behind the scenes events that occurred during this period, and on to the 1980s. Jack Drury, who was on the first course and has served the WEA over many years, and Mark Wagstaff, who was Executive Director when the WEA was in Saranac Lake, New York will highlight events during those years.

Pre-WEA years

During the 1960s and 1970s there was an explosion of interest and groups going into the back-country. Most of these groups had poor or no leadership and an alarming number of accidents and deaths occurred. The situation was growing so bad that insurance rates started to rise rapidly and land managers such as the US Forest Service and Park Service were getting more restrictive for groups requesting permits to use the back country. Outward Bound (Petzoldt was the first chief instructor) and the National Outdoor Leadership School (started by Petzoldt) had an abundance of publicity that help fuel the interest in back country camping and tripping, especially in the mountains. Outdoor leaders recognized that something must be done about leadership issues but there was no agreement about the best strategies for correcting the situation.

My involvement

My involvement in helping develop a national certification program accelerated after meeting Paul Petzoldt and an outdoor conference at the Lorado Taft Field Campus of Northern Illinois university in the summer of 1975. Petzoldt, as a speaker, said that the leadership programs for the country could not be done by universities but were the domain of NOLS or other (unspecified) programs. They were the only groups capable of doing the leadership for high adventure activities. I took a very strong stance against that line of thinking at that meeting and stated that colleges and universities must be in the mix, and that where leadership was not qualified, there must be a search for appropriate leaders and development of appropriate programs.

After returning to Bemidji, Minnesota I started work on a wilderness leadership certification program. I worked with several managers of outdoor centers and camps that did

tripping. Sandy Bridges, from the BSA Northern Tier High Adventure Base in Ely, Minnesota, was a big help in this development. I presented the proposed program at an outdoor leadership conference at Isabella, Minnesota. In February 1976, Paul was present at that session and met with me after the meeting to discuss some of the issues. He stayed in Minnesota for several days while we discussed issues and programs, and talked with some of the managers that were providing input into the process. It was at this time that we started working together on the problem. It was also just before he was forced out of NOLS.

In the spring of 1976 Paul met Frank Lupton at a conference in Indiana. Frank related his plans for travel in his ECO program and Paul invited him to Wyoming to do a month of back-country education. The exposure to the students in the Western Illinois ECO program proved to be extremely significant in the formation of the WUEA. It was Paul's first exposure to working with an intact university class. It was also in the fall of 1976 that I move to Bradford Woods, Indiana University.

At various meetings of outdoor leaders we discussed the merits of a certification organization but could not come to any agreements for the next year. Paul traveled a lot and generated interest, but no agreements. The situation came to a head during the fall of 1977 with Frank's ECO group working with Paul in Wyoming. After that experience, Paul called me while Frank was returning to Macomb. Paul had finally seen the merits of working with Universities and conceded that a certification should work with a goal of program delivery within universities and colleges as part of professional training. That was a deal maker for me, and I believe also for Frank.

After Frank's return to campus a series of telephone calls ensued, and the organization meeting was set in October. Chuck Gregory was invited because of work with Paul and Frank. It was our first meeting. We decided to "bite the bullet" and the WUEA came into existence. Paul would travel and promote the new organization and set up a course for 1978 at his cabin in Alta, Wyoming. It ended up as ten days working on the cabin and then the course, which was 35 days in the field.

When the formation of WUEA was announced it was controversial. Outward Bound and NOLS were very "unreceptive". NOLS even added an insert into its literature announcing a new program which was identical to the WUEA , even down to the levels of instructor, leader and user categories. A few telephone calls were made and they were persuaded to drop the program.

To gain broad recognition and credibility an advisory board was established. We enlisted the best people in the related fields to join and their names were listed on our stationary. Paul was responsible for operations, booking and was the chief instructor. The organizers worked with him to clarify the operations of the organization but Paul carried the load, including the financial aspects. He traveled and spoke to groups in many colleges and universities. The difficulty for the organization was that Paul was doing everything in operations, yet we had to become a national organization. We did not become incorporated until January 1979, and then had an official board of trustees.

It would take several years to get enough instructors to run programs as affiliates. In the mean time Paul brought in a couple of instructors from NOLS to work with him and provide opportunities for potential instructors to assist with courses and become certified. WUEA conducted courses into the eighties until it started to compete with affiliate institutions for students. In 1980 the name was changed to Wilderness Education Association. During the early days there were a considerable number of discussions on the development of policies and procedures for all aspects of operations. It was essential to develop a consistent approach to

certification for all courses. Some of the discussions were very "hot" as we worked out the details. No one could be outside the lines that were set, including Paul. It was also agreed by the board that Paul would be more valuable on the board and that we should hire a new executive director. That became very contentious to Paul but he came around to the point that we were making in time. He quit several times, but changed his mind within a very short time. But through all of this there is no question that Paul Petzoldt set the standard for instructors to follow and was the major strength of the organization.

Major financial problems occurred with the change from WEA conducting courses to affiliates conducting courses. Funding was primarily through memberships. In the mid 1980s after Sandy Braun resigned as Executive Director the WEA nearly died. Frank Lupton took over as acting director and moved the office to Macomb. In 1987 Jack Drury obtained a grant that enabled WEA to move to Saranac Lake, New York and hire an executive director. Jack will relate that aspect of the history.

Jack's Notes

I first met Paul Petzoldt when I was a student at the University of Wyoming in 1968. He was taking some public speaking courses and decided to live on campus and see what the radical students of the sixties were all worked up about. He failed to realize that there were only about five radical students at the University of Wyoming in 1968 and I wasn't one of them. I remember being in awe of the man with the big white eyebrows in the cafeteria. I'm not sure how I knew who he was but I did. I never had the nerve to go up and talk to him but I heard him give a presentation about the "new" school he had started called the National Outdoor Leadership School. One comment struck me as particularly valuable. When an audience member commented that when he thought of camping he thought of being cold, wet, getting blistered and generally being miserable, Paul responded, "When someone says they are uncomfortable in the wilderness we say that's because they aren't doing it right." In 1970 I took my first NOLS course and got to spend about four days with Paul teaching us. In 1971 I climbed Mt. McKinley with NOLS and Paul spent a few days with us then as well and in 1974 I took the NOLS Instructors' Course the summer before Paul was fired from NOLS. Each experience reinforced the belief that I had figured out what I wanted to do with my life. I also realized I had found a mentor for my career in wilderness education.

In 1977 I was serving as a regional representative to the New York State Outdoor Education Association and was attending a meeting in Sherburne, NY. One of the board members stated that they had received a letter from a Chuck Gregory of Penn State. Chuck was letting people know that this guy Paul Petzoldt was going to be traveling in the east promoting a new organization called the Wilderness Use Education Association. I asked to read the letter and made a copy of it. When I got home that night I called Chuck Gregory who told me that Paul was at Springfield College and gave me the number of his host there. I called Paul in Springfield and invited him up to Saranac Lake. He offered to come and I kept him very busy during his stay. I had him talk to the NYS Department of Environmental Conservation, the Paul Smith's College student body, the Rotary Club, the North Country Community College (NCCC) student body, and the NCCC Outdoor Leadership class. The most important meeting however was one I arranged on the last day of his three-day visit. I was a part-time instructor at NCCC at the time teaching only one, or if I was lucky, two courses a year. I had a grand vision though of starting a wilderness leadership program at the college so I planned a meeting with Paul and college

administrators. By then I had impressed Paul enough I guess so that with no prompting he told the administrators that he was so impressed with what I was doing that he wanted to offer me a scholarship to go out to Wyoming the following summer and take a WUEA course, the first official summer of WEA courses. Paul had told me that he wanted me to help teach the course but of course he had told three or four others the same thing. It was confusing at first but once I figured out my role the course was a wonderful experience and spending thirty days in the field with Paul was and is still a treasured time of my life.

Later that fall when I was back working part-time at NCCC, the WUEA office manager called me and said, "We're working on a schedule for next year and Paul wants to know the dates of course that NCCC is going to offer." I gulped and said I would have to check with the Academic Dean of the college. I remember when I called the Dean and relayed the message just as it had been given to my, his response was, "Well, did you give him some dates?" I reminded him that it would require a considerable investment in equipment ($10,000) and he said okay. That was the start of my twenty-year stint at North Country Community College and I will always be grateful to Paul for giving my career the kick-start it needed.

People talk about how to develop confidence. We'll I tell you that you develop confidence by developing some expertise and having the passion to share it. I was passionate about my vision for WEA and I had acquired some outdoor expertise so I wasn't shy in sharing it with board members. They finally invited me to be on the board in 1983. I was vice president from 1985-88 and president from 1988-94. Like most non-profits WEA struggled to have enough money to accomplish its mission. WEA was trying to run courses and also become a certification organization. I firmly believed it should not be in the course running business but since the organization was making money running courses it was hard to argue against it. In 1987 I wrote a grant to the Adirondack North Country Association (ANCA) to move WEA to the Adirondacks it wasn't funded but from that experience I learned to get my political ducks in a row. The next year I asked the President of NCCC to solicit letters of support for the proposal. He told me to write the letter and it was sent out under his signature. We had a wide base of support and I knew things were cooking when I got a call from our very influential veteran State Senator's office. NCCC President David Petty ended up going to visit the Executive Director of ANCA Terry DeFranco to talk about the grant application. We had applied for $36,000 hoping for anything. David Petty was a big help as Terry explained that ANCA had never granted that much money before. She asked if we would accept considerably less and when I was about to say, "SURE!" Dave interrupted and said, "If they said they need $36,000 then they need $36,000 and they won't be able to move for anything less." Well lo and behold they came through with $28,000 one of the largest grants they ever made. Over four years I believe we got over $60,000 from ANCA and it allowed us to grow and prosper as we never had before. It was shortly after that grant that we had our first annual meeting in 1988 at Paul Smith's College. I believe our first true conference was the next year at Slippery Rock University.

In 1989 we hired Mark Wagstaff as Executive Director and things really started hopping. Our affiliate network went from less than 10 affiliates to about 35. Mark and I are very different but worked very well together. During that time period *The Wilderness Educator* edited by David Cockrell was published as was as the first edition of *The Backcountry Classroom.*

There were many other key players in those early years. Office staff in Saranac Lake included Kathy Jurczynski and Duane Gould. In addition Jeff Brown, Doug Garrand, Gregg Dahlen, Sue Thornley, Kim (Massari) Holmlund, Wendy O'Neill and Catherine Palmer among others played a variety of important roles. When NCCC President David Petty suddenly died in

1992 campus support for WEA died as well. It became apparent that WEA's days on the NCCC campus were numbered but the history of WEA after it left Saranac Lake will have to wait for that is another chapter.

Mark's Notes

I am a believer in life changing experiences. Abraham Maslow called this phenomenon a "peak experience". During our lifetime, we have peak experiences that mold what we will become. I can confidently say that WEA provided me with these critical experiences.

I first became involved with WEA in 1985 when I helped organize an NSP course through Western Carolina University (WCU). Dr. Russ Bachert, one of Paul's former students and a professor at WCU, insisted that Petzoldt be sent out as our head instructor. The WEA national office, managed by executive director Sandy Braun, agreed and plans were made. Dr. Chris Cashel co-instructed with Paul for that 28 day course. Petzoldt was seventy-seven years old at the time. That time spent in the woods with Paul left an everlasting impression in my professional psyche. I was in my mid twenties at the time and had a touch of "young cocky male syndrome". Translated, I thought I knew more than I really did. Petzoldt had a very direct way of letting you know about that, especially young cocky males!

Petzoldt was a complex man who could be controversial as many stories tell. He was a master teacher but his methods, at times, were radical. I'll never forget my first course and the daily routine of building fires to cook breakfast and dinner. This ritual required skill and time to prepare those delicious field meals. Petzoldt made it perfectly clear that pots, pans, food and other kitchen items should be positioned well away from the fire pit. This system of organization served many purposes such as safety and sanitation. As you would imagine, novice students get sloppy and items begin to pile up all around the pit during meal preparation. One of our cook groups made this terrible error. Petzoldt, seeing the messy kitchen, walked up from behind and began kicking pots directly into the fire. We stood in disbelief with our eyes wide open. While this act may be deemed unsound pedagogy, our kitchens remained perfect for the rest of the trip and still do to this day!

I share this story to emphasize that our organization is rich in tradition. We all have our associated memories and experiences when we become part of an organization. It was an honor to eventually become the executive director of WEA and play a part in organizational growth. As Jack stated, our time in Saranac Lake was most productive. After three years, my aspiration was to seek a doctorate and teach in a college setting. I have no doubt that WEA influenced this personal decision. I deeply believed in the WEA mission and methods and knew that we could make a difference as part of the higher education system.

WEA left Saranac Lake and moved to Colorado under the leadership of Kent Clement. Later it moved to the Tennessee State Park system under the leadership of Dare Bible. Finally, about four years ago, Indiana University submitted a proposal to house the national office. I would like to publicly thank the Indiana staff at this time. They have brought life and stability to the organization in a new era. Your dedication and energy have truly made a difference.

My final message is about professional involvement. As professionals, we must become involved in our professional associations. We become part of something larger and filled with meaning in an altruistic way. Being part of WEA allows us to actualize our passion and provide a service. Our service work is concentrated on the development of outdoor leaders and protecting the natural environment. I urge you to become involved – seek those peak experiences to develop

yourselves professionally. The service you provide as a WEA member, outdoor leader, affiliate, board member or employee is a meaningful act when put into the context of our mission. It has been a privilege to sit with legends such as Bob and Jack to bring this message to you. Please enjoy the conference and become involved!

Point Release: Strategies for Successful Journal Writing

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One of the biggest challenges of teaching outdoor education is learning transfer. How does the knowledge gained in a wilderness-based learning transfer in a usable way to our daily life? As in all forms of education, the evaluation of the educational effectiveness is how well the learning will serve the student in the future. Teachers continually strive to get classroom learning to make sense in a practical way in the student's life, whether it using math to balance a checkbook, geometry to build a square birdhouse, or using basic mathematics as the foundation for higher mathematics, and perhaps aiding the student in their life profession. However, the dichotomy between wilderness learning in a natural setting and living in a daily urban environment magnifies the problem of effectiveness, because the worlds we teach in and the worlds we live in are so different. How does backpacking through a slot canyon in Utah teach us to lead more productive lives in our daily world? How can we, as educators, enhance the transfer of learning from backcountry to the front country?

Wilderness experiences are among the most powerful experiences in a person's life. The research literature in outdoor education is resplendent with data pertaining to the life changing impact that wilderness experiences have on the participants. Arnould & Price, describe the experience as extraordinary sense of belonging. Bannister (1996) describes a powerful sense of community. In terms of personal growth, research data supports positive changes in self-concept, self-efficacy, strengthen internal locus of control and growth toward stronger spiritual values (Cross, 2002; Paxton & McAvoy 1998; Stringer & McAvoy, 1992). There is also a large body of historical literature supporting the positive life-changing influences of wilderness experiences. One needs only to refer to the writings of Henry David Thoreau, William James, John Muir, John Burroughs, Edward Abbey, and Wendell Berry among many others. The fact that wilderness experiences are unique and take place in spectacular surroundings alone can be a powerful learning tool (Luckner & Nadler, 1997). However, there is also research that leads us to believe that the experience does not have a lasting affect and that the effects diminish as time passes. As outdoor educators, we continue to work towards a stronger and longer lasting learning transfer. Willie Unsoeld said " . . . the final test for me of the legitimacy of the experience is, how well does your experience of the sacred in nature enable you to cope more effectively with the problems of mankind when you come back to the city" (1990 p. 130). As outdoor educators we gauge the success of the experiences by the strength of learning transfer. (Luckner & Nadler 1992; Gass, 1999). Gass identified three types of learning transfer (1) specific, (2) nonspecific, and (3) metaphoric (1999).

Specific transfer is the transfer of knowledge that relates closely to the learning situation. Specific transfer refers to learning primarily in the psychomotor domain. A common example is learning to use a brake hand in belaying on a rock climb or challenge course and transferring that knowledge to using a brake hand in rappelling.

Nonspecific transfer is primarily in the affective domain, transferring feelings and emotions from one situation to another. An example would be learning patience while waiting

out a storm in a tent and carrying the practice of patience back to one's normal working environment with family, friends, and colleagues.

Metaphors liken one thing to another in a way that allows the learner to see each thing in a new perspective. Metaphoric transfer is learning through the skills and experiences. The experience becomes a metaphor for the underlying goal of personal growth and development (Bacon, 1983). According to Bacon, the key of making the transfer powerful and getting the learning to transfer is the degree of isomorphism between the metaphoric situation and the real life situation. In biology, isomorphism means there is a similarity in form; in mathematics, it means a one to one correspondence. When we teach using isomorphic metaphors we strive to get the elements in one situation as close as possible to those of another situation. Therefore, as teachers in this field we are striving to create and facilitate learning situations that have parallels to the student's life away from the learning experience. This is the ultimate goal of the wilderness-based education; aiding students in evaluating the experience, reflecting upon that experience, and then incorporating the learning into future use (Sugarman, 2003).

There are many ways to augment one's reflection and learning experience. One method used commonly in outdoor education is journal writing. Journal writing increases participants' involvement in their own growth as learners (Tillman, 2003; Cutforth & Parker, 1996). However, in conversation with colleagues it becomes apparent that success with journal writing experiences with students is inconsistent at best. One of the author's of this article had a student state at the end of a 30-day course where journal writing was encouraged that it was the only piece of equipment she brought that she did not really understand how to use. This can be disheartening from an educator's point of view. O'Connell and Dyment's research points to insufficient direction or training when it comes to the task of journal writing (2003).

As outdoor educators, we would not think about giving our students a stove and telling them they have to cook their own meals without any instruction on lighting the stove or cooking. In a climbing class, it would be negligent to give students a rope, tell them we want them to tie in to it so we can climb, and not give any instruction on how to tie a correct figure-eight- follow-through. Why then do we assign journal writing without any instruction on how or what to write? Granted, not giving instruction in journal writing would not be legally negligent, but it is a core educational issue that borders on educational negligence. We are derelict in our duties as teachers if we expect our students to gain reflection from journal writing without aiding them in understanding how to do it.

After struggling with this issue for a few years, we have come up with some exercises that have aided our students and us in journal writing. In order to help us be more effective at using journals we are offering the following as examples of exercises we have used in our courses. These examples have come about through trial and error, sweat and tears, divine inspiration, and pirating other educator's materials.

This is our model for teaching journal writing. We are presenting it here as seven exercises, we have used them in succession but they can also be used independently depending on factors such as the length of the program, the students, or the purpose of the program. The exercises are not intended to be the only journal writing done, instead they are meant to aid the student in getting started with writing in the journal and to help them expand their writing to help them create their metaphors and to aid in creating an isomorphic way of thinking about learning. We have also had success with these exercises on longer trips. On these trips, we do not present the exercises daily; instead, we allow time between the exercises for the continued exploration of the themes. We intend this article to be user friendly so someone may run to a copy machine,

print this off, and take it into the field. However, we also hope that it sparks ideas for one's own exercises. We welcome the sharing of ideas and authors can be contacted via e-mail to facilitate the sharing.

The following exercises are separated for ease of use. The section titled "Set-up" is a quick version of hints and instructions to help facilitate the exercise. These are not intended as rules but rather guidelines and our hope is that you adapt them and make them your own. They are in the most basic form to empower maximum freedom when facilitating.

The "Frontload" is a set of instructions that is given to the students. It could initially be used as a script to read to students, but reading the script is not the intent. The intent is to tailor the words to your course or activity.

Facilitating Journal Writing

Exercise One: Point Release

Set-up:

This is a stream of consciousness type of writing designed to get the students writing. With the students in position of comfort and journals ready, then give them a word and allow them to write from that word for 5 minutes. After 5 minutes, give them another word to write from. This exercise works well when you alternate between concrete words and abstract words. It is also helpful if the words you choose have some meaning to the group. The abstract words might come from group dialogue, debriefs, group contracts, or course objectives. The concrete might come from the type of course you are teaching, such as water if it is a canoeing course.
Examples of word types:
Concrete words: Tree, Water, Rock
Abstract word: Integrity, Trust, Respect

Frontload:

Point release is a loose snow avalanche that starts when a single tiny snowflake breaks and falls into another one, then the combined weight of the two fall into a third, then those three into a fourth until there is enough weight to cause the unconsolidated snow to slide picking up more snow as it descends. From a distance, they appear to start at a point and fan out into a triangle. This journaling exercise works the same way. The trigger snowflake is the sound of a word. As I read the words let them slide into your minds, and free write about each of these words. From your pencils grow an avalanche of thoughts, images, experiences, and feelings about the past, present, and future. If you get stuck just keep writing something, write anything even if you just write "I am stuck" over and over until the critical mass of your snowflake words cause the avalanche to continue. Your thoughts drift out, slide down, gain speed and collect the debris from the past and roll through the present to the future.

Exercise Two: Dreams and Dragons

Set-up:

Start this exercise by reading the quote from Thoreau, and then talk about dreams a little. This is a great exercise for the group to share and get to know each other. If a person can't think of effective ways to slay their dragons, then perhaps the group can throw out suggestions to

help. We have seen this exercise help the group find commonalities and pull them closer together. A lot of us share the same dreams in common, even if nothing else appears to be the same.

Frontload:

> *I learned this, at least, by my experiment: that if one advances confidently in the direction of his dreams, and endeavors to live the life which he has imagined, he will meet with a success unexpected in common hours.*
>
> *Henry David Thoreau*

What dreams did you have when younger? Did you want to be the president, firefighter, actor/actress, musician, or a professional athlete? Where did those dreams go? Do you remember them? What are your dreams now? Why did they change? When did they change? Are they still inside of you? Can you still feel those dreams inside your being in times of reflection? Dreams are essential to life; they are there in your mind every time you make a decision to advance towards them. Success might come unexpected, and it might come as something you didn't dream about. It is not the act of attaining the dream; so much as it is the thoughts of having them that is important.

I would like for each of you to write down three dreams. The first one is a short-term dream: this trip, a few weeks, or around there. The second dream is a mid-term dream: a few months to a year. The last dream is the life-long dream. Remember, this is not a goal, but a dream, a dream is grandiose. Think hard about the dream for your life, it may seem impossible, but that is what dreams are all about. If you remember to advance confidently towards these dreams, you just might surprise yourself. Don't sell yourself short when it comes to your dreams. Dream as high as your heart will allow you to.

Now write down the dragons. Dragons are the obstacles in the way of the path toward your dreams. What are the obstacles that might keep you from your dreams? Finally, write down the swords you can use to help slay the dragons. Swords are the tools and support you have to reach your dreams.

Exercise Three: The Expedition

Set-up:

This exercise should be organized around your current surroundings. If you are in the snow, you might model it off an Everest Expedition. If you were rafting maybe you would use John Wesley Powell exploring the Grand Canyon. Make this exercise the best you can - according to the current trip and the expertise you have to share about that method of exploration. Talk about the size and immensity of the different expeditions; tell participants about how many resources go into one person reaching the summit of Everest, or charting an unknown bay, or putting a 30-day course in the field.

Brainstorm with the students all the possible roles and write them down for everyone to see or read each role out loud slowly and have the participants copy them into their journals. List the possible people involved on their expedition, from the expedition's name to the laborers that built your boat. Allow for people to come up with some of their own roles if they want, but stress the metaphor as much as possible. The purpose is to get the journaling to move deeper, and to have people begin to relate the outdoor activities to things in their own lives.

This can be a very emotional exercise and plenty of time should be allowed for the dialogue that follows.

Frontload:

On the expedition of your life people have filled many roles for you. Some roles include the leaders, navigators, cooks, porters, sponsors, tent mates, hiking mates, the people you shared meals with, people you will name your new land after, summit teams, doctors, and anything else you can think of. We have listed many possibilities; now in your journals write who in your life has fulfilled each of these roles. The cook is not your mom because she cooks well, but she might be your cook because she gives you strength and nourishes your body. This one takes some time and creativity, but think about all the people that go into your life to make it possible. Remember to think metaphorically.

Exercise Four: Then and Now

Set-up:

For this exercise allow at least 30 minutes for each part. Encourage students to get up and walk around, and find a good writing place. You can blow a whistle to signify how much time, when to switch, and when to return as a group. This exercise works at getting people to think about the affects of nature on their lives, but also focuses on the changing past, and how perceptions have changed over the years. This exercise can be difficult, but we are beginning to use nature as a metaphor. The participant is beginning to see nature through different eyes, and seeing connections from the past and present.

Frontload:

> *"Out there is a different world, older and greater and deeper by far than ours, a world that surrounds and sustains the little world of men as sea and sky surround and sustain a ship. The shock of the real. For a little while we are again able to see, as the child sees, a world of marvels. For a few moments we discover that nothing can be taken for granted, for if this ring of stone is marvelous then all which shaped it is marvelous, and our journey here on earth, able to see and touch and hear in the midst of tangible and mysterious thing-in-themselves, is the most strange and daring of all adventures."*
>
> *Edward Abbey*

First, think back to your past, go back as far as you possibly can to your first memory of nature. Think of your favorite tree, a trail you used to hike, or maybe a bush in your yard where you made a fort. Think of anything; try to remember that past, write as much as you can remember about how you felt, what it looked like, and what you did. Be as descriptive as possible. Be bold. Be confident. You will write a piece that will make trees bow and flowers blush with delight at having so moved you to song.

[Allow time to write]

Second, look around you and find the similar object in your current surroundings, you should leave the area and find a place that feels right. It does not have to be a perfect match; in fact, it will never be a perfect match. If you wrote about a favorite tree, find another tree now,

and write about it. Sit under it, climb up high into it, and hug it if you are so inclined, then sit down and write everything you can about it.

[Allow time to write]

Lastly, bring these two things together; look at the similarities and differences between the two writings. Think about how you are the same person, and look at how much has changed.

Exercise Five: "13 WAYS OF LOOKING AT A BLACKBIRD" by Wallace Stevens

Set-up:

This is a complex poem and the meaning may be difficult to grasp, but that is beside the point. The idea is not exactly to comprehend the poem, but to continue looking at nature with a metaphoric lens. This one is great to assign early in the day or at a trail break, then shared later in a group dialogue.

Frontload:

In this exercise the metaphor is pushed further. You may be completely baffled as to the meaning of this poem. That's fine, maybe there never was one set meaning for the poem, but it will help you to see the same object in many different ways. First get comfortable and close your eyes and listen to the poem while I read it, then listen again but this time follow along with your copy.

[Read the poem here] *from Wallace Stevens' Collected Poetry & Prose 1997*

Now find an object, it can be anything: a tree, a rock, a river, or even a blade of grass. After you find an object, discover 13 ways to look at it and relate those things to your life. For example maybe you are looking at a tree. The tree has roots, what are the roots to your life? Or how is the wind in the leaves like your past? Do you have bark to protect you? Or maybe you have an oak desk at home and want to explore how this desk relates to the tree. As you can see, there are many more than 13 ways of looking at anything.

Exercise Six: Writing Letters

Set-up:

Letters have long been used in outdoor education as a means of reflection. In this letter we want to concentrate on the imagery of the environment. Encourage the students to use excerpts from their journals to write the letter. This is not an exercise that is done on the spot; it may take a few days to a week to complete the letter. After the letters are completed some students may want to share them with the rest of the course, which makes for interesting dialogues.

Frontload:

This is our sixth exercise together. First we wrote about words and thought of different ways they make you feel or think. Then we wrote about our dreams, what they were and are; then we wrote about nature in the past and present; then we thought about all the people that make up our expedition of life; then we tried to relate one object 13 ways, and now we combine all this together to write a letter to someone, anyone, even yourself if you want to. This letter could tell someone about your dreams and goals in life, how they have changed from past to present, how

they have affected your life, or what this particular trip means to you. Make a deliberate effort to use your surroundings as a metaphor to get your emotion and energy into the letter.

Everett Ruess is a great example of using his natural surroundings to better relate his emotions and feelings to his readers. He was 20 years old in 1934 when he completely vanished from the Utah desert. All that remains are some prints, pictures, his journals, and some beautifully crafted letters.

In this letter Everett writes to a woman he loved and uses the natural surroundings to give the dichotic feelings of awe and loneliness in the desert to highlight his emotions to the woman he writes. Everett use his journal writing to craft letters home to the people he loved. He wrote about events on the trail and worked them into tails of emotion and beauty.

May
Near Lukachukai, Arizona

Dear Frances,

[Read the letter here] - see Ruess, E. (2002).

Love from Everett

Exercise Seven: Transference

Set-up:

Transference does not take much set-up. Usually it is done towards the end of the course, and you should allow the students several days to write in their journals on this one.

Frontload:

I am going to read you an essay by Morgan Hite. He was a NOLS instructor when he wrote this and it deals specifically with what we learn out here and the impact this learning has on our life. This is the last writing exercise that we are doing together, and it is open ended, write anyway you want. Maybe you want to write an essay, another letter, or even poetry, but the topic should be about what we learn in the wilderness that enables us to function more fully when we are home. Think about what you learn, how it relates, what it changes, what might be difficult, what will be easier, and any other differences or similarities.

Briefing for Entry into a More Harsh Environment by Morgan Hite

People always talk about what you can't take home with you after a NOLS course. You can't take home the backpack, or at least it has no place in your daily life. You can't take home the rations, and if you did, your friends wouldn't eat them. You can't take home the mountains. We seem to have to get rid of all of our connections to this place and our experiences here. It's frustrating and can be depressing.

This essay is about what you can take home: what you can take home, and what, if you work at it, can be more important than any of those things you have to leave behind. Let's look at what we've really been doing out here. We've been organized. We lived out of backpacks the whole time, and mostly we knew where everything was. We've been

prepared: at this moment, every one of us knows where his or her raingear is. We've taken care of ourselves. We've been in touch with basic survival tasks. We've taken chances with other people, entrusted them with our lives and seen no reason not to grow close to them. We've persevered and put our minds to things that never seemed to end. We've learned to use new tools and new techniques. We've taken care of the things we have with us. We've lived simply. These are the things you can really take home. Together they comprise the set I call "mental hygiene," as if we needed to take care of our minds the way we take care of our bodies. Here they are again, one by one.

1. Organization.
The mountains are harsh, so you need to be organized. But that other world is much more complex, and even harsher in ways that aren't always as tangible as cold, wind and rain. Being organized can help you weather its storms.

2. Thoroughness.
Here, it is easy to see the consequences of leaving things only half-done. That other world has so many interruptions, distractions and stimuli that it is easy to leave things half-done, until you find yourself buried under a pile of on-going projects with no direction.

3. Preparedness.
Out here, you've only had to be prepared for every eventuality of weather; but in that other world you have to be prepared for every eventuality period. There are no rules, shit happens, and only the prepared are not caught off balance.

4. Take care of yourself
And do it even more aggressively than you do it out here. The environmental hazards are even greater: crowding, noise, schedules. Take time to be alone and think. Never underestimate the healing power of being near beauty, be it a flower, music, a person, or just dinner well-prepared.

5. Stay in touch with basics.
Continue to cook your own food and consciously select the place where you sleep at night. Take care of your own minor injuries and those of your friends. Learn about how the complex vehicles and tools you use work. The other world is far more distracting and seeks to draw you away from the basics.

6. Keep taking risks with people.
Your own aliveness is measured by the aliveness of your relationships with others. There are so many more people to choose from in that other world, and yet somehow we get less close. Remember that the dangers are still present; at any time that you get in a car with someone, you are entrusting that person with your life. Any reasons that seem to crop up not to get close, examine very carefully.

7. Remember, you can let go and do without seemingly critical things.
Here, it has only been hot showers, forks and a roof overhead. But anything can be done without; eventually, for us all, it is a person that we have to do without, and then especially it is important to remember that having to do without does not rule out joy.

8. Persevere at difficult things.
It may not be as concrete as a mountain or as immediately rewarding as cinnamon rolls, but the world is given to those who persevere. Often you will receive no support for your

perseverance because everyone else is too busy being confused.

9. Continue to learn to use new tools and techniques.

Whether it is a computer or an ice cream maker, you know now that simply because you haven't seen it before doesn't mean you can't soon be a pro. Remember that the only truly old people are the ones who've stopped learning.

10. Take care of things.

In that other world, it's easy to replace anything that wears out or breaks, and the seemingly endless supply suggests that individual objects have little value. Be what the philosopher Wendell Berry calls "a true materialist." Build things of quality, mend what you have, and throw away as little as possible.

11. Live simply.

There is no substitute for sanity.

These eleven things are the skills you've really learned out here, and they will serve you in good stead in any environment in the world. They are habits to live by. If anyone asks what your course was like, you can tell them. "We were organized, thorough and prepared. We took care of ourselves in basic ways. We entrusted people with our lives, learned to do without and persevered at difficult things. We learned to use new tools and we took care of what we had with us. We lived simply." And if they are perceptive, they will say, "You don't need the mountains to do that."

Europa Canyon
Bridger Wilderness, Wyoming, August 1989

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What is a SPEC™ Learning Environment and how do we create it?

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Leading Edge

Abstract

The Student-centered, Problem-based, Experiential, Collaborative (SPEC™) learning environment featured in the 2nd Edition of *The Backcountry Classroom* (Drury et al, 2005) is based on an experiential cycle that tracks the teacher and learner roles within an authentic and meaningful context built on the foundation of a safe learning community with clear and specific learning outcomes. When contrasted with traditional learning approaches the SPEC™ approach's advantages clearly outweigh the advantages of the traditional approach when the learning of higher level thinking skills such as leadership and decision-making are desired. While the outdoors frequently provides these opportunities naturally the traditional classroom rarely does. The challenge is to intentionally design learning experiences, both indoors and out that brings all these qualities to bear.

Keywords: student-centered learning, problem-based learning, experiential learning, collaborative learning, cooperative learning, experiential cycle, SPEC™, wilderness education

This interactive session explored *The Backcountry Classroom*'s 2nd Edition **Teaching and Learning** Chapter in order to investigate what a Student-centered, Problem-based, Experiential, Collaborative (SPEC™) learning environment is, how it differs from a traditional learning environment and how instructors can use this chapter of the book to maximize the teaching and learning experience.

Outcome: Participants saw how to use *The Backcountry Classroom* to design more powerful wilderness lessons and how to bring the power of outdoor learning into the classroom

The Experiential Cycle - The philosophical foundation
The Experiential Cycle – In Figure 1, we try to represent the feel of a 'SPEC' learning environment. In simplest terms, learning in the classroom or wilderness involves the interaction of three essential components: the student learner, the instructor (who also learns), and the context of challenging experiences (whether planned or spontaneous) that may yield important understanding and insights. The question is, how do we consistently create these both indoors and out.

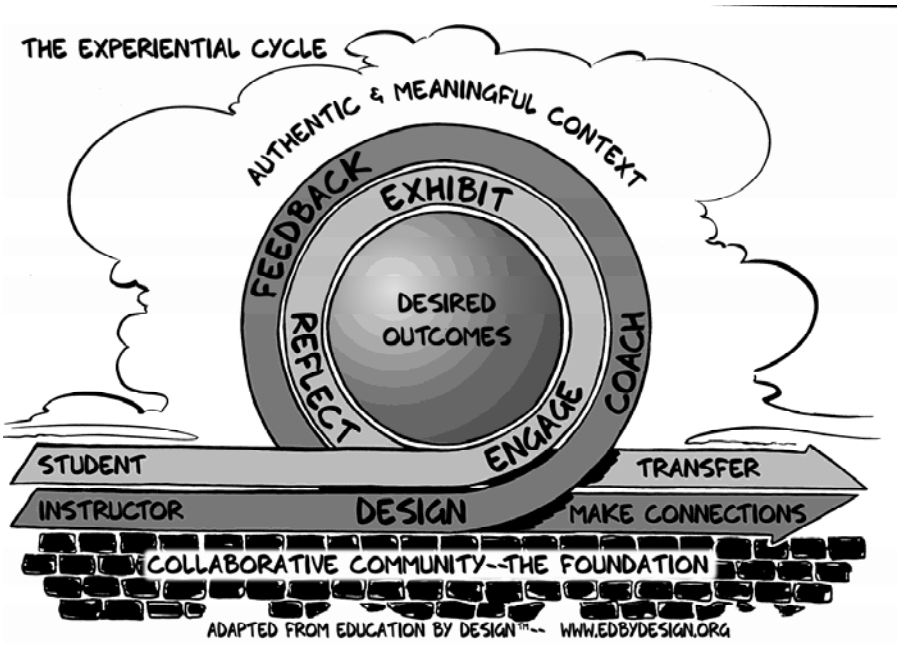

Figure 1. Experiential Cycle

Comparing the SPEC™ and Traditional Learning Environments

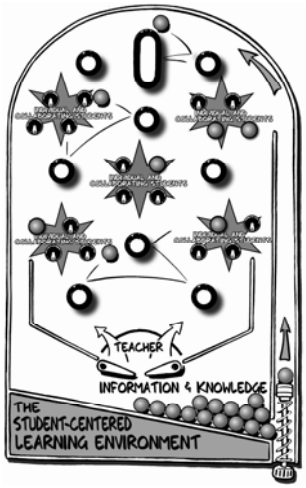

Figure 2

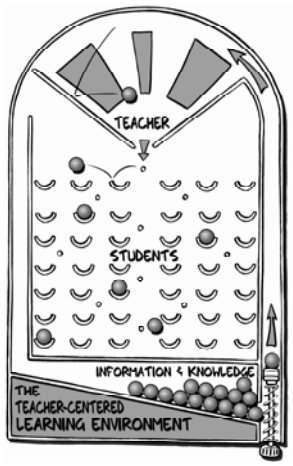

Figure 3

Characteristics of a SPEC™ vs. "Traditional" Learning Environment

SPEC™ Environment (figure 2)	"Traditional" Environment (figure 3)
Student-Centered – Students learn by talking, listening, writing, reading, creating, and reflecting on content, ideas, issues, and concerns as they work in small groups or individually to engage the curriculum. Authority is shared with the teacher in many ways. Students have direct access to knowledge. They are encouraged to develop their own questions and arrive at some of their own conclusions with teacher guidance. It is presumed that students have pre-existing knowledge and skill that they can contribute to the learning. Students may learn from each other as much as they learn from the teacher. See Graphic 1	**Teacher-Centered** – The teacher is the center of authority. The teacher transmits most information and all knowledge to the learner. It is presumed that the teacher will ask most of the important questions and that these questions have a correct answer that must be validated by the teacher. Students are "empty vessels" - teachers are the experts that fill the vessels with appropriate knowledge. See Graphic 2
Problem-Based – Teachers design complex and increasingly authentic problems for students to solve individually or in collaborative teams. Students must grapple with information (the content) as well as use skills (social, intellectual, emotional) to solve the problems successfully. Feedback and assessment is an integral and ongoing part of the process. Successful learning is assessed on multiple levels: content understanding, group process, individual skill development, etc. Students receive personalized narrative feedback regarding their performance from several sources: peers, teacher, and self-assessment. The teacher serves as a facilitator, guide, co-learner, mentor, and coach who helps students through the problem-solving/learning process.	**Content-Based –** The coverage of content is the focus of the learning**.** Teachers create structured lessons designed to help students understand and recall important facts, concepts, and processes that they will be expected to recall on tests and examinations. Concern for skill development is often tied directly only to those skills that are required for improved mastery of the content. Assessment often comes at the end of a unit of study and is frequently evaluated in terms of percentages of correct answers or expressions of understanding as shown on pencil and paper tests. The teacher may have little or no opportunity to share personalized, narrative feedback with each student to provide direction for future improvement.
Experiential – Students learn by doing. All learning occurs within the context of real, first hand experiences. Students participate, make choices, and accept some responsibility for their role in the learning process. The interactive nature of this approach creates a wealth of physical, intellectual, emotional, and social experiences. Learners construct their own meaning by reflecting on all these experiences. They are prompted to make connections to their own lives, larger contexts, and theory during this reflective stage.	**Theoretical –** Students generally learn by listening, reading, writing, or following tightly scripted activities related to the curriculum. Students have very few choices of consequence. The curriculum exists in and of itself. Passing exams is the primary context for motivation. Curricular content is often pre-packaged in discreet bundles of information to be learned in a prescribed, often linear sequence. Students may or may not recognize any connection between the content and their own lives.
Collaborative – All learning takes place in a social context. Working as an individual or as part of a collaborative team, students consistently function as part of some larger "community." While competition has its place, collaboration is the fundamental value. All learners are expected to work with and show respect for others. Through multiple experiences, reflection, and a conscious attention to the emotional health of the group members, students learn to value (rather then merely tolerate) the differences in each other. Success for both individuals and the group is recognized and rewarded.	**Individual –** Individual performance is the primary measure of success. Competition is encouraged as a predominant value. Individual accountability and achievement is recognized and rewarded. Group accountability and achievement may go unrecognized or actively discouraged. Little emphasis is placed on the development of social skills or group decision-making, management, or leadership skills. The emotional health of the group members is not as high a priority as individual grades on exams.

Issues when Comparing SPEC™ vs. Traditional Approaches

SPEC™	Issue	Traditional
SPEC™ learning usually takes more time. A powerful learning experience proceeds at the pace of the learner – not necessarily that of the teacher or some external schedule.	**Time**	Traditional lessons can be tailored much more predictably to time constraints as many (if not all) of the variables are under the control of the instructor.
SPEC™ learning definitely leads to a greater depth of learning among a wider range of students. Living the experience at multiple levels (physical, intellectual, emotional, social, spiritual) creates the opportunity for a broad array of very powerful, long-term understandings and insights.	**Depth of Understanding**	Traditional lessons have the potential to produce reasonable depth of understanding in the specific area of focus (physical, intellectual, emotional, social, spiritual), provided that the style of presentation matches the learning style of the specific student.
The SPEC™ approach may help many learners to synthesize a great deal of knowledge and experience. It is questionable whether this approach is worth the time it takes if the goal is to introduce and recall lots of information for the short term.	**Breadth of Understanding**	Traditional lessons can "cover" a wide area of information in a short amount of time. Effectively presented and reinforced, the information can be recalled successfully in short-term memory.
SPEC™ experiences can be "life-changing" for some learners. Ownership implies some measure of personal investment. With the high degree of student participation and interaction, decision-making, and commitment required, SPEC™ learning invites deep investment and therefore a tremendous amount of student ownership and pride in positive results.	**Emotional Impact & Ownership**	Ownership is not often a descriptor associated with very traditional approaches. Since most decision-making and control is in the hands of the teacher, successful participation in a traditional learning experience may require little student investment of personal energy.
Teachers who are successful using the SPEC™ approach generally possess all the qualities of a solid traditional instructor. However, in addition they must: - Be comfortable with yielding some control to learners. - Be comfortable not knowing all the answers. - Be comfortable with the messy chaos that often attends experiential learning. - Be prepared to let students struggle and/or fail for the sake of the learning.	**Essential Teacher Qualities**	Teachers consistently successful in traditional instruction usually have a complete mastery of the content, well-developed group management and organizational skills, an appreciation of learning theory, and an engaging and/or nurturing personality that develops relationships with a diverse array of students. It is important that the teacher be mature enough to put the needs and best interests of the learner first.

SAMPLE SPEC™ CHALLENGE

Knowledge Outcome **Title**
Skill/Disposition Outcome

What do you want them to know…		**What skill/disposition do you want them to develop…**
- Participants can knowledgeably discuss the criteria for selecting major pieces of backcountry equipment, such as backpacks, stoves, tents, sleeping bags, and sleeping pads.	Equipment Selection	Decision-making: Analyzes and prioritizes relevant information.

Essential Question or Key Issue:

Running an outdoor program requires large expenditures of money on equipment. In order to ensure we get the greatest value for our dollar, what criteria should we use to guide our selection/purchase of the major pieces of equipment for backcountry travel?

Description of Challenge/Task/Performance:

You are a team of editors for *Backcountry Trekker* magazine. Thousands of subscribers anticipate your annual review and recommendations regarding the quality of new gear for backcountry travel. As part of your annual process, your team reviews and re-establishes its list of criteria for making recommendations in each category of equipment: backpacks, tents, sleeping bags, sleeping pads, and stoves. This year you agree to make equipment recommendations appropriate for three-season travel in (with the help of your teacher/instructor, agree on a specific region or environment and write it in here) _____.

Follow this process to set up the remainder of this challenge:
1) Form five evenly sized teams. Each team should examine the references provided and, based on your research, begin to create a team's list of criteria for selecting each of the pieces of equipment cited above.
2) Once all the teams have completed their research, organize a "Carousel" with the help of your instructor. In this Carousel, acquire five pieces of blank poster paper and title each one with the label of a different piece of equipment. For instance, one poster paper is labeled "backpacks", another "stoves", etc.
3) Timed by the instructor, each team should move from one poster to another writing down its suggestions for criteria for the equipment cited at the top of the paper. Build on or add to the suggestions of previous teams. NO CROSSING OUT CRITERIA SUGGESTED BY PREVIOUS TEAM!
4) Once all teams have commented on all equipment, have first team to comment on each poster return to that poster and distill/clarify/cull the language so the list of criteria is clear to all. Post these clarified lists for viewing, discussion, and common agreement, if possible. Each team must be able to support any of its suggestions with references to specific authoritative sources if challenged to defend what the team has written.

Your Task: Using the criteria established, your group is to create an engaging and informative print **ADVERTISEMENT** recommending a specific piece of equipment in one of the categories that is the **BEST VALUE** for your readers. There must be at least one advertisement created for each category of equipment. Your selections must be currently available for purchase. Be prepared to share both your advertisement and the rationale behind your choices with others in the group _____ (insert day and time the project is to be ready).

Criteria for Assessment & Feedback:

Form Criteria

- Advertisement is on one page of poster paper.
- Advertisement is engaging – causes the viewer to look with interest, pause, and read.
- Advertisement is informative – provides viewer with important/relevant information.

Content Criteria

- Advertisement includes a recommendation for a BEST VALUE piece of equipment in one category.
- The team can support its suggestions with references to specific authoritative sources.

Knowledge: Participants can knowledgeably discuss the criteria for selecting major pieces of backcountry equipment.
- Participants can adequately defend their Best Value choices in terms of the established criteria.

Skill: Decision-making: Analyzes and prioritizes relevant information.
- Participants can cite information from authoritative resources that supports their choices of criteria and equipment.

Product Quality Checklist

Date: _____ Class Period:____

Product Author(s):	**Product Title/Name:**	**Evaluator Name(s):**

	Standard/Criteria	**Possible Points**	**Rating**
	Advertisement is on one page of poster paper.		
	Advertisement is engaging – causes the viewer to look with interest, pause, and read.		
	Advertisement is informative – provides viewer with important/relevant information.		
	Advertisement includes a recommendation for a BEST VALUE piece of equipment in each category.		

	Total		
Observations:			
Elements of Questionable Quality…		Elements of Exceptional Quality…	

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Using Phenology to Build Participants' Environmental Ethics

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Abstract

This paper will discuss how wilderness educators can use phenology to build their participants' environmental ethic through increasing affect for the natural environment and their ecological understanding.

"We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in."

-Aldo Leopold

It has been a standard practice for wilderness educators to promote environmental ethics. Wilderness Education Association (WEA) instructors are no exception, as designated by the inclusion of environmental ethics as the third point in their National Standards Program (NSP) Curriculum. This practice occurs most often through reflection and discussion. The environment is part of this process, but it plays more of a supporting role versus a leading role. I believe using phenology as a teaching tool, we can encourage a relationship between the natural environment and our participants where the environment plays a more central role.

Furthermore, wilderness educators are often practicing environmental education while facilitating their students' educational endeavors. If we are drawing on environmental education in our teachings, it is important to understand how we are supporting environmental education's specific objectives. In 1994, the North American Association of Environmental Education (NAAEE) expanded environmental education's objectives into seven categories: (1) affect, (2) ecological knowledge, (3) socio-political knowledge, (4) knowledge of environmental issues, (5) cognitive skills (ability to analyze, synthesize, and evaluate environmental issues and problems), (6) locus of control and personal responsibility, and (7) actual environmentally responsible behaviors (Simmons, 1994).

These objectives can be viewed as a building project with the foundation being built with affect and ecological knowledge. Wilderness education can contribute actively to many of these objectives. Affect, ecological knowledge, socio-political knowledge, knowledge of environmental issues, cognitive skills, locus of control and personal responsibility, and even environmentally responsible behavior are embraced throughout the NSP curriculum. For example, basic camping skills that incorporate Leave No Trace practices result in environmentally responsible behaviors. Still, as educators, we need to begin by building a solid foundation. Without affect for the environment and a basic ecological understanding, many of WEA's and NAAEE's objectives may not be realized. By giving the environment our time and attention in a disciplined practice, we can build our students' affect and ecological knowledge. Phenology, the study of recurring natural events, is a teaching tool we can use to engage our students in a regular activity that can increase their affect and ecological understanding.

Including phenology in your curriculum gives your group the opportunity to focus on the natural environment through simple observation for a given time period (20-30 minutes a day is suggested). During this time, participants are instructed to find a safe, comfortable place where they can sit, observe nature, and journal. In their journals they will describe or draw what they see. They can use field books to identify plants and animals, and they can consider the ecological connections that they witness. It is believed that this disciplined activity will help participants create a more intimate relationship with nature that will lead to affect and ecological understanding. After all, as Leopold (1966) stated, "We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in" (p. 251).

The key to incorporating phenology as a learning tool to promote affect and ecological knowledge and to contribute to the NSP's environmental ethics curriculum point is to provide opportunities for students to share their observations. This allows students to express their feelings (building affect) and work out the intricacies of what they observed with others' input (building ecological knowledge). To further develop an understanding of ecological knowledge, the instructor can facilitate the debriefing by having students make connections between their observations, reinforcing this important ecological concept. Over a ten-day course, the regular practice of phenology and sharing observations can lead to richer discussions of environmental ethics.

For example, if a student has increased awareness of the natural environment, they will be more informed to talk about "the concept of ethics as it relates to the natural environment and wilderness travel" (Drury & Bonney, 1992, p. 39). First, through regular observation, students may have keener observations of the impact that their wilderness travel has on the natural environment. This may leady to a greater understanding of the need for Leave No Trace practices. Next, by being more aware of their feelings, students may be more capable of expressing their "personal philosophy as it relates to backcountry conservation practices" and they may be more equipped to "describe the implications their personal environmental philosophy has for their actions as citizens of the world" (Drury & Bonney, 1992, p. 39).

Before we get to this point, though, we need to make sure as instructors we connect the practice of making regular phenology observations to affect, ecological understanding and then to environmental ethics through careful facilitation. By following "Environmental Ethics: A Progression," practicing phenology adds a foundational step (Drury & Bonney, 1992). Instead of beginning with individual behavior, the development of ethics during a course begins with regular observation of the natural environment and follow-up discussion to support the building of affect and ecological understanding. Once this foundation is built, the instructor can add to the discussion: "individual behavior," "patterns of behavior," "consequences of behavior," and "personal values" (Drury & Bonney, 1992, p. 48). By beginning with building affect and ecological understanding, then adding the layer addressing individual behavior and personal values, the development of personal ethics and professional ethics is built on the foundation of a genuine affect for the natural environment and a better understanding of ecological knowledge.

In conclusion, wilderness educators often engage in environmental education. By being cognizant of environmental education's objectives we can be more deliberate in meeting those objectives and integrating them with our own objectives. As this paper

explains, environmental ethics can be facilitated by incorporating regular phenology observations on a course followed by discussions based on the objectives of building a foundation of affect and ecological understanding and then developing and expressing personal and professional ethics tied to these observations and their outcomes. It all begins, with taking the time to regularly observe the natural environment throughout your course.

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Judgment and Decision-making In Outdoor Leadership: Critical factors, Common Missteps, and Keys to Success

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Abstract

Situation Awareness is critical to successful judgment in outdoor leadership. Decision-making poses challenges that tend to minimize situation awareness. Participants discussed critical factors that limit situation awareness, identify common heuristic hazards and decision-traps, and experience key decision-making aids that enhance their decision-making in the field. The following were objectives of the presentation and discussion: Define and discuss decision-making and judgment; discuss the field-based decision-making environment and implications; develop understanding of situation awareness and heuristic hazards; identify tools for supporting decision-making; and use of scenario-based discussion to focus and refine understandings. This article details a presentation given at the 2005 Wilderness Education Association National Conference on Outdoor Leadership.

> *"Each day the leader must make numerous decisions; some are very important, others are not. The effectiveness of leadership is determined by the quality of those decisions, and it cannot be stressed too strongly that the key is good judgment."*
>
> *-- Paul Petzoldt, 1984*

Judgment and decision-making remain the focal point for the Wilderness Education Association's (WEA) 18-point curriculum – and rightly so. For the outdoor leader, the ability to apply good judgment and make appropriate decisions in naturalistic and risk-laden environments is the keystone skill. The development of this ability parallels the development of expertise in many ways – and that process requires much time and experience. Simply put, experts see the world and think about it in very different ways than do novices. While no WEA course can provide the time and experience to develop full expertise in outdoor leadership, I believe that there is a structure for enhancing that development and enabling novices to think more like experts in the field. Or at least give them a glimpse at what their skill in this crucial area can become.

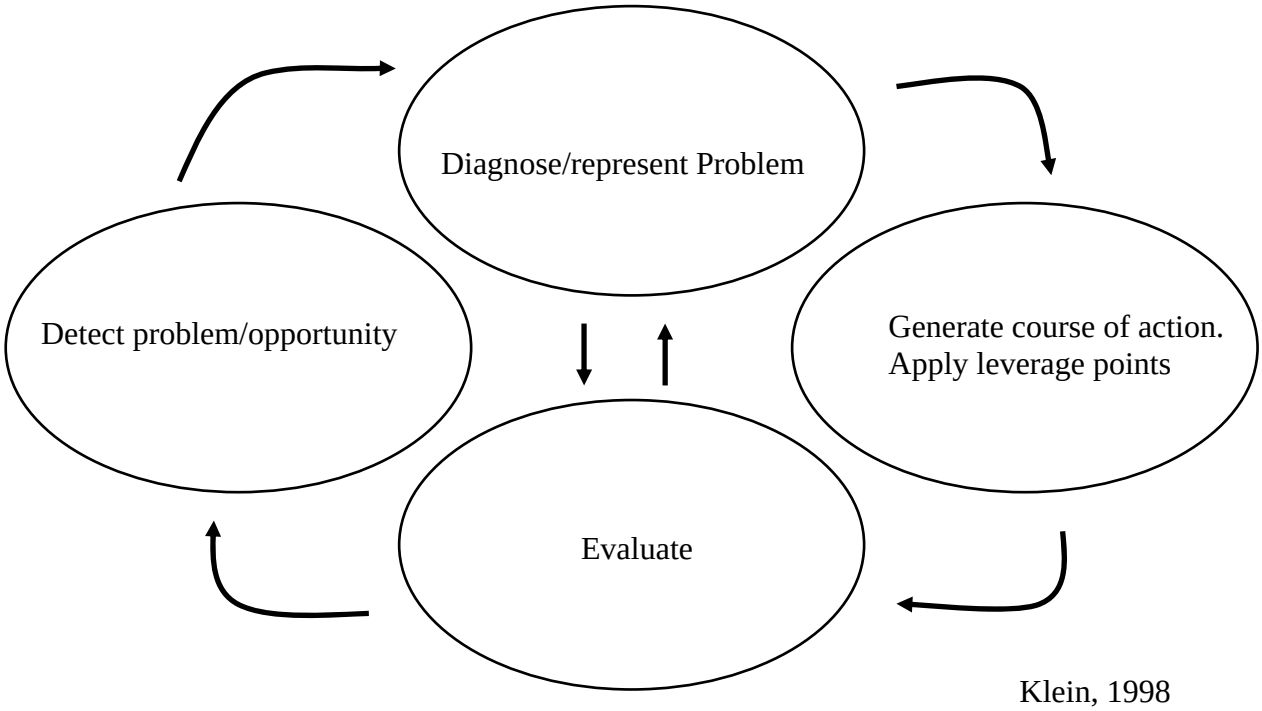
Many different perspectives exist on exactly what judgment and decision-making are, and so some definition facilitates this discussion. For this paper, judgment and decision-making are defined as a process of problem solving. As opposed to a focus on the minute cognitive aspects of decision-making, a naturalistic and operational perspective is adopted that centers on a macro view that encompasses the complexity of naturalistic environments and goal-oriented programming (Zsambok & Klein, 1997; Klein, 1989; Kelin 1998). As has been posited elsewhere, outdoor leaders function in a naturalistic environment (Galloway, 2002).

Naturalistic decision-making (NDM) environments include: ill-structured problems; uncertain, dynamic environments; shifting, or competing goals;

action/feedback loops; time stress; high stakes; multiple players; and organizational goals and norms (Hammond, 1993; Zsambok, 1997; Klein 1998). The NDM approach suggests that the process of decision-making is complex and non-linear and does not follow what has become known as the 'rational' or clinical decision-making process. Under the clinical model, all options are identified and the pros and cons of each are weighed and the outcome with the best 'cost/benefit outcome' is chosen. Under the NDM model, a cognitive search is begun based on mental simulation and pattern matching. The decision-maker in the naturalistic setting identifies a solution that 'works' and then scans for alternatives that might seem to 'work better' rather than weight all options equally and choosing the one with the best cost/benefit ratio (Klein, 1998).

Figure 1 illustrates the complex and nonlinear process that decision-makers in naturalistic environment use in their judgment process (Klein 1998). In a basic form this process entails four segments: Detecting the problem or opportunity, diagnosing and mentally representing the problem, generating a course of action, and evaluating that course of action. Rather than a cyclical process this model operates in a nonlinear and iterative fashion – where the evaluation phase occurs within the process not only at its end.

Figure 1: Naturalistic Decision-making Process



Klein, 1998

Given this model it is more appropriate to define decision-making as a process of negotiating a complex environment and achieving goals set forth by the program, the needs of the moment, the needs of the students, and the needs of the instructor. Thus, decision-making in the field is not a process of being right, correct, or winning arguments.

Taking into account the NDM environment and the complex process by which decision-making occurs raises the question: Are field-based decisions ever simple? Drury and Bonney (2005) pose a structure where it is suggested that the leader (decision maker) parse decisions in to 'simple' and 'complex' categories and apply the classical (rational/clinical) decision making model accordingly. To this writer's thinking, there are two factors that confound this approach to decision-making. One, research in NDM suggests that we do not make decisions according to the rational/clinical model. Two, the NDM environment is never 'simple' – given the fact that there are students and a curriculum at the least – despite the fact that it may appear to the casual observer that 'there is nothing going on.' Better then to train students of outdoor leadership in using the process that they would naturally access and to use it effectively – given their level of experience – and to train them to develop their level of expertise in their program areas.

Alternatively, several factors become important in the development and maintenance of judgment in the NDM environment. First we must acknowledge: All decisions made in this environment are complex. Second, it is critical to assess the potential impact of a decision by considering the level of risk surrounding the decision and potential outcomes of the decision (forecasting). The classic calculation of risk is useful here: Risk equals the probability of loss times the cost of that loss times the length of one's exposure to the risk. Third, risk can take many forms. It may be objective as in an approaching lightening storm or it may be subjective as in how the group deals with communication issues under stress. It will very likely be both in the NDM environment.

With these factors in mind, the recognition-primed decision-making (RPD) model that supports NDM provides some suggestions for developing judgment in outdoor leaders. Figure 1 provided an applied illustration of the RPD model. In the generic RPD model, the situation generates cues that enable recognition of patterns that activate action scripts to affect the situation. Action scripts are assessed through mental simulation. Mental simulation is driven by mental models about 'how things work.' (Klein, 2003)

Under the RPD model, situation awareness (SA) provides access to patterns, action scripts, and mental simulations and is therefore extremely important to successful decision-making (Endsley, 1997). Applied to the WEA context, SA is the instructor's ability to make successful decisions and depends on their perception of key elements in the environment, their comprehension of the current situation, and their ability to project into the future the implications of 'what's going on.'

Several factors minimize SA and lead to diminished decision-making. These include insufficient communication, fatigue and stress, task overload and under-load (boredom), group 'press on regardless' mindset, degraded operating conditions, and heuristic bias. Degraded SA leads to poor pattern recognition, misapplication of action scripts and error in evaluation. Novice decision-makers are particularly susceptible to degraded SA and as such one key to successful NDM is a training focus on accurate situational assessment.

Heuristics and heuristic bias also skew SA and lead to altered decision-making. A heuristic is a rule of thumb used as a guideline in decision-making. An example of a heuristic would be: 'red means danger.' Under most circumstances heuristics work in our favor, but occasionally these rules of thumb can become traps. A heuristic trap exists when rules of thumb based on familiar, but inappropriate cues leading to biased decisions and potentially catastrophic outcomes. Some examples are included in Table 1.

Table 1: Example Heuristics

Heuristic	Definition	Potential Bias
Familiarity	Tendency to believe behavior is correct to the extent that we have done it before	May reduce analysis of current situation elements
Social Proof	Tendency to believe behavior is correct to the extent that other people are doing it	Over reliance on assumption that what others are doing is correct
Commitment	Tendency to believe that behavior is correct to the extent that it is consistent with prior commitments	Over reliance on internal consistency in the face of external disconfirmation
Scarcity	Tendency to distort the value of opportunities we perceive as limited and to compete with others to obtain them	Over valuation of limited resources or opportunities
Satisficing	Tendency to choose the first option that works	Other options may be 'better'
DeMinimus	Tendency to diminish disconfirming information in defense of selected option	Vital disconfirming may be ignored

As part of the presentation, those in attendance participated in a simulation of a high-risk decision-making situation. Through the discussion, each of the heuristics and potential biases were highlighted. As well, strategies for maintaining SA were also discussed. These include meta-analysis of the situation: Are you thinking about what you are thinking and about what is going on around you? Actively question and evaluate progress and analyze your situation and potential for heuristic biases. It is also important to update and revise your image of 'what's going on' to maintain effective SA. When working in a group it becomes important to use assertive behaviors when necessary: make suggestions; provide relevant information without being asked; ask questions as necessary; confront ambiguities and anomalies; state opinion on decisions and procedures; and refuse unreasonable requests – It is OK to say No!

So in pursuit of the goal of training for enhanced effective decision-making there exist organic processes that may be used to further our student's progress toward expertise. The NDM model outlines the process we use naturally, simply put, and it would be to our benefit to access that process in training our students. As stated earlier, there are substantive differences in the way in which experts see and understand the world (at least in terms of their area of expertise) than what novices are capable of at their current stage of development. We can and should aid the novice's development in training by accessing their ingrained decision-making practices, while at the same time exposing them to the world that experts see. For example, an expert will see deeper and more complex patterns, and recognize anomalies. They understand the 'big picture' and have better understanding of the way things work due to more developed mental models. This helps the expert take advantage of opportunities and improvisations. Experts have a deeper understanding of the past and are better able to forecast future conditions. They appreciate small differences. Perhaps most significantly, experts tend to have better understanding of their own limitations. Klein (2003) states that all this comes down to the

fact that experts more effectively use pattern matching and mental simulation to generate early feasible options in their decision-making.

By sharing with our students that this is the end-state that we see for them, they can develop a better understanding of their own decision-making at a meta-level (Bruer, 1993). In opening this world to our students, we aid them in the development of their own expertise by involving them, and their inherent tendencies, in the process (Ewert, et. al., 2000). As Petzoldt (1984) noted, good judgment can be developed and our students stand to benefit through the incorporation of naturalistic decision-making in the development of their expertise.

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Building and Using Portable Ropes Course Initiatives

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Abstract

This experiential workshop utilized various portable ropes course initiatives that could be used in either the backcountry or classroom environments. Participants learned how a challenge course class researched and built various portable ropes course elements for one of their projects. This session included brainstorming and active participation.

Keywords: Portable Ropes Course, Teambuilding, Backcountry setting

A portable ropes course initiative consists of props and elements that are used for teambuilding, communication, leadership, and trust. Portable initiatives, sometime similar to permanent low ropes course initiatives, are usually made of ropes, wood, PVC pipes, material, or any other material that can be moved from one location to another. To be able to utilize various ropes course initiatives, it is important to understand facilitation. Facilitation is the process of working with a group as a leader, but not always leading. "Facilitators must create space for learning and understanding without having control over the outcome or a necessarily 'tightly' specified curriculum or learning outcome" (Allison, 2003, p. 23).

A key aspect to facilitation is the experiential learning cycle. This cycle has roots in beliefs of John Dewey (Rohnke, Wall, Tait, & Rogers, 2003). The experiential learning cycle includes the experience and then being able to process what occurred through a series of questions. These questions include the examination of "what" just happened, then reflecting on the experience by asking "so what" does that mean, and this is then applied to the situation by asking "now what" will we do with the learning or the experience (Rohnke, et al., 2003).

During the spring of 2004, a class at California Polytechnic State University in San Luis Obispo, CA was asked to create portable ropes course initiatives while taking REC X230: Challenge Course Leadership and Facilitation. The course description stated that the course included an examination of "Techniques and models used in challenge course leadership and facilitation. Students will learn leadership styles, challenge course technology, facilitation models, safety guidelines, and learning styles." This course was a 4-credit quarter class that had several assignments throughout the quarter.

The element construction assignment included student groups of 2 or 3 working together to build any portable element. Students were responsible for submitting a budget for approval prior to building the element. This entire project was funded by a teaching enhancement grant, offered through the College of Agriculture at Cal Poly. Students planned, organized, built, and then facilitated using their newly created portable

initiative. After facilitating their initiatives for their peers, the students also facilitated the initiatives during the Cal Poly Open House.

Various portable initiatives were demonstrated during the workshop.

Participants from the session then participated in a brainstorming activity - which asked the following questions:

- Which activities do you feel could be used in the front-country and the backcountry?
- How can we use the "natural environment" for creating elements? Is this LNT?
- Should challenge course elements be used on WEA courses?
- What activities have you done in the past in the wilderness?

The group felt that several of the initiatives (pass the penny, helium stick, all aboard, and lycra tube) could all be used in both the front-country and the backcountry. The natural environment can be used for creating elements by being part of the framing and debriefing, as well as using sticks, pinecones, or rocks in various portable initiatives. The overall feeling was that initiatives should be used on WEA courses and can be used in a way that is Leave No Trace. Various other initiatives and activities were discussed to be used in the backcountry setting.

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Expanding the Horizons of the WEA Legend

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Abstract

This workshop examined the WEA Newsletter, formerly the Legend, and recently changed to the Journal of the Wilderness Education Association. During the interactive workshop, participants examined past Legends and set standards and criteria for this new electronic journal.

Keywords: The Legend, WEA Newsletter, Electronic Newsletter, Journal of the Wilderness Education Association

During the 2005 National Wilderness Education Association in Estes Park, CO, the board of trustees approved a name change for the Legend to become the Journal of the Wilderness Education Association. This session examined the history of the Legend, looked at past issues, and made suggestions and provided direction for the new Journal.

In 2004, the newsletter became electronic to increase distribution and to save money for the Wilderness Education Association. Throughout 2004, receiving article submissions was still a challenge, but the newsletter was published on its scheduled timeline with articles submissions due on September 1, December 1, and April 1.

In 2004, a workshop was held at the National Conference to provide direction for the Legend. This is a list of some of the suggestions from the 2004 conference delegates:

- Standard Features:
  - Board/President/National Office updates
  - Outdoor Equipment Feature
  - Affiliate Feature and Student Feature
  - Instructor Update
  - News, upcoming events, celebrations

- Issue Stuff:
  - Case Studies
  - Book Review/Research Review
  - Member Profile
  - Paul Petzoldt Anecdotes
  - “The Campfire” – 18 point curriculum
  - “Ask the Legends”
  - Recognition

- Rotating:
  - Legal/Risk Management
  - Land/Resource Management Updates
  - Accreditation/Certification Issues
  - Wilderness Medicine Update

  - Reports/Updates from Profession at Large and other conferences
  - Field Application of Leadership and Decision Making

- Other ideas:
  - Gear Swap
  - Pro Deal Updates
  - Member Benefit Updates

At the 2005 conference, more suggestions were also made. The creation of an Editorial Board was formed and several individuals are interested in being involved with the Journal of the WEA in the future.

Horse Packing Do's and Don'ts

David Rogers
Garret Hudson

Abstract

The purpose of this presentation was to shed light on the various issues related to backcountry horse use and to provide some of the tools necessary for outdoor programs to organize horse packing trips that extend from minimum impact techniques.

Keywords: Backcountry, LNT, impacts, horses

> There is a taste to this place. This time. Nothing is behind you and nothing ahead. There is only now and now has you in the saddle, on a bay horse, heading up a trail of pines and spruce and mountain and stream and meadow. What an amazing thing to have an animal carry your hide up and over and through and far. And you grasp that here is the connection, the element that is everything: a partnership.
>
> -Tom Reed, NOLS Instructor

Horse packing is a beautiful and unique way to travel through our wild lands where a unique bond between a person, place and an animal can potentially be achieved. Horse back riding has been a long time part of our history and heritage (Wood, 2002). Back country horse use may remain a tradition as a means of enjoying and connecting with our country's wild lands if backcountry horse users continue to embrace minimum impact techniques and methodologies. The purpose of paper is to provide some of the tools necessary for outdoor programs to organize and coordinate horse-packing trips that extend from minimum impact philosophies.

Unfortunately, in many places, horse use in the backcountry has received a bad reputation. Increased restrictions have significantly limited the use of horses in some backcountry areas. These restrictions have occurred for a variety of reasons most often due to harmful impacts on the natural environment. One environmental issue is associated with caching where horse-packing parties have left or "stashed" camping gear and waste in the backcountry. Another issue relates to the ways horses have been corralled at camp causing harm to vegetation. Horse packers have also had a tendency in the past to take too many people and too much gear into the backcountry, which has increased environmental impacts beyond what may be considered acceptable. Currently, the most pressing issue involves the spread of noxious weeds.

In the opinion of John Morrissey from the Gunnison County Forest Service in the state of Colorado, these restrictions have most often occurred because of miss-use rather than overuse. He expressed that solving such problems is about continuing to educate backcountry horsemen and women and not about limiting the numbers of horse users. The use of horses in the backcountry has been going through and will continue to go through a transformation in order to better minimize its impacts on our wild lands and to hopefully change some of the current negative attitudes that have developed towards it.

In planning a horse packing or horse-back riding trip, open communication with outfitters about how to manage such environmental issues is a must. Again, in the opinion of John Morrissey, the three most important questions for a program coordinator to ask with regards to environmental issues related to backcountry horse use are: (1) How will horses be handled and managed in camp? (2) How will problems be handled that are associated with the spread of noxious weeds? (3) What is party size and how will that party travel in the backcountry?

Four other questions that the outdoor program coordinator may consider when organizing a horse packing program are: (1) Does the land have the capacity to accommodate the horse packing party without disrupting its natural rhythms? (2) To what extent are the areas we are traveling in considered fragile and to what extent are they considered durable? (3) What is the land's capacity for self-renewal? (4) Are actions being taken to aid in such renewal (Wood, 2002)?

In the opinion of Michael Cheek, the coordinator of the Leave No Trace program, working with outfitters, and those who have historically used horses in the backcountry as part of their livelihood, has become an increasingly sensitive issue as backcountry horsemen and women have been intensely scrutinized in recent years. All of this, combined with new regulations has caused much dissent among some commercial outfitters. Historically, it seems that many trail horse riders have been regarded and have regarded themselves as guardians of the wilderness. Many of these outfitters are sincerely interested in protecting the land and may already be familiar with minimum impact camping techniques or may be eager to learn. As coordinators of outdoor programs, these of course are the outfitters we want seek out.

When organizing horse-packing programs, it is important to conduct a site visit. Go and meet the outfitter. Discuss the specifics of the program that you wish to put together. Take a look at the horses to see if they're healthy. Find out if the outfitter has any references to investigate the quality of past programs. From those outfitters that we have talked and worked with, some have been well versed and understand the value of minimum impact techniques, some have never heard of it, but are open to new ideas, and of course some want nothing to do with it and see minimum impact techniques as a threat.

Paul Petzoldt was one of the first individuals to recognize that outdoor recreational activities have negative impacts on the natural environment and was one of the first to develop specific techniques to reduce such impacts. It has taken time for minimum impact techniques to mature into what they are today and these techniques have affected different user groups in different ways. It seems that backcountry horse users have been singled out and punished for what they have supposedly been doing wrong instead of recognizing that backcountry horse use is currently in a different part of the minimum impact process.

All of these issues present a variety of challenges to those who may be attempting to organize horse-packing programs. However, these challenges may be overcome with proper planning and communication and by working with outfitters who practice or who are willing to practice minimum impact techniques. The implementation of horse packing programs provides a unique opportunity for those associated with the WEA to contribute to this transformation of horse use in the backcountry in a positive light. By learning about and supporting the use of minimum impact backcountry travel and camping

techniques associated with horse use in the backcountry, those associated with the WEA can help in the continued growth of responsible land use as well as spread the word and practice of a sustainable land ethic to a larger variety of user groups.

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Whitewater rafting: A program organizer's guide to risk management

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Abstract

Whitewater rafting is exciting and great fun. There can be both skill-mastery- and teamwork-elements. In an effort to better understand raft-related risk, the safety data compiled by the American Canoe Association has been analyzed. This analysis provides an objective view of various program practices.

Keywords: Whitewater, rafting, safety, risk management

Many outdoor programs find that whitewater rafting is an excellent outdoor adventure element. Rafting is exciting and great fun; additionally, when participants are taught to row or guide, there are many skills to be mastered and teamwork is critical. Guided rafts are generally very safe craft; however, every year there are fatalities. The presentation was divided into three phases. The first phase reviewed the analysis of the ACA data and some of the lessons learned from it. The second phase showed a video of a rafting fatality that depicted many of the principles illustrated by the ACA findings. The last phase centered on a handout that listed twelve guidelines for increasing rafting safety. These guidelines reinforced the video and ACA analysis.

Analysis of the ACA Data

Especially interesting are results from the first three tables (see addendum):

- Many fatalities are linked to Class IV water, runs at very high water levels, and for those in self-guided rafts
- "Raft capsizes" and "rafters thrown out of the boat" are the most common causal factors
- Flush drowning is responsible for a very high number of fatalities.

Table 4 (see addendum) presents selected two-way results. When examining any of the data for Class V water, keep in mind that the total number of rafting river days in Class V is likely a fairly small fraction relative to days spent rafting easier rivers.

Some of the results which stand out are: (1) twice as many of the rafters thrown out of their rafts are coming from guided rafts, (2) flush drowning at the very high river levels is an especially common problem (keep in mind that most rafting is not taking place during these very high flows), (3) undercuts and sieves tend to be low-water killers and they are a major factor for those in un-guided rafts, and (4) un-guided rafts have a lot of problems relative to washing into holes.

Lessons Learned From the ACA Data

1. There are countless unknown, and even unknowable, hazards associated with the whitewater environment…rafts staying on line and rafters staying in the boat are both important in all whitewater environments. While looking at the fatality rate associated with difficult whitewater (Class IV and above) and high river levels, it is very important to not forget deaths can occur on fairly benign rivers at standard levels. The only certain solution to raft risk reduction is for rafters to stay in the boat and guides to stay on line while exercising good boat control.

2. While rafters have died as a result of swims on easy whitewater, swims on harder water are more dangerous. Quite a few people have died as a result of swims in Class IV whitewater. Being out of the boat in Class V whitewater is especially dangerous. As the difficulty of the water increases, so too does the importance of staying in the boat and on line.

3. High water makes both rafting and rescue difficult. As the water level increases on most rivers, boat control becomes more difficult to maintain. Waves, holes, and eddy lines become more able to push rafts off line, capsize rafts, and wash rafters out of the boat. At the highest levels, small lapses in boat control can quickly result in total loss of control, capsizes, or individual swims.

4. One cannot always depend on commercial rafting companies to define what is “too high.” Some companies may operate under various financial pressures, some are too willing to please clients who want to go rafting "right now," and others simply make mistakes.

5. There are a number of "lessons" hidden in the data…these are lessons that we have gleaned from some of the low frequency and very-questionable-behavior cases:

    a. Rafters over 50 years old have special problems dealing with very cold water and difficult whitewater swims.

    b. People with asthma have similar problems with very cold water and whitewater swims.

    c. Small adults and children often have a problem finding well-fitting Personal Floatation Devices (PFD); these people, when in ill-fitting PFDs, are more likely to have their PFDs washed off during a swim.

    d. Having your PFD come off during a difficult swim in whitewater generally results in death.

e. Paddling whitewater in a PFD that was not designed for whitewater (e.g., Coast Guard Type II PFD) is dangerous.
f. Wearing helmets in whitewater is a good idea. Additionally, good quality helmets designed for whitewater use are further recommended. This means, generally, a plastic helmet with closed-cell foam padding.

Video of Rafting Fatality

In the second part of the presentation, a power point/video of the New River fatality was shown to illustrate the findings of the first part of the presentation and as a lead-in activity for the third part of the presentation: the Twelve Guidelines for Improving Rafting Safety. The video showed a fatal accident in the Kenney Rapids. Some of the factors involved in the accident and shown in the video were: a) there was higher than normal water levels, b) the raft was out front of the rest of the group, c) the raft was no longer in visual sight of the other rafts in the group and the guide could no longer see the other rafts, d) the raft was under-manned, e) the guide was off-line and didn't make the move behind Whale Rock, f) four of six passengers swam, g) no assistance was available from the other rafts in the group, h) the guide rescued two of the group quickly, i) the victim, flushed onto Flint Rock, a strainer, where she died. In addition, the incident raised the question whether the incident was an isolated situation or whether it was representative of poor management practices by the company.

Twelve Guidelines for Improving Rafting Safety

The third part of the presentation covered twelve guidelines for improving rafting safety. The content of this handout is presented below. Examination of numerous rafting fatalities reveals a general scenario regarding rafting fatalities. First, the raft in which an accident or fatality occurs gets off track or off "line." There are numerous reasons for this including the inability of the guide to control the raft and keep it on course, inexperience of the raft guide, a river that is running higher than what the guide is normally accustomed to, etc. Next, one or more passengers fall out of the raft. This might occur when the raft goes through a hole or hydraulic, when the raft broaches on a rock or other obstruction, or when it flips on a powerful eddy line. Once a passenger is out of the raft and swimming in rapids, the probability of this person becoming a boating fatality increases dramatically. Hence, "the root of raft safety is really very simple. Rafts need to be in-control and on-line; and, there should be no swimmers. To achieve these goals, all one really needs are three operational guidelines: a competent guide, running appropriate lines, on reasonable rivers."

Also, the process works in reverse. Having a lot of swimmers on a raft trip is a potential indicator of guides being off line. If it is only one guide, it may call into question that guide's competence. However, if it is occurring across the board, it is a good indicator of potentially poor management practices by the rafting company since the company is responsible for establishing the procedures on the trip, for assessing guide performance, and for setting the tone of the trip while on the river. With this in mind, the following guidelines or suggestions are designed to assist you in assessing the general competence of a rafting company/guide.

1. Follow standardized routes. Think of the river as having a series of roads or routes through the rapids. Guides should know these routes and they should be able to keep their raft on the designated route. These routes may change with water level where some routes become acceptable and other routes become unacceptable with the change in water level. A raft that runs off the road is an indicator of a potential problem. There should be a continual evaluation of the guide's performance in adhering to these established routes (next item).

2. Evaluate the performance of the raft guides while on the trip. Often an excellent place to conduct an evaluation of guide performance is on major rapids where the group has set up rescue in case there is a mishap. In a choreographed progression, one raft after another negotiates their way through rapids. Evaluation becomes an easy process of comparison for the trained eye.

3. Establish procedures that minimize swims by passengers. When a victim is out of the raft, their chance of becoming a fatality increases significantly. Hence, the objective is to keep passengers in the raft and to minimize a swim once they are in the water. For example, keeping all rafts in sight of each other and when this is not possible, keeping the raft in front and behind in sight can greatly aid in minimizing swimming time of a victim. Setting up safety and rescue at the bottom of major drops and keeping passengers in the raft can greatly assist in reducing the swims of victims.

4. If swims do occur, minimize a swim once they are in the water. For example, keeping all rafts in sight of each other and when this is not possible, keeping the raft in front and behind in sight can greatly aid in minimizing swimming time of a victim. Setting up safety and rescue at the bottom of major drops and keeping passengers in the raft can greatly assist in reducing the swims of victims.

5. Under what conditions does the raft company not run the river? When a company won't run the river is often a good indicator in assessing the quality of their operation. For example, at what water level does the company cease commercial operations? Does the company increase raft size; does the company have serious requirements regarding prior passenger experience; does the company use only guides who have experience at the higher water levels; does the company double up on guides in the raft?

6. Increase perceived risks and reduce actual risk. This is a judgment issue. The nature of a rafting experience is that there are always risks associated with the activity. A good guide seeks to reduce the actual risks by doing many of the things already noted, including: following the correct route through the rapids, by being able to correctly read water, by coordinating the passengers into a cohesive paddling team, and by keeping an appropriate distance between rafts. At the same time, they often seek to increase perceived risks among the passengers by hyping the run through the rapids, or by seemingly to brush against inconsequential rocks in the river. In contrast, a poor raft guide often increases actual risks through their improper behavior. Examine the guide's actual river behavior to their hype while guiding. Assess whether their actual river behavior is actually risk enhancing or risk reducing?

7. <u>Consider the four competencies areas of a good raft guide</u>. In general, there are four skill sets of a good raft guide: a) river reading ability, b) paddling ability or good stroke mechanics, c) team building skills, and d) a client centered approach. A guide needs to be able to read whitewater and they need to have good stroke mechanics and paddling ability. Regarding team building, it is incumbent on the raft guide to take a group of non-paddlers and develop them into a team capable of paddling the river as a team. It requires the guide to call commands and to get others to assist in maneuvering the raft. This is very different from paddling your own craft. Last, in a client-centered approach, the guide focuses on the clients and making them feel as a valued member on the trip. Discussion on the trip focuses on where the passenger is at; not where the guide is at. Assess each of these competencies in the raft guide.

8. <u>A commercial trip is run differently than a private trip</u>. This may seem obvious but often guides don't make the transition in their attitude from private boater to commercial raft guide. As previously noted, the commercial guide seeks to stay on route as part of the group and to get their passengers safely down the river. Running extreme routes, surfing holes or waves may not be part of this experience. In contrast, the private boater is free to run whatever route they want. They don't have an obligation to the passenger. Assess this attitude within the guides and the company.

9. <u>A commercial trip is run differently than a contracted trip</u>. Often guides don't make the transition from guiding normal commercial customers to guiding passengers who come as part of a contracted group. Running routes designed to produce the best video or the wildest ride may not be consistent with the group's preference. At any given rapid there will generally be higher- and lower-risk routes. The higher risk routes provide a wilder ride but often increase the likelihood of swims. Groups contracting for raft experiences should consider requesting the more conservative routes. Often these milder routes only marginally impact the quality of the over-all experience while promoting the "stay in the boat, stay on line" ethic.

10. <u>Use proper equipment</u>. Just as cars range in their performance and handling capability, rafts do so also. Are the rafts of an appropriate size for the river? Are they self-bailing? Are they well maintained rafts or second hand used craft from another outfitter. Regarding passenger equipment, are passengers required to wear helmets? Are the helmets "cheesy" un-padded helmets or are they the type of whitewater helmets one sees kayakers using? Does the company supply properly fitting Type V life jackets? Note, that people weighing under 90 lbs (adults included) require different life jackets…some raft companies don't have an adequate supply of very-small and very-large life jackets. Are wetsuits required or optional and under what conditions are they required?

11. <u>Examine passengers for health conditions</u>. The impact of cold water, and other weather elements upon customers who have health conditions is often an underlying causal factor in fatalities. Asthma, heart conditions, people over 50 years old, and obesity

are often significant contributing factors in river fatalities. It may be necessary to modify, or even restrict, the activity for these individuals.

12. <u>Swimming in the river is just another activity; treat it like any other supervised activity</u>. Rafting companies often have places where the customers can jump off a rock into the water or where they swim a section of the river. This activity should not be confused with a swimmer who has fallen out of the raft. Some questions to consider are: Is the activity performed on a known stretch of river under known conditions? Have the hazards such as undercut rocks, strainers, or foot entrapments been identified? Usually, these are reasons to move the activity to another spot. Is there a large pool or calm water at the end to easily pull people out of the river? Did the guide swim it first to test for hazards? Is there a guide at the end with a throw-bag to rescue a swimmer if needed? Is there a guide supervising the entire activity? Note that even under the most controlled conditions, anyone attempting to stand in moving water is placing themselves at risk of foot entrapment. Swimmers must be taught not to try to stand in moving water…and those swimmers must exercise the discipline to follow instructions. People should be queried for health conditions that might interfere with the activity. Some use a planned swim as an activity to help assess the customer's comfort level in the water. Groups contracting for raft experiences should carefully consider the impact of managed swims on their over-all risk management plan.

Addendum I

Table 1. Frequency of Incident Antecedents

Variables	Frequency	Percent
Difficulty of the River		
Class I and II	9	8.7
Class III	27	25.7
Class IV	51	48.5
Class V and harder	18	17.2
Flow rate of the River		
Low and Medium	13	26.5
High	15	30.6
Very High/Flood	21	42.9
Was Raft Professionally Guided?		
Yes	41	38.0
No	67	62.0

Notes: percents reported exclude missing data.

Table 2. Frequency of Directly Causal Factors

Variables	Frequency	Percent
Raft Off-Line	10	7.9
Raft Capsized	50	39.7
Raft Pinned on Rock, Strainer, Bridge	14	11.1
Rafters Thrown Out of Raft	31	24.6
Raft Washed into Strainer	16	12.7
Raft Washes into Hole	18	14.3
PFD Came Off During Swim	9	7.1
Decided to Run Low-head dam	5	4.0

Notes: percents reported include missing data.

Table 3. Incident Results

Variables	Frequency	Percent*
Undercut Rock or Sieve	20	15.9
Flush Drowning	54	42.9
Victim Stuck in Strainer	16	12.7
Foot Entrapment	8	6.3
Entanglement in ropes, etc.	10	7.9
Hypothermia	16	12.7
Victim Washes into Hole	18	14.3

Possible Heart Attack	6	4.8

Notes: *percents reported include missing data.

Table 4. Effect of Antecedents

Class			Water Level			Guided	
1-3	4	5+	Low	Hi	V. High	Yes	No
Raft Capsized							
28	55	18	28	55	18	34	29
Rafter Thrown Out							
25	57	18	25	57	18	64	36
Flush Drowning							
17	64	19	26	22	52	41	59
Undercut or Sieve							
16	58	26	60	40	0	38	63
Washed into Hole							
18	71	12	27	36	36	22	78

Notes: Data are percents.

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Appendix: The ACA Data

What follows is the summary of all raft-related incidents reviewed by Walbridge (1986, 1989, 1992, 1996, 2000). Omitted are tubing and "duckie" incidents. Incidents involving Wal-Mart-like el-cheapo rafts are included.

1982 to 1985

1. Class III, Upper upper Gauley. Two small rafts. Capsized raft. Stranded on mid-stream boulder. Firefighter dies during routine rescue of rafters. Page 8.
2. Brookmont Dam, Potomac River, just above a Class IV+ section. Medium-high water level. People choose to run dam, five rafters die in backwash. Page 10.
3. Class IV, Black River (NY), medium water level. Guided raft. Guest fell out of raft. Flush drowning (68 years old and out-of-shape). Page 13.
4. Class IV+, Slippery Rock Creek (PA), very high water, rented rafts. Raft pins; entanglement in loose rope attached to the raft. Page 14.
5. Class V, Bio Bio (Chile), very high water, guided trip. Failed to run high-water sneak route. Guest fell out of raft; flush drowning.
6. Private raft trip, decided to run dam, died in backwash. Page 19.
7. Class IV, Ocoee River (TN). Guided raft. Guest falls out of raft, is run over by another raft while swimming. While being run-over the PFD strap snags on underwater rock and she drowns. Page 30.

1986 to 1988

1. Class III-IV, Lower Taos Box run of the Rio Grande (NM). Raft smashed into a large boulder, raft capsized, rafter had PFD strap snagged on the raft frame, he removed PFD to eliminate the entanglement, but did not survive the PFD-less swim. Page 12.
2. Horse-collar PFD comes off while a person attempts to salvage a raft which is pinned on a bridge pier. Person drowns. Page 13.
3. Class V, Royal Gorge, Arkansas River (CO), medium water level. Raft flips, flush drowning (no helmet). Page 18.
4. Rio Grande (TX). Inexperienced rafters in a rented raft. Raft hits rock and then flips. Flush drowning (one-boat trip, maybe hypothermia). Page 19.

5. Class II-III, lots of strainers, cheap raft. Raft swept into a strainer; rafters swim past strainer and end-up clinging to mid-stream rock for hours. Flush drowning or hypothermia. Page 33.
6. Class IV+, Elaho River (BC). Guided trip, very high water level. A 63-year-old guest collapsed, other guests panic, raft washes onto logjam, five die. Probably flush drowning, hypothermia, and maybe strainer deaths. Page 36.
7. Class V, Chilko River (BC). Guided trip, very high water. Raft pins on rock. Five die. Probably flush drowning or hypothermia. One-boat trip, no wet suits. Page 36.
8. Class V, Selway River (ID). Private trip. Raft flips. Flush drowning with possible head injury. No helmet or wetsuit. Page 44.
9. Four commercial raft deaths (page 47):
    1. Lower Yough, Class III, foot entrapment
    2. French Broad, Class III, undercut rock
    3. New River, Class IV, undercut rock
    4. Undercut rock
10. Class IV-V, North Payette (ID). Rower ejected from boat. Flush drowning. Not a Class V rafter. Page 50.
11. Class V, Lower Moose River (NY). Guided trip, high water. Broken neck when the guest was thrown from the raft and hit a rock. Near miss. Page 56.
12. Class IV, Tohickon Creek (PA). Private trip. Raft washes into hole. Inexperienced, no wetsuits. Hypothermia near miss. Page 59.
13. Rafter stranded for eight days after capsize. Alaska. One-boat trip. Page 65.

<u>1989 to 1991</u>

1. Class IV, Cheat Canyon (WV), private trip in medium water level. Raft flips in hole. Flush drowning. Inexperienced. Page 10.
2. Class V, Crystal Rapid, Grand Canyon run (AZ). Guided motorized raft. Motor dies in rapid. The guide dies of flush drowning/hypothermia. Page 19.
3. Class VI, Section 4 of the Chattooga (GA). Private raft. Raft flips in hole. Death due to undercut rock. Inexperience. Page 22.
4. Class II, Delaware River (NJ). Rental raft. Drowned in calm section. No PFD. Page 34.
5. Class III, Wolf River (WI). Rented raft, high water. The raft flipped. The paddler drowned while being held to the bottom of the river; possible foot entrapment. Horse-collar PFD came off shortly after the capsize. Page 52.
6. Wildcat Creek (IN). Private trip. Raft floats into strainer. Stranded rafters rescued by S&R. Alcohol involved. Page 66.
7. DuPage River. Private raft, high water. Raft flips and everyone is swept into strainer. Near miss. Page 79.
8. Class IV, Westwater Canyon (UT). Private trip in high water. Raft flips, rafter's PFD is entangled with the spare oar (which is tied to the raft). Near miss. Page 89.

<u>1992 to 1995</u>

1. Raft swept over dam; man drowns. Page 9.

2. Class IV, Lower Yough (PA). Rental raft. Inexperienced rafter becomes entangled in a rope he installed in the raft. Raft flips, man drowns while being "tied" to the raft. Page 13.
3. Class IV, New River (WV). High water, guided run. Guest falls out of raft and is pinned underwater in a large crack in a rock. Page 13.
4. Class IV, Cheat Canyon (WV). Guided raft flips, flush drowning. Page 13.
5. Class V, Upper Gauley River (WV). Guided raft. Guest falls out of raft, dies at undercut rock. Page 13.
6. Class I, American River (CA). Rented raft floats into strainer. Several swimmers. Two children die after their overly-large PFDs come off during the swim. Page 14.
7. Class V, Tuolumne River (CA). Private trip. Raft broaches, capsizes. One rafter dies: undercut rock. Page 15.
8. Class III, Klutina River (AK). Guided trip got caught in a pour-over and flipped. Flush drowning and hypothermia. Page 23.
9. Class III, Lowe River (AK). Private trip. Raft flips. Flush drowning or hypothermia. Page 23.
10. Class III, Shenandoah River (WV). Private raft at very high water. Hit big wave; raft flips. Died of hypothermia after very long swim. Page 34.
11. Class III+, Stanislaus River (CA). Two swim out of private raft. Undercut rock kills one. Page 36.
12. Class IV, Cataract Canyon (UT). Guided oar raft. Raft off-line, flips, flush drowning. Hypothermia and alcohol. Page 37.
13. Class IV+, North Fork American River (CA). Private high water trip. The raft pins on a rock; undercut rock kills one rafter. Page 38.
14. Class IV (VI), Salt River (AZ). High water private trip. Three paddlers and a raft end up in the Class VI Quartzite Falls. Two drown in the hole. Page 45.
15. Class II-III, Wolf River (WI). Rental raft. Raft washes up on rocks; rafter falls out of the raft while trying to unpin it; dies of foot entrapment. Page 51.
16. Class III, Marsh Creek. Private raft. Broached on logjam. One dead of strainer entrapment or flush drowning. Page 52.
17. Class VI, Deschutes River (OR). A navigational error while driving to the put-in resulted in a private raft trip putting in just above a Class VI drop. Two drown; horse-collar PFDs came off in the drop. Page 53.
18. Class IV+, Yuba River. Private raft flips in the first big drop. Two rafters were pinned for a bit under an undercut rock. One of these swimmers died after floating out from under the rock (unconscious).
19. Inexperienced rafters die in CA (page 54):
    1. No PFD, foot entrapment
    2. No PFD, floated into strainer, head injury
    3. No PFD, non-swimmer, raft flipped in Class I
    4. Raft flips, child of 11 drowns
20. Class V, Russell Fork (KY). Swimmer caught in ropes and debris. Page 60.
21. Otter Creek (VT). Private raft capsized, no PFDs. One dies. Cold and high water.

22. Class III-IV, Lochsa River (ID). Private raft. Raft hit rock, then wrapped. Rafter was entangled in rope (which was attached to the pinned boat) and drowned. Page 74.

23. Class III, Wenatchee River (WA). Guided raft pins on bridge pier. Two guests' legs were caught in the raft's perimeter ropes. They both drown. Page 75.
24. Class IV, Rio Grande (NM). Private trip, high water. Raft hit a hole, rafter ejected from raft. Maybe flush drowning or head injury. No helmet. Page 77.
25. Class III+, Ocoee River (TN). Guided raft. Raft hit hole; everyone fell out. One guest (70 years old) was face down after a short swim; he died. Page 81.
26. Class III (probably Class V on the day in question), Chattooga River, Section 3 (GA). Rental raft at flood level. Raft flips in large hole, victim floated into a strainer and drowned. Inexperience. Page 83.
27. Class V, Russell Fork (KY). Private trip. Off-duty guide fell out of his raft. Washed into an undercut rock and died there. Page 85.
28. Class IV-V, Chattooga River, Section 4 (GA). Rented raft, medium-low water level. Raft pinned on a rock, rafter thrown into the water, washed into an undercut and died. Page 91.
29. Class IV-V, Merced River (CA). Off-duty guide at very high water. Raft flips, victim is pushed into a strainer and dies. Page 93.
30. Class V+, Snake River (ID). Private trip, dangerous water level. Off-line run, washed into hole, flipped, flush drowning. Not a Class V boater. Page 95.
31. North American River (CA). Guided trip. Guests fail to follow paddle command, raft runs into a rock, guest falls out of raft. Flush drowning. Page 97.
32. Class III, Snake River (WY). Rented raft hits the one very large rock in the river. Boat pins on the rock and several paddlers fall out. Victim's PFD comes off and she drowns. Small woman victim (hard to fit correctly in PFDs). Page 99.
33. Class IV+, Arkansas River, The Numbers run (CO). Private raft at high water. Raft flipped in hole. Flush drowning or hypothermia. No wetsuit, one-boat trip. Page 100.
34. Class IV+, Duckabush River (WA). Private trip, cheap raft. Raft flips and washes onto a strainer. Two die. No PFDs. Page 101.
35. Guided raft deaths in Colorado, page 101.
    1. Class III, Brown's Canyon, Arkansas River, thrown from raft, one dies.
    2. Eagle River, raft flip, possible heart attack or flush drowning.
    3. Class III, Brown's Canyon, long swim results in a drowning, one-boat trip
    4. Class IV, Royal Gorge, raft flips, PFD came off
36. Nooksak River (WA). Private high water run. Raft washes into strainer; two killed. Page 103.
37. Class I-II, Guadalupe River (TX). Private trip. Rafter is straddling raft tube while paddling; while in this position, his foot gets caught in rocks. Paddler is pulled out of raft by his foot, foot entrapment, he dies. Page 104.
38. Class IV+, Cossatot River (AR). Private trip, low water, cheap raft. Raft flips, foot entrapment, one drowns. Also, a rescuer died of heart attack. Page 104.
39. Class IV. South Fork, Payette River (ID). Guided raft. Died of asthma attack after being thrown from a raft. Page 105.
40. Class IV-V, Animas River (CO). Private raft trip at very high water. Raft flips in Class V hole. Flush drowning. Page 105.

41. Class IV, Middle Fork, Salmon River (ID). Guided raft pins on a rock; guest gets tangled in a rope which was attached to the raft. Lost PFD before being cut free from the rope. Drowned. Page 107.

1996 to 1999

1. Class IV-V, Kern River (CA). Private trip, moderate water level. Paddlers dumped out of boat into river; washed into hole. Drowned. Page 14.
2. Dam, Vermilion River (IL). Rental raft, ran low-head dam, drowned in backwash. No PFDs. Page 15.
3. Dam, Patapsco River (MD). Cheap raft, ran low-head dam. Two drowned in backwash. No PFDs. Page 15.
4. Class III, Hudson River (NY). Guided low water run. Raft goes into hole, guest falls out, death after foot entrapment. Page 17.
5. Class IV, Brown's Canyon, Arkansas River (CO). Private trip on very high water. Raft hit large wave, paddler was washed out, flush drowning. Page 17.
6. Class IV, Numbers run, Arkansas River (CO). Private trip on moderate water level. Raft flips, flush drowning. Page 17.
7. Class IV+, Selway River. Private trip on very high water. Several people tossed into the water. One drowns (flush). Page 18.
8. Snake River (WY). Guided run on very high water. Raft flip. Flush drowning along with possible heart attack. Page 18.
9. Gallatine River (MT). Guided raft on very high water. Tossed from the raft. Flush drowning and very cold water. Page 18.
10. Class IV, Kennebec River (ME). Guided raft at high water. Victim fell out of the raft in the Alleyway. Flush drowning and possible heart attack. Page 18.
11. Class IV, Sunbeam run, Salmon River (ID). Guided raft at very high water. Flush drowning, very cold water, and possible heart attack. No wetsuit. Page 19.
12. Clark Fork River (MT). Private trip. Raft washes into hole; 2-year old flushed out of raft and died. Child was wearing an adult PFD. Body not recovered. Page 20.
13. Class IV, Kalkeetna River (AK). Private trip on very cold water. Raft pinned on rocks and flipped. Flush drowning and hypothermia. No wetsuit. Page 21.
14. Class III+, Lower Yough (PA). Commercial trip. Raft flipped at Dimple, victim washes into undercut and drowns. Page 21.
15. Class III, Natahala River (NC). Two rental raft customers die in separate incidents:
    1. foot entrapment at Natahala Falls
    2. raft hit rock, victim thrown into water, foot entrapment
16. Class II+, Lower Gauley River (WV). Guided trip. Fell out of raft and drowned. History of asthma; 52 year old victim. Page 26.
17. Class II-III. Toutle River (WA). Guided raft trip in high water. Raft broaches on rock, guests flush out of the boat and into a strainer. One dies. Page 36.
18. Class IV, Middle Fork, Salmon River (ID). Private trip in very high water. Raft flipped in a hole. Flush drowning/hypothermia. Page 40.
19. Class III+, Truckee River (CA). Guided trip. Raft hits rock, six people thrown into the river. One death due to heart attack or hypothermia. Page 46.

20. Class IV, Colorado River near Glenwood Springs (CO). Guided raft trip at high water. Big wave dumps everyone into the water. Victim washes into hole; flushes out dead. Page 53.
21. Class III, Payette River (ID). Private trip. Raft flips; horse collar PFD comes off. Victim drowns. Page 54.
22. Class V, upper Gauley River (WV). Guided trip. Raft hits rock, guests thrown into river. Swimmer refuses to swim aggressively to shore; washed into undercut and drowned. Page 56.
23. Class IV, Cataract Canyon (UT). Private trip at moderate flow. Raft flips in hole; flush drowning. Page 57.
24. Class IV, French Broad River (NC). Private trip at flood levels. Inexperience. Two drown. Page 66.
25. Class V, Illinois River (OR). Private trip at very high water level.
    1. Flipped raft in big waves; flush drowning.
    2. Missed eddy, swam, dry suit gasket blows, flush drowning.
26. Page 85. Collection of five CA fatalities:
    1. Tuolume River, Class IV, high water, guided trip, boat flips, flush drowning.
    2. S.F. American River, Class IV, private raft flips, off-line, flush drowning.
    3. Kern River, commercial, raft hits submerged log and flips, victim caught in strainer and drowns.
    4. S.F. American, Class IV, one-boat private trip, off line and hit hole, boat flips, flush drowning.
    5. Cosumnes River, flat-water. Raft goes over a submerged pipe which forms a dam-like hole. Entire party (three people) die in backwash.
27. Class III+, S.F. American River (CA). Guided trip at very high water. Raft flips on tough eddy line, swimmer floats into strainer and drowns there. Page 87.
28. Class IV, Rio Grande, Lower Box section (NM). Guided trip. Raft pins in rapid; another raft runs into it, one swimmer gets sucked into rock sieve and drowns. Page 90.
29. Class III, Arkansas River, Fractions section (CO). Guided raft at medium-high water. Large wave flips raft; flush drowning. Page 93.
30. Class III, Arkansas River (CO). Guided raft trip. Raft hits hole and dumps everyone in the river. Flush drowning. Page 93.
31. Class IV-V, Kern River (CO). Inexperienced rafters end up running a Class V+ drop. Raft flips. Two people sucked into sieve and drown. Page 96.
32. Class IV, upper run of the Ocoee River (TN). Private trip. Raft hits rock broadside, victim thrown into water, sucked into sieve. Drowns. Page 97.
33. Class IV, North Yuba River (CA). Guide trainee. Trainees are off route, raft flips, victim washes into undercut and drowns. Page 117.
34. Class III-IV, Clark Fork River (MT). Private trip. Raft hits big wave and flips. Flush drowning or hypothermia. The victim was 53 years old. Page 119.
35. Class IV, Green River (WA). Private trip in low water. Off line, fell out of raft, sucked into boulder sieve. Drowned. Page 120.
36. Class IV, Parkdale section, Arkansas River (CO). Guided trip on high water. Raft flips, flush drowning, cold water, 53-year-old victim. Page 129.
37. Class III, Salmon River (ID). Raft hits strainer, victim was thrown from raft, drowns in strainer. Page 132.

38. Class V, W.B. Penobscot (ME). Guided trip. Raft flips at Exterminator. After the swim, 56-year-old dies of heart attack. Page 133.
39. Class IV, New River (WV). Commercial trip at low water. Raft hits rock, victim falls out of raft, sucked into strainer-filled undercut. Drowns. Page 133.
40. Class IV, Westwater Canyon (UT). Private trip. Raft flips in hole, legs caught by loose rope attached to raft. Raft and snagged victim flush into the Room of Doom and the raft snags there. Victim drowns. Not a Class IV big water boater. Page 143.
41. Class IV, South Fork, Payette River (ID). One-boat private trip. Raft flips victim attempts a self-rescue by righting boat. Near flush drowning or hypothermia. Page 162.
42. Class IV, Dead River (ME). Guided trip. Raft hits big wave, several are thrown from the raft. Victim washes into a hole. Near flush drowning. Page 168

The Wilderness Education Association & Leave No Trace Center for Outdoor Ethics Integration of the Master Educator Curriculu within the National Standards Program

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Program Missions

The Leave No Trace Center for Outdoor Ethics is a national non-profit organization dedicated to promoting and inspiring responsible outdoor recreation through education, research and partnerships. Leave No Trace builds awareness, appreciation and respect for our wildlands.

Wilderness Education Association strives to promote the professionalism of outdoor leadership, improve the safety of outdoor trips, and enhance the conservation of the wild outdoors. The WEA promotes professionalism through the following strategies: certification, accreditation, affiliation, membership, program consulting, and research and development.

Definitions

Master Educators Course:

A Leave No Trace Master Educator course emphasizes skills and techniques essential to Leave No Trace minimum impact outdoor ethics and education. Leave No Trace courses do not teach basic travel, camping or other outdoor skills, nor do they provide outdoor instructor certification. A Leave No Trace Master course includes a minimum of four eight-hour days and at least three nights camping in the field.

National Standards Program:

The National Standard Program is a 21 to 35 day course, that is designed for those with minimal wilderness expeditionary experience who wish to become certified as outdoor leaders and/or pursue a career in the fields of Outdoor Leadership, Outdoor Education, Adventure Travel, Wilderness Therapy, or any field that requires a leader capable of planning, organizing, leading, and executing a safe and environmentally sound wilderness expedition. Graduates of the NSP are able to:

- Use and teach state-of-the-art minimum impact camping and travel techniques to move a group through the backcountry with minimal degradation to the environment;

- Exercise good quality judgment and decision-making skills within a leadership position to help avoid potential accident and survival situations;

- Recognize their own leadership abilities and limitations within the context of a group;

d. Demonstrate a basic standard of outdoor knowledge and experience based on the WEA 18-Point Curriculum;

- Efficiently travel in the wilderness utilizing a number of technical skills such as: kayaking, canoeing, mountaineering, canyoneering, snow travel, rock climbing, ice climbing, rafting, and glacier travel.

Proposal

The Wilderness Education Association is well situated to offer the Master Educator certificate at completion of a National Standards Program along with the certificate of Outdoor Leadership, to successful graduates. We, the WEA, feel that much of the Master Educator Curriculum is encompassed within the WEA 18-point curriculum. With some minor adjustments and more definition this will be an easy transition for our instructors. Outlined below are the Master Educator core curriculum components as well as the WEA 18-point curriculum and other subject areas taught on WEA NSP courses. Master Educator components are included in red font directly below the corresponding WEA curriculum point. For those Master Educator core components not covered by the WEA 18 point curriculum, a written description of how each of these components will be addressed at the latter end of this section.

Core Components for Master Course Curriculum

1. Review of the role of Leave No Trace Master Educator.
2. Discussion and practice of the principles and ethics of Leave No Trace.
3. Discussion of the Leave No Trace trainer concept and Training Guidelines.
4. Overview of recreation ecology and types of resource and social impacts.
5. Discussion of Leave No Trace teaching skills and techniques, student learning styles and development of lesson plans.
6. Development of a Leave No Trace action plan.
7. At least one student led teaching exercise by each participant.
8. Focus on interactive and hands-on field experiences.
9. Review of the mission and need for the Leave No Trace program.
10. A historical overview of the Leave No Trace program.
11. Discussion of the role, function and administrative structure of the federal land management agencies' Leave No Trace programs.
12. Overview of the role, function and administrative structure of the Center for Outdoor Ethics.

WEA 18-Point Curriculum

The 18-Point Curriculum provides the conceptual basis for all WEA courses. Developed through the combined work of many individuals in the WEA Committees, it represents the major skills and knowledge areas that a qualified outdoor leader should be able to effectively demonstrate. The concepts listed below form the basis for the academic content in the WEA National Standard Programs (NSP).

Judgment
Increasing one's ability to exercise good quality judgment in decision-making is the overall goal of any WEA program and underlies the 18-Point Curriculum. Judgment involves the ability to utilize a process, which enhances the probability of making a decision with a high rate of success.

Point 1—Decision Making and Problem Solving
Decision-making and problem solving strategies are critical skills for outdoor leaders. They should be applicable to a variety of environmental and social conditions. Leaders must be able to find viable solutions to real-life problems.

Point 2—Leadership
Outdoor leaders must possess leadership knowledge and be able to apply it in field settings. They must be able to apply safety standards, leadership skills, and environmental ethics in a variety of situations.

Point 3—Expedition Behavior and Group Dynamics
Expedition Behavior/Group Dynamics is a combination of several interrelationships: individual to individual, individual to group, group to individual, group to other groups, and individual and group to multiple users, administrative agencies, and to the local populace. The skillful practice of expedition behavior demands motivation, self-awareness, and other-awareness applied under varying group and environmental conditions. The following numbered points in italics refer back to the LNT Master points

8.Focus on interactive and hands-on field experiences.

Point 4—Environmental Ethics
There are both practical and philosophical bases of utilizing the wild outdoors with minimum impact. This area must be integrated with other curriculum points such as Basic Camping Skills, Cooking, Equipment, Natural History, and Health and Sanitation. Outdoor leaders must possess skills and techniques that promote minimum impact on the environment.

2. Discussion and practice of the principles and ethics of Leave No Trace.

4. Overview of recreation ecology and types of resource and social impacts.

11. Discussion of the role, function and administrative structure of the federal land management agencies' Leave No Trace programs.

Point 5—Basic Camping Skills
Integrated with environmental ethics, outdoor leaders have such basic skills as when and where to camp, fire safety and fire building, establishing shelter, basic cooking, the use of equipment, and how to animal-proof the camp.

8. Focus on interactive and hands-on field experiences.

Point 6—Nutrition and Rations Planning
Skilled outdoor leaders are able to adequately plan package and cook rations for a two-week experience. Knowledge of food cost, nutritional value, weight, and purchasing food are critical for outdoor leadership. Emphasis is placed on reasonably priced, nutritious, and personally selected foods which allow for variety in self planned menus.

8. Focus on interactive and hands-on field experiences.

Point 7—Equipment and Clothing Selection/Use
Assisting others with the selection, repair, and storage of equipment and clothing are essential leadership skills. Leaders must also be able to apply general principles to specific settings and conditions needed for participants to be comfortable and safe in the field.

8. Focus on interactive and hands-on field experiences.

Point 8—Weather
Outdoor leaders must consider cloud formation, basic weather forecasting, and the implications of the effects of weather on the comfort and safety of the group. This curriculum point also includes reading signs of changing weather and general characteristics of weather patterns in the specific region in which the group will travel.

Point 9—Health and Sanitation
The implementation of proper health and sanitation techniques is essential to the well-being safety and comfort of the wilderness user. The subjects of water purification disposal of human waste environmentally sound and sanitary dishwashing and preparation of food must be practiced. Environmentally sound health practices including bathing and laundry are also considered in this topic.

8. Focus on interactive and hands-on field experiences.

Point 10—Travel Techniques
Outdoor leaders can plan for the safety, comfort, and organization of the group while traveling. Pre-travel plans encompass time control, energy control, and climate control. Rhythmic breathing, walking techniques, and trail courtesy while hiking are common practices for effective leaders. Comparable techniques for other modes of travel are also utilized, when appropriate.

8. Focus on interactive and hands-on field experiences.

Point 11—Safety and Risk Management
Outdoor leaders have the skills to lead other safely in the outdoors. They take appropriate steps to prevent or minimize risks. They have knowledge of insurance of liability issues, programmatic and personal responsibilities.

Point 12—Navigation
Navigation is the art of getting from one place to another and understanding how it is done efficiently and safely. Map interpretation, use of a compass, and limiting factors such as weather, physical abilities, and group motivation are also encompassed in this curriculum point.

Point 13—Wilderness Emergency Procedures and Treatment
Outdoor leaders prepare for the prevention, assessment, and treatment of injuries common to outdoor travel. Specific skills covered in this curriculum area include treatment for broken bones, fatigue, shock, bruises, blisters, hypothermia, hyperthermia, and strains.

Point 14—Natural and Cultural History
Outdoor leaders have awareness of a site's natural and cultural history. They understanding the ecological integrity of an area, particularly flora and fauna, as well as unique geological features of the areas in which they travel.

8. Focus on interactive and hands-on field experiences.

Point 15—Specialized Travel/Adventure Activity
Depending on the particular emphasis and environment of each trip, outdoor leaders possess special skills in specialized modes of travel. These can include: mountaineering, backpacking, skiing, canyoneering, canoeing, kayaking, rafting, climbing ice and snow, climbing, caving, and other skills.

8. Focus on interactive and hands-on field experiences.

Point 16—Communication Skills
Included in this area are group development, communication skills, conflict resolution, group and individual problem-solving techniques, and learning styles. Included also are techniques for affecting group motivation and cohesiveness.

Point 17—Trip Planning
Outdoor leaders are able to prepare an effective plan for group outings of ten or more days. Factors tat must be considered include: physical abilities, the nature and size of the group, purpose and length of trip, terrain, and mode of travel.

8. Focus on interactive and hands-on field experiences.

Point 18—Teaching, Processing, and Transference
Effective outdoor leaders are able to teaching and model the techniques and skills necessary to travel safely and comfortably in the outdoors. They can also facilitate transference - the process of taking what is learned in one situation and applying it to other situations.

5. Discussion of Leave No Trace teaching skills and techniques, student learning styles and development of lesson plans.
7. At least one student led teaching exercise by each participant.

Master Educator core components that need to be added to the 18 point curriculum

1. Review of the role of Leave No Trace Master Educator.
3. Discussion of the Leave No Trace trainer concept and Training Guidelines.
6. Development of a Leave No Trace action plan.
9. Review of the mission and need for the Leave No Trace program.
10. A historical overview of the Leave No Trace program.
12. Overview of the role, function and administrative structure of the Center for Outdoor Ethics.

Curriculum Components to Be Added

On each sanctioned WEA course, there is a curriculum component on the history of the Wilderness Education Association. The History component covers the WEA's founders and their backgrounds. Next, the history covers the mission and philosophy that drives the organization. It also covers the grass root efforts to get the WEA off the ground and a time line of significant events. The curriculum explains where our national office is and how the national office can help them as potential certified outdoor leaders. Finally, a synthesis of what it means to be a Certified Outdoor Leader and how the WEA's history has contributed to defining our field is offered. Adding the following Master Educator Core Components to this section of the WEA curriculum—as well as adding how the partnership between the Wilderness Education Association and the Leave No Trace Center for Outdoor Ethics came to fruition—will be an easy addition:

1. *Review of the role of Leave No Trace Master Educator.*
3. *Discussion of the Leave No Trace trainer concept and Training Guidelines.*
9. *Review of the mission and need for the Leave No Trace program.*
10. *A historical overview of the Leave No Trace program.*
12. *Overview of the role, function and administrative structure of the Center for Outdoor Ethics.*

The final Master Educator Curriculum component is the integration of a Leave No Trace action plan. Students participating in the National Standards Program spend a fair amount of time doing reflective learning exercises. The Leave No Trace action plan will become a focused component of these exercises. Once the seven principles have been covered the action plan will be presented to the students to get them thinking about the bigger picture of what it means to be a Master Educator of the Leave No Trace curriculum. The action plan will be revisited several times throughout the course with the final result being a well thought out plan of action for each student to leave the course and be a productive advocator for Leave No Trace Center for Outdoor Ethics. The final action plan will be created concurrently with the NSP student evaluation.

Master Course: Course Leaders

The course leader for a Leave No Trace Master course sanctioned by the Wilderness Education Association must be a Master of Leave No Trace as well as a certified Outdoor Leader and either be employed by an organization approved to conduct Leave No Trace Master courses or retained by such an organization for the purposes of conducting a Leave No Trace Master course. A course leader should co-instruct one or more approved Master courses prior to serving as a course leader or, at a minimum, must successfully instruct at least two Leave No Trace Trainer courses prior to serving as a course leader. (Note: The substitution of teaching two Trainer courses is a less-preferred option intended to assist new Master Course providers in developing a qualified cadre of Master Course instructors.) The qualifying Master or Trainer courses must be co-instructed with a different Master than the one who instructed your Master Educator course. Leave No Trace Master courses should include a course leader assisted by at least one co-instructor. A course leader should have training and experience in outdoor leadership/instruction skills and maintain appropriate levels of emergency medical certification. At a minimum, the course leader should maintain a current certification in CPR and as a First Responder. If a course Leader or co-instructor must be replaced in the event of a last-minute emergency, and the Provider cannot locate a replacement that fulfills these criteria, the Center should be contacted immediately. The Center will offer assistance in locating a qualified leader from other Master course providers or land management agencies. In the event that this is not possible, the Center can grant an exception on a case-by-case basis.

Master Course: Course Co-instructors

The co-instructor for a Leave No Trace Master course must be a Master of Leave No Trace and be affiliated with an institutional or organizational member of the Center, the Wilderness Education Association agency partner or be an individual member. Co-instructors should have experience as teacher/trainers within their respective organizations, including instruction of at least one overnight Leave No Trace course. Co-instructors should have training and experience in outdoor leadership/instruction skills and maintain appropriate levels of emergency medical certification. At a minimum, co-instructors should maintain current certification in Standard First Aid and CPR. The ERC encourages, when possible, the presence of qualified agency-affiliated co-instructors on Master courses to provide participants with a perspective on the management and use of federally administered lands.

Integration of the Master Educator course into the National Standards Program Requirements

In order for a NSP course to include the Master Educator Curriculum the course has to be a minimum of 28 days in length. The current NSP options that would be eligible are:

Standard Course – 28 to 35 continuous days

2 + 2 + 2 option – two, two week trips in a two year period of time

2 + 1 + 1 option – two one week trips and a two week trip in a one year period of time.

Application of Leadership Theories in the Field: Examples from the Western Carolina University 2004 Teton Course

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Introduction

Outdoor leadership requires a wide range of competencies. In order to help students' leadership development, instructors need to have a broad understanding of leadership and its application in the field. The WCU Teton course used several theories pertaining to leadership. Data was collected from pre and post tests to ascertain if this WEA course affected students in transformational, transactional and non-leadership ways.

This paper then, introduces the transformational leadership and transactional leadership theories, which have received much attention in the business world. Bass and Avolio (1997) in their manual, Full Range Leadership Development: Manual for Multifactor Leadership Questionnaire add transactional and laissez-faire to transformational leadership which all can be measured in their Multifactor Leadership Questionnaire (MLQ) (Bass and Avolio, 1995).

Past theories used by the Wilderness Education Association have included Situational Leadership - which also has been mainly used in business, and aims also to "transform" followers to higher levels of leadership responsibility as their "readiness" levels increase. Situational Leadership theory corresponds well with group development theory and its use was linked to a Group Dynamics Teaching Model to provide a method whereby leadership could be taught in a systematic way. This was the Experiential Leadership Education method developed and tested on past WEA courses (Phipps, 1986).

On the 2004 Western Carolina University sixteen day Steward course in the Tetons, students practiced leadership through the ELE and WEA standard teaching methods such as using Leader of the Day, journaling, mid-course evaluations, and the eighteen point curriculum. Components of the ELE consisted of using the Expedition Leader Style Analysis inventory (Phipps, 2003) to illustrate students' dominant and "uncomfortable" styles. This detail was noted on a pie chart at the back of the students' field-book. Each day the students chose the four most important decisions that they saw and recorded them in a very structured journal format recording the situation, decision, judgment factor, style and whether it was task or relationship or both. These decisions were checked regularly as well as at mid-course evaluations by instructors to enable continuous assessment of students' decision-making processes. Elements of the Group Dynamics Teaching Model (Phipps, 1987 & 1991) were also followed, including setting group norms or expedition behavior, both conflict styles and management, and group roles etc. The Group Dynamics Questionnaire (Phipps, 1986) was used three times to assess group climate and specifically what needed to be addressed in the group process.

The students also took another test, the Multifactor Leadership Questionnaire as mentioned above as pre and post measurements to see if a WEA course using the ELE

method of teaching leadership would improve scores on this instrument. The MLQ measures aspects of transformational leadership, transactional leadership, "non-leadership" and outcome factors (all MLQ factors).

Transformational leadership according to Bass and Avolio (1997) is inspirational, intellectually stimulating, challenging, visionary, development oriented, produces maximum performance and is charismatic. They define Transactional Leadership as leadership that focuses on identifying mistakes, agreements, and contracts with rewards or other consequences. Laissez-Faire is regarded as "non-leadership. Outcome factors include extra effort, effectiveness and satisfaction.

Transformational Leadership develops needs from lower to higher levels of maturity and is used between associates, and bottom up besides top down. Burns (1978) stated that transformational leadership:

> Raises the level of awareness of the importance of achieving valued outcomes and strategies for reaching them;
> Encourages associates to transcend their self-interest for the sake of the team, organization, or larger policy; and
> develops associates' needs to higher levels in such as achievement, autonomy, and affiliation.

Bass and Avolio (1997) also suggest that it can encourage others to perform beyond standard expectations. However they add that transformational leadership does not replace transactional leadership, it augments it.

Transactional leadership is about intervening when standards aren't met - with disciplinary threats or by preventing mistakes. Bass and Avolio make the point that if all a leader does is focus on mistakes, the performance will suffer and that transactional leadership often fails because the leader lacks the necessary resources to deliver the needed rewards. They also suggest that the idea of just exchanging effort for specific rewards is insufficient as there needs to be some intrinsic motivation – which transformational leadership can produce. Burns (1978) stated that transformational leaders motivate associates to transcend their own self-interest for the sake of the mission. The five transformational leadership factors according to Bass and Avolio are:

> Idealized Influence – the leader is viewed in an idealized way (charismatic) but must develop associates as leaders. Idealized influence relates to both behaviors and attributes.
> Inspirational Motivation – shared goals, what is right and what is wrong
> Intellectual Stimulation – furthering of associates ideas
> Individualized Consideration – treating each individual uniquely to develop their full potential (mentoring or coaching).

The non-leadership factor is named Laissez-Faire, which indicates the absence of leadership, the avoidance of intervention, or both (Bass and Avolio, 1997). With Laissez-Faire (avoiding) leadership, there are generally neither transactions nor agreements with associates. Decisions are often delayed; feedback, rewards, and involvement are absent;

and no attempt is made to motivate others or to recognize and satisfy their needs. A sample item is: "The leader avoids getting involved when important issues arise."

'Extra Effort' in the outcome factors reflects the extent to which associates exert effort beyond the ordinary as a consequence of the leadership. A sample item is: "The leader heightens others' desire to succeed." Effectiveness reflects a leader's effectiveness as seen by both self and others in four areas: meeting the job-related needs of associates; representing associates' needs to higher-level managers; contributing to organizational effectiveness; and performance by the leader's work group. A sample item is: "The leader is effective in meeting organizational requirements." Finally, satisfaction reflects how satisfied both leader and associates are with the leader's style and methods, as well as how satisfied they are in general with the leader. A sample item is: "The leader uses methods of leadership that are satisfying."

Method

This was a case study with pre and post test measures using the MLQ to ascertain if there were any changes in the students' perceptions of the MLQ leadership constructs after this WEA course using the WEA and ELE leadership teaching methods (the treatment). The null hypothesis was that this treatment would produce no change in the students' self-perception on each of the MLQ factors.

In The MLQ Manual (1997) the following information is given. Raters completing the MLQ evaluate how frequently the leader engages in 32 specific behaviors and attributed charisma. A five point rating scale is used as follows:

Rating Scale for Leadership Items
0 = Not at all
1 = Once in a while
2 = Sometimes
3 = Fairly often
4 = Frequently, if not always

On average it takes about 15 minutes to complete the questionnaire. Detail of the MLQ factors can be found below under MLQ Factors and Instructor Observations in the results section. Many studies on many aspects of the MLQ have been completed. Alpha reliability was between .69 and .85 for the different factors for self raters though much higher for other raters (.74 through .94). Test-retest reliabilities ranged from .44 to .74 for self-ratings and from .53 to .85 for other ratings.

Paired two-tailed t-tests were used to compare each factor between pre-test and post-test scores. Additionally, pre-test scores were compared with those of the normative sample consisting of 1545 adults given in the Technical Report of the MLQ (Bass & Avolio, 1997), in order to see if students' scores were significantly different from the normative sample.

After the course, the authors studied the MLQ factors and described how some of these are actually a part of how we are currently teaching courses. The course was not changed in any way to fit the MLQ and was taught just as past courses have been taught.

A limitation of the study could have been the amount of time filling out the questionnaire (besides the ELSA) and the other WEA evaluations. However, students

were rewarded with a CD of course photographs and exotic candy. The conditions for filling out the questionnaires were good, warm and under shelter. Another limitation could have been that all the students except one (who had a social services master's degree) had already completed a semester long course using the ELE method (with a four-day expedition).

Results

MLQ Results

The null hypothesis for the difference between the pre and the post test score was accepted for all the MLQ factors except 'extra effort' and 'effectiveness.'

Table 1. Mean score results from the MLQ pre and post-tests

	Pre-test Mean (SD)	Post-test Mean (SD)	Mean Difference	t
Transformational Leadership				
Idealized Influence (attributed)	2.75 (.72)	2.89 (.66)	+ .14	.834
Idealized Influence (behavior)	2.86 (.57)	2.89 (.56)	+ .03	.225
Inspirational Motivation	2.93 (.19)	3.14 (.38)	+ .21	1.44
Intellectual Stimulation	2.85 (.56)	2.96 (.76)	+ .11	.60
Individualized Consideration	3.07 (.53)	3.10 (.43)	+ .03	.24
Transactional Leadership				
Contingent Reward	2.96 (.44)	2.79 (.47)	- .17	-1.26
Management-by-exception (active)	1.82 (.34)	1.96 (.17)	+ .14	1.00
Management-by-exception (passive)	1.39 (.59)	1.46 (.37)	+ .07	.40
Non-transactional Leadership				
Laissez-Fair Leadership	.89 (.71)	.85 (.71)	- .04	-.55
Outcome Factors				
Extra Effort	2.62 (.73)	2.86 (.74)	+ .24	2.50 *
Effectiveness	2.93 (.40)	3.21 (.39)	+ .28	8.00 ***
Satisfaction	3.21 (.49)	3.57 (.45)	+ .36	2.00

*<.05 sig., **<.01 sig., ***<.001 sig.

The comparison between pre-test scores and those of the normative sample found no significant differences. This implied that scores of the students on this course were similar to the MLQ population previously studied.

MLQ factors covered on the course

This consists of instructor observations of the course and how the various activities could have aided the leadership development in terms of transformational leadership, transactional leadership, "non-leadership", and outcomes. Detailed information on each of the factors from an example report Multifactor Leadership Report prepared for "Sandy Sample" (Bass and Avolio, 1998) has been used to lay out what

exactly is being looked for in these concepts. Descriptions of how this WEA course may have affected these concepts have been added next to each point.

Table 2. MLQ factors and Instructor Observations for Transformational Leadership

Transformational Leadership	Techniques Observed
Idealized Attributes	
Instill pride in others for being associated with them	- Promotion of other -directedness
Go beyond self- interest for the good of the group	- As instructors – role modeling. Also
Act in ways that builds other's respect	emphasized acting more civilized than normal
	- Practice playing roles of a leader and followers
Display a sense of power and confidence	- Practice LOD and getting feedback
Make personal sacrifices for other's benefit	- Not doing the final mountain
	- Helping with tasks such as bear bagging in bad weather
Reassure others that obstacles will be overcome	- During evening discussions
Idealized Behaviors	
Talk about their most important values and beliefs	- During and after self-introductions
	- Some of group norms/expedition behavior
	- Petzoldt's "new ethic"
	- WEA way
Specify the importance of having a strong sense of purpose	- Relating back to the Curriculum
Consider the moral and ethical consequences of decisions	- Some discussion on students' past behaviors
Emphasize the importance of having a collective sense of Mission	- The "WCU Teton Course" and past history, WEA mission/history
Champion exciting new possibilities	- Battleship Mountain (but did not go)
Talk about the importance of trusting each other	- Through practicing alpine techniques Moving roped on steep ground, sliding middleman on snow, and rappels with belays. Also hygiene when cooking together and food packing
	- Use of the idea of "distributed leadership"
Inspirational Motivation	
Talk optimistically about the future	- At evening discussions before travel days
Talk enthusiastically about what needs to be accomplished	- At evening discussion and some classes
Articulate a compelling vision of the future	- Leader must knows lecture near the end
Express confidence that goals will be achieved	- Curriculum goals but not all physical goals
Provide an exciting image of what is essential to consider	- The terrain, activities, and wildlife offered plenty of excitement
Take a stand on controversial issues	- Insisting on civilized behavior early
	- Confronting some behaviors
	- Allowing the group to decide the final climb
Intellectual Stimulation	
Re-examine critical assumptions to question whether	- Used the WEA way = There's no best way

they are appropriate	mantra. - Think and understand reasons behind decisions
Seek differing perspectives when solving problems	- When students were able such as some bear bagging and whether to do Battleship Mountain
Get others to look at problems from many different angles	- Battleship Mountain discussion - In general on all decision-making
Suggest new ways of looking at how to complete an Assignment	- Cooking, bear bagging, food re-supply and use of WEA/ELE methods
Encourage non-traditional thinking to deal with traditional Problems	- "No best way"
Encourage rethinking those ideas which have never been questioned before	- "No best way". Also use of WEA/ELE methods
Individualized Consideration	
Spend time teaching and coaching	- Throughout the course in physical skills, leadership skills, and group skills (WEA a and ELE – including Situational leadership and the Group Dynamics Teaching Model
Treat others as individuals rather than just as a member of the group	- Enabled by frequent one on one discussions through the journal technique (pouncing)
Consider an individual as having different needs, abilities, and aspirations from others	- Opportunities for practicing leadership roll as well as observing others' leadership - Battleship Mountain Discussion - Teaching how to recognize readiness levels
Help others to develop their strengths	- Developing mountaineering and leadership skills
Listen attentively to others' concerns	- Stopped by, frequently asking about concerns, Also at group meetings
Promote self development	- Whole course is about developing the person as a leader. In Situational Leadership terms, from R1's to R4's

Table 3. MLQ factors and Instructor Observations for Transactional Leadership

Transactional Leadership	Techniques Observed
Contingent Reward	
Provide others with assistance in exchange for their efforts	- Differentiated between NSP and Stewards
Discuss in specific terms who is responsible for achieving performance targets	LOD's and exactly what their mission was each day
Make clear what one can expect to receive when performance goals are achieved	- Certificate and grade
Express satisfaction when others meet expectations	- Verbal praise
Clarify what outcomes are expected	- Daily at meetings and during mid course evaluations
Deliver what is promised in exchange for support	- Certificate and grade at the end.

	Occasional Mars bars during the course
Management-by-Exception (Active)	
Focus attention on irregularities, mistakes, exceptions, and deviations from standards	- Through journals and "pouncing", group infractions and LOD feedback
Concentrate their full attention on dealing with mistakes, complaints and failures	- Instructor Effectiveness Questionnaire, Group Dynamics Questionnaire - Always requested feedback on problems at evening de-briefs
Keep track of all mistakes	- For grading purposes and mid-course evaluations
Direct their attention toward failures to meet standards	- At mid-course evaluations or before if necessary - Safety issues, health/sanitation, expedition behaviors
Arrange to know if and when things go wrong	- Explained during the initial Situational Leadership lecture that this is R4 behavior
Watch for any infractions of rules and regulations	- There were some policies besides agreed upon norms
Management-by- Exception (Passive)	
Fail to interfere until problems become serious	Did not observe any of these items
Wait for things to go wrong before taking action	
Show a firm belief in "If it ain't broke, don't fix it"	
Demonstrate that problems must become chronic before taking action	
Take no action until complaints are received	
Have to be told what went wrong before taking any action	
Non-Transactional Leadership	
Laissez-Faire	
Avoid getting involved when important issues arise	
Absent when needed	
Avoid making decisions	
Delay responding to urgent questions	Did not observe any of these items
Avoid dealing with chronic problems	
Fail to follow-up requests for assistance	

Table 4. MLQ factors and Instructor Observations for Outcomes of Leadership

Outcomes of Leadership	Techniques Observed
Extra Effort	
Get others to do more than they expected to do	- Definitely on the Teton course with the big loads, living on snow and alpine starts
Heighten others' desire to succeed	- To a point, but physical effort drained Some as we had too many consecutive long days
Increase other's willingness to try harder	- Up until the final couple of days when the the majority were too exhausted to do Battleship Mountain - Revisited expedition behavior and goals

Effectiveness	
Are effective in meeting others' job related needs	- Instructors supported LOD's perhaps too much now and again
Are effective in representing their group to higher authority	- The students felt that the instructors were approachable
Are effective in meeting organizational requirements	- We had all we needed at the right time in in the right amounts at the right place
Leads a group that is effective	- The group was effective at different levels as they could cope with some tasks better than others without help. Very effective in outdoor living skills and backpacking, needed more experience with mountaineering skills
Satisfaction	
Uses methods of leadership that are satisfying	- The Group Dynamics Questionnaires results reflected this
Work with others in a satisfying way	- The course evaluations reflected this

Discussion

The results were only statistically significant in showing increases in the two constructs, extra effort and effectiveness. However most of the groups' mean scores increased although they were not statistically significant with the exceptions of the Laissez- Faire score and the Contingent Reward which did decrease (though not significantly). The mean scores of the post-test for perceived outcome factors by these self raters was 2.9 (fairly often) in extra effort, 3.2 (fairly often) in effectiveness, and 3.6 (frequently if not always) in satisfaction. These scores are respectively in the 40th, 80th and 70th percentile of MLQ "other" raters (there are no percentile scores for self-raters) The 40 percentile is possibly a reflection on not completing the final peak due to the sense of fatigue at the end of the course. However perceptions concerning leader effectiveness and satisfaction score quite high in the percentile range.

All the other post-test scores are in the 60-70th percentile range as documented for other raters and considering that six of seven of the group were traditional undergraduate students, these could be regarded as quite high scores. The pre-test scores were also high, so the chances of statistically significant improvements were lessened. This group (except the one mature student) had completed a semester long course using the WEA and ELE techniques which was a three hour a week plus a four day expedition, followed by a detailed self analysis on Situational Leadership and Group Dynamics data. Although they had learned the materials prior to this course, it was heard from them that practicing those again in realistic situations helped their more practical understanding and skill development. The mature student had a master's degree in social sciences and was employed in a management level position. Perhaps students with no prior leadership education would respond to the MLQ quite differently on a pre-test.

With regard to the observed MLQ factors by instructors, there are several discussion points. Overall, many factors seem to be covered except in passive management by exception and laissez –faire. These two concepts would be very

problematic in expedition settings in wild country. They are not suggested in the business world for effective leadership either. The three other areas that were not observed were; instilling pride in others for being associated with us, displays of a sense of power and confidence (both under *idealized attributes*), and providing others with assistance in exchange for their efforts (under *contingent reward*). Instilling pride, this was not purposely done, but might have perhaps indirectly been achieved through WEA history, the use of Petzoldism's and the WCU history of Teton courses. Displays of sense of power and confidence were not planned in to the course. There has to be a sense of power and confidence toward instructors as seen by students going into an environment like the Tetons. This would be especially so in the snow environment which was new to all the students on this course where they have to learn many new skills in a very challenging and "foreign" environment. If an individual is trying to usurp the leadership in a group, then the instructor may well have to display a sense of power to put a stop to such behavior. This tactic was commonly used by Petzoldt, though sometimes over used. Paul's "Masai Chief" decision making related to this when he said it was a Masai Chief decision, that meant it was absolutely not to be questioned. There were no such encounters in this WEA course. The contingent reward, providing others with assistance in exchange for their efforts was not planned - as the WEA way is to provide assistance wherever it is needed unconditionally. There were examples of transactional leadership, but not passive management by exception. If there is a certificate or grade involved, then transactions are necessary with the associated feedback and corrections for students to reach the required level of skill.

Transformation Leadership is designed for long-term groups so some factor statements don't fit the short-term nature of expeditions but for the most part it is a very relevant theory as it gives an overarching philosophy. The philosophy is to transform associates (or in this, case students) to higher levels by motivation. Bass (1990), stated that "transformational leadership occurs when leaders broaden and elevate interests of their employees, when they generate awareness and acceptance of their purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group" (p. 21).

The appropriate MLQ factors for both transactional and transformational leadership can assist in the development of leaders. Many of these factors are used on WEA courses, especially if the ELE method of systematically teaching leadership is being used. However for the MLQ factors to be achieved, they need additional methods. For example, the use of leader style - which is paramount for motivation and the teaching of group skills to enable a high functioning group enabling a team to reach interdependence. The leader requires these communication skills and teaching skills to effect the *intellectual stimulation* and *individualized consideration*. Without the ability to successfully relate with the correct leader style or to meld the group with specific strategies, then these two components of transformational leadership would only happen where groups naturally coalesce - which would be a very rare occasion. So specific "tools' are required to make transformational leadership work. Hersey (1992) suggested that "For every job there is an appropriate tool. Hammers are great for pounding nails. You could also use a hammer to cut a two by four but it would leave rough edges. For that particular activity there is probably a better tool. To build effectively, you need a variety of tools and the knowledge of what they are designed to accomplish. The same is

true for leadership." (p.22). So, leadership education requires the tools as well as the philosophical aspects. The corollary is the same, leadership requires an overall philosophy or umbrella as well as the tools. Using the transformational and transactional strategies in conjunction with tools such as Situational Leadership and the Group Dynamics Teaching Model could produce overall a more comprehensive way to teach leadership development.

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Special Use Permits from Problems to Partnerships

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Workshop Outcomes

Participants Identified:

- ✓ Potential benefits of the special use permitting system.
- ✓ Issues and inconsistencies that educational organizations face in securing special use permits for public lands.
- ✓ Potential ways to organize and develop partnerships.

From the breakout group notes there was not necessarily agreement by all 26 participants, but the following were identified.

BENEFITS (at least theoretically) OF SPECIAL USE PERMITS:

- Helps create dispersed use.
- Fewer people can ruin trails an areas.
- Paying a fee for special use permits can promote ownership of the public lands. Generally, if you have to buy a permit, the outdoors will be better taken care of because it's your money.
- Safety of students is enhanced, if the operating plans are reviewed by the agency and are followed by the educational organization.
- Permits have the potential to create a baseline of use that everyone is working from.

ISSUES THAT EDUCATIONAL ORGANIZATIONS HAVE WITH THE SPECIAL USE PERMIT SYSTEM TODAY

- Lack of communication. It is very difficult for educational organizations to find out information about special use permits, how to apply, who to talk with, etc. When calling the field offices/ranger district offices, seasonal staff often give out incorrect information. Phone calls to the special use administrators (e.g., recreation specialists) are not usually returned in a timely manner, if at all. Workshop participants noted staffing inadequacies, which adds to the difficult situation.
- Lack of differentiation between education organizations whose mission is to teach safe, responsible, environmental and sound use of public lands and commercial outfitters whose purpose is to make a profit by providing experiences on public lands.

- Lack of defining who actually needs permits. Inconsistency between public lands agencies. Park Service, BLM, forest service have different definitions/criteria, even within the same agency depending on the area. Participants recognized that a single criterion would be extremely difficult to agree upon.
- Perception that there is a "good ole boy" network. Vendors and agencies manipulate the system. Paperwork is not followed up, things are not always as they seem. "New comers" are treated differently than "old timers," many of whom are commercial outfitters.
- Application/Review/Issuance
- Time constraints
- Classification system of commercial versus private versus educational. The same organization program is classified differently depending on the agency, the individual agency staff or the location. Some larger non-profit organizations are choosing to pay "for-profit" rates in order to get priority use; however, this may not be possible for smaller nonprofits, who are thus required to apply for annual temporary use permits.
- Some commercial outfitters do not (never) use all their authorized use, but will not relinquish it for others to use. This frustration was noted by several participants on rivers in the southwest, who cannot obtain authorized use.
- Fees are different for different agencies.
- Some agencies do not have a refund system for allocated use, if not used. This is a burden for nonprofit organizations.
- Colleges in places like Oklahoma should have equal access to federal public lands in other states, yet the system is even more difficult to negotiate from afar.
- Issues the agency recognizing/accepting self-insured universities and colleges.

POTENTIAL WAYS TO ORGANIZE PARTNERSHIPS

- Form WEA and AEE committees that will collaborate with AORE, NRPA, etc.
- Advocate a link to education organizations in the FS Outfitter Guide Handbook. Currently only commercial outfitters are listed.
- Keep smaller organizations, or those in states without local public lands, in the information loop.
- Create a website to post helpful agency contacts or information.
- Share opportunities with other organizations, if not using all of the authorized use. For example, the organization would need to facilitate the trip, increasing the cost of the other organization – but there might be creative ways to problem-solve.
- Organize meetings with agencies and other education providers in local or regional locations.
- Help educate agency officials about what other regions are doing to help solve this problem e.g., Region 8 proposal that universities don't need permits.
- Contact legislators and inform them of education organization problems on public lands.
- Potentially join commercial outfitter organizations.

Safety Protocol and Development for New Student Led Trip Programs

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Abstract

The presentation entailed open discussion on industry standards for safety and risk management protocols in developing leadership in student led trip programs. We discussed how to make a program better while still being feasible, with realistic requirements.

Introduction

To more fully understand a student led trip program, a lot of work needs to be completed by collecting the data needed for an infant program. This requires for the most part, talking to professionals in the field. Manuals are important and play a huge role in trip programs, but the foundation of protocols and development of new student led trip programs lies in the knowledge of well-experienced and highly trained professionals.

Outdoor Education at UVSC

Outdoor Education at Utah Valley State College in Orem, Utah, is in the beginning stages of development. The current situation is one where a faculty or staff member is required to be present on all trips that are conducted through the Outdoor Education Program. Student leaders often do not realize the benefits that are received when the responsibility of trip leaders is placed on their shoulders. This current method also exhausts the time and resources that faculty members are able to give and doesn't allow for the growth that could be seen if students were leading the trips by themselves.

One of the main difficulties with recruiting and retention of trip leaders is that all of the leaders are volunteers. Because intrinsic factors are the main source of motivation, it is an additional challenge to find those students who are willing and mature enough to be self-starters. Because of our location at the base of the mountains and so close to rivers, lakes, caves, etc. we know that we have the potential to be a world-class program.

Risk Management

Along with all of the other challenges that are involved in the creation of a student led trip program, the risk managers for the campus need to be convinced that Outdoor Education Program is aware of, and willing to be held accountable for all of the risks that are involved in putting students in the field with other students as their trip leaders. The risk managers need to know specifically what is happening in the program along with goals and purpose. A lot of confusion has come about, for example, the difference

between, a guide and a trip leader is great but restrictions are imposed because of misunderstandings.

Industry Standards

I was personally involved in the process of developing a student led trip program, starting as a beginning trip leader and later receiving a scholarship position as the Student Coordinator of the Adventure Trip Leader Program. The first assignment given to me was to find the industry standard for colleges, universities, and programs all over the country. I worked closely with Shayne Galloway, and Kim Reynolds who work as the Program Director of the Recreation Department and Program director of Outdoor Education respectively. I was able to talk with a lot of notable program directors from all over the country.

Our goal in talking to people from different organizations all over the country was to be able to see the requirements that other schools had for their trip leaders and compare that with qualifications that we want to set up for our trip leaders. Being careful not to copy other programs, we were able to use an outline of the industry standards to compare programs and to build a stronger case for our risk managers. As I talked to them I would establish a few things about their program: The required certifications, the different levels of trip leading, and the process that was gone through when they were first creating the program. I also inquired about the relationship that each program had with their risk management officials on campus.

Trip Leader Manual

One of the key things that I asked for at the end of the conversations with the program directors was their trip leader manual. We wanted other schools manuals so that, again, we could see what the industry standard for trip manuals is. We also wanted some ideas for organization of the manual and to see how specific we should get with certain directions that are given. It is again stressed that we do not want to by any means copy a manual verbatim, but by reviewing a lot of different manuals, we could see what works best for each one.

Creating and maintaining a trip leader manual is an ongoing process and will continually be changed and updated as we learn from our experiences and find different methods of teaching and leading that work better than what we were using before.

Trip Leader Progression

One of the most rewarding parts of being an administrator is to see that progress is being made by leaders on hard skills, soft skills, and meta-skills. A student led trip program should have an appropriate system set up to be able to handle the progression of the trip leaders. Usually a program is set up into three or four tiers that allow trip leaders to gain experience and skill while being tutored.

For the purposes of the presentation I used an example of a three-tiered system; Beginner, intermediate, and expert trip leaders. Within each of these levels are different requirements and certifications that need to be met before a leader can progress to the next level. Some of these certifications are: Leave No Trace, Wilderness First Aid,

Wilderness First Responder, and Wilderness EMT, as well as mountaineering certifications and white water certifications. There are many more and different kinds of certifications and each program is at the liberty of choosing the certifications that would work best for them. Some requirements are; the number of trips that have been led by that person, and the trip leader's ability to communicate and be involved in a well structured group dynamic. This progression needs to be outlined in the manual so that it is very clear how to progress.

Trip Leader Training and Development

When all of the groundwork for a program has been laid, it is now the pleasure of the program coordinators to train the leaders. This involves a lot of different techniques, with the foremost method being WEA's 18 point curriculum. With this in mind, graphs were created to compare the WEA's 18 point curriculum with other programs. Many colleges were right on track with the WEA and their standards.

Training can come from a wide degree of sources. Personal experience is extremely valuable, when it is combined with formal training and provides the knowledge necessary to use the experience in an appropriate way. Networking with other schools while at the WEA conference has been an invaluable source of ideas. I collected more feedback and contact information in the three days of the conference and specifically during the hour of my presentation than I did in a month a half on my own in Utah.

The WEA Conference

To foster some discussion and incorporate cross learning in my presentation, I separated the presentation attendees into three groups and gave them some open-ended scenarios of situations involving students at different levels of Outdoor Leadership who are interested in being volunteer trip leaders.

The scenarios were as follows:

Scenario #1

A highly trained senior with a lot of personal experience backpacking, climbing, and kayaking, but no experience leading or guiding other people. Outdoor skills are solid and knowledge of gear and techniques is excellent.

Scenario #2

An enthusiastic freshman with no training and little experience. This freshman has a lot of potential and a hefty case of YAMS. (Y A M S=Young Adult Male Syndrome). This young adult under the age of 26 has a much higher chance of dying or getting hurt from doing something stupid than does an older male or a male without YAMS.

Scenario #3

Shy but humble junior with moderate hiking and backpacking skills but poor communication skills.

With these scenarios I asked the participants the following question:

1. What is the fastest and most effective way to get these potential leaders to go into the field, teaching and leading?

a. Keep in mind that they are all volunteers.
b. We are assuming that resources are not available to send them through a WEA course.

The questions were answered accordingly:

Scenario 1:

- Put in assistant leader position, co-lead before becoming a leader
- Work in rental program and become more familiar with equipment get to know others in shop
- Do in house training as an incentive program
- Take leadership/outdoor education course
- Do a Wilderness 1st Responder training
- Evaluate/ test on manual requirements in the field as well as before leaving on trips
- Teach them about logistics.

Scenario 2:

- Ask YAMS to participate on a trip or two and the discussion that follows may facilitate interest
- Program requirements of training
- Possible fees involved in training
- Encourage leadership experience with other student groups on campus
- Encourage academic related courses (if possible)
- Hold a new staff retreat with old staff facilitating
- Complete certifications - WFA/WFR
- Gain experience – leadership and hard skills.

Scenario 3:

- Match with role model to understand self and need for communication skills (+ and of clear and un-clear communication)
- Understand their role in process and buy-in of areas for growth and plant to accomplish it
- Assign a peer mentor (senior) to walk with them in learning process
- Speak directly to the poor communicator and identify the roadblocks. What do you thing keeps you from fully and effectively communicating? Develop a plan for negotiating those roadblocks
- Need communication skills (role model, apprentice, etc…)
- Practice hiking and back packing skills
- Base line of protocols for checking skills (KSD's) - include a self-assessment.
- Give a script of small beginnings
- Have a process for being able to lead with people who compliment and challenge them
- Are there other requirements for certification?

Recruiting

Recruiting new trip leaders can be time consuming and challenging. Here are some ideas that were given during the presentation on how to recruit new trip leaders:

- Recommended by others and put before a panel
- Questionnaires in skills classes
- Peer Recommendation
- Trip Participants
- Slideshow presentation - meet the staff gatherings.

Conclusion

The creation and development of student led trip programs is a daunting task, but can be done very efficiently if the right tools are used, and if the program directors are willing to learn from other peoples' mistakes. It takes a lot of time and effort, but there are countless resources available to help anyone interested in the development of a program. The WEA conference was a very valuable resource for our program to communicate with other programs that are at willing to give and take any information that is needed to push the industry forward. It is definitely worth the work.

Navigating the Job Search Trail

William Sassani

Abstract

This presentation is meant to provide information to those searching for jobs in the outdoor field. This includes an overview of job search websites, such as AEE.org, Outdoored.com, and others. It also highlights opportunities in the Colorado/Rocky Mountain area of the U.S for employment and volunteering.

Keywords: jobs, searching, employment, internships, volunteer.

In today's market, finding a job in any field can be a frustrating experience. For those just entering the outdoor field, or those trying to transition to a new position, the process can also be frustrating. The purpose of this paper is meant to provide information on current sources of employment in the outdoor field. Hopefully it will spark ideas about positions not previously considered to those looking for a job.

The Federal government maintains data on the tourist sector in the United States. According to the Bureau of Economic Activity, total sales of tourism-related goods and services grew at a seasonally adjusted annual rate of 1.1 percent in the third quarter of 2004 to $973.3 billion (www.bea.gov). There is also a graph provided by the BEA that shows tourism related sales and employment from 1998-2004. Unfortunately there doesn't seem to be specific data for the outdoor field specifically, however, the data provided can still useful for determining overall trends. In the late 1990s employment and sales were both rising rapidly, and in the early 2000s had flattened out. But by the third quarter of 2001 both had fallen off sharply. Since 2001 there has been some gains, but with sales significantly higher than employment numbers. What does this mean to those looking for a job? Employers are making profits again, but by reducing costs, including employees. This means that job searchers must be creative and diligent in order to find a job. (www.bea.gov)

As one begins to look for a job, it is important to ask several questions. What do you want to do? Outdoor education encompasses such a large field, and there are many sectors, such as recreation, wilderness therapy, college programs, secondary education, government jobs, and more. Do you want to work full-time, part-time, or be a seasonal employee? Also, are you still in school, or have just graduated from college? Have you been out for a couple years? Most importantly, where to start? Two web sites to start with are www.aee.org (Association for Experiential Education) and www.outdoored.com. Both have job boards that are open to everyone and advertise many jobs in the industry. Other sites that perform a similar function are www.coolworks.com and

www.funjobs.com. These are sites that have information for seasonal work in the services industry, wilderness therapy, and more. Something to watch out for are links to the Outdoor Network. This site no longer exists, but there are still links that exist on some web pages. These links will only lead to a dead-end.

It can be difficult to find a job when you are younger and just entering the field. There are many opportunities to gain experience, boost your skills, and improve your resume. For instance, the U.S. government has many programs and opportunities to gain experience for those in the outdoor field. The U.S. Navy offers internships through its Morale, Welfare, and Recreation (MWR) program, where one works for a Navy program somewhere in the world delivering programs to military service members and their families. (http://www.mwr.navy.mil/mwrprograms/intern.html) In Colorado, the MWR program for Fort Carson offers an internship for students in the summertime, with training to be a whitewater raft guide.

Other government programs include AmeriCorps. This is a national, domestic service organization that has opportunities across the U.S. to work in partnership with local organizations to provide service to the community, some of which have an environmental or team building theme. It usually requires a one year commitment, and provides health insurance, loan deferments, and a $4, 750 education voucher that can be used to pay school loans or use to further one's education. (www.americorps.org) One particular program in Colorado is the Eagle Rock School in Estes Park, which is a school for students who have not been successful in a traditional school setting, and offers a wilderness component. (www.eaglerockschool.org)

There is also the inspiration for AmeriCorps, the Peace Corps, which offers opportunities to U.S. citizens to volunteer to help in developing nations. It is a two year commitment, and offers many of the same benefits as AmeriCorps, including international travel, language training, and preference hiring for Federal jobs (www.usajobs.gov) upon completion of service (www.peaccorps.gov)

Other opportunities with the government exist through the Student Conservation Association. This organization offers shorter internships with government organizations. It is also helpful to check with state and local authorities, such as state parks, forest service, recreation departments, etc.

Another way to gain valuable experience is working for summer camps and programs. These include the YMCA, Girl Scouts, Boy Scouts, church camps, etc. Many of these programs can be found at www.aee.org or www.outdoored.com. One camp in particular is Philmont Scout Ranch in New Mexico. This camp is considered the largest youth camp in the world, with over 137, 000 acres of land and over 20, 000 participants a summer. They hire for 1, 000 positions each summer, which include instructors for backpacking, climbing, teambuilding, historical interpretations, conservation, and more. Besides room, board, health care, and a salary for the summer, they also have a partnership with the University of New Mexico-Taos for college credits at a low cost. (www.scouting.org)

There is also a way to use the summer to get experience by being an intern for the National Outdoor Leadership School (www.nols.edu) and Outward Bound (www.obusa.com). Both have programs all across the U.S. and the world, and would be a great opportunity to gain experience.

But one doesn't have to wait until the summer to get their feet wet. There are plenty of opportunities to get experience working with youth and doing outdoor work by volunteering. Campus groups, youth groups, environmental education centers and more are always looking for motivated individuals to help deliver their programs. These groups are a great way to get some experience working with different populations and age groups.

In Colorado there are lots of organizations that need volunteers. The Colorado Fourteener's Initiative and Continental Divide Trailbuilding Alliance (www.coloradofourteners.org, www.cdtrail.org) are two trail maintenance and conservation programs. The Breckenridge Outdoor Education Center (www.boec.org) have an adaptive skiing program for those with disabilities. The Snowboard Outreach Society (www.sosoutreach.org) Big City Mountaineers (www.bigcitymountaineers.org) and City Wild (www.citywild.org) are outreach programs that provide outdoor experiences for youth from urban areas who may not normally have such an opportunity. The Colorado Mountain Club (www.cmc.org) also has volunteer opportunities through its youth education program, and also to instruct on club trips and courses.

While looking for a job, it is important to stay in touch with your network of contacts. These include professors, professionals in the field, and friends. It is also helpful to be a member in one or more professional organizations, as these also have resources for job searchers. A handful of organizations include the Wilderness Education Association (www.wea.org), the Association of Experiential Education (www.aee.org), the National Intramural Recreation Association (www.nirsa.org), and the Association of Outdoor Recreation and Education (www.aore.org).

To expand the job search, here are some more sites that may have job positions. These include: Boojum Institute (www.boojum.org), Naturalists at Large (www.naturalists-at-large.com), National Recreation and Park Association (http://nrpa.jobcontrolcneter.com), Touch of Nature Environmental Center (www.pso.siu.edu/tonec), American Camping Association (www.acacamps.org), North American Association for Environmental Education (http://eelink.net/eejobsdatabase.html), Back Door Jobs (www.backdoorjobs.com). Some outdoor jobs that are in demand now are the wilderness therapy field, government jobs, and working seasonal jobs.

But if things are slow going, and don't seem to be going the way you expected, here are some ideas. Many states offer an alternative teaching license, such as Colorado's Department of Education (www.cde.state.co.us/index_license.htm). Programs such as these allow people who have a college degree to teach in public schools while also earning a teaching license. Areas that are in demand are the sciences and math. Working for a non-profit, such as those found at www.idealist.org, can be a great way to get some work experience. There's also Starbucks (www.starbucks.com). Sure, it's not the outdoor field, but if you work twenty hours a week or more you get health insurance.

If you happen to have plenty of free time available, consider taking some classes at a local community college, such as in computers or education. You can also brush up on your outdoor skills by taking courses through a guide service. Read books pertinent to your field and stay current by subscribing to newsletters. Do you have a neat idea, such as a new way to teach cooking or teambuilding idea? Why not present at a conference?

Also, get out and play! The more places where you have biked, climbed, and paddled the more marketable you are to an outdoor employer, plus it's a great stress reliever.

In the end, what is the key to all of this? Having a combination of education, experience, and professional training will make you a very qualified potential employee. It is also important to remember to stay positive during this process. Rely on your support network of friends and colleagues whom you can bounce off ideas, and vent frustration. Your time will come!

Traps and Tips of Decision Making for Outdoor Leaders

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Abstract

This article describes how the intrapersonal processes of decision-making by outdoor leaders can be unconsciously influenced by a variety of decision making traps. These traps are associated with common decision making strategies based on heuristics, analysis, expertise, and random choice. Finally, an outcomes-based model is presented as a process for making decisions about broader curricular questions, such as when, where, and how to instruct the variety of outdoor skills imbedded into our college and WEA outdoor leadership courses.

Keywords: Decision making, Outdoor Leadership, Outcomes model

Setting the Scene

Put yourself into the following scene. It's day five of a 7-day backcountry expedition you are co-instructing as part of a university adventure education or Wilderness Education Association course. This is the second of three backcountry expeditions for the course. You have established a leader-of-the-day (LOD) routine, and today two students are leading your group of 11 (including two instructors) on a route covering eight or nine miles in mountainous terrain. It's a warm fall day, but you and your co-instructor have noticed signs of a weather change. The students have previously had instruction in map reading and compass navigation, including declination, and some instruction in mountain weather patterns. The group gets to a trail junction, where they have a choice of two trails—Bog Brook Trail, and Rainbow Trail. The trails are about 20 degrees apart, and the magnetic declination in this part of the country is 18 degrees west.

At the trail junction the LOD's ponder over the maps, take a compass reading, and other group members add their opinions, sometimes strongly, about which trail to take. The following conversation unfolds amongst the LOD's and other students (designated S 1, S 2, etc.). The co-instructors take notes about but are not involved in the conversation, using this as material for a subsequent debriefing about decision-making.

S 1: (Looks at LOD's and asks…) "Which trail do we take?"
LOD 1: "The blazes are this way." (- pointing to the Bog Brook trail)

S 2: (Looking at a map) "We want to head north."

S 1: "Both trails connect with the Appalachian Trail."

S 3: “That sign over there says ‘Rainbow Trail’ but the arrow on the sign sort of looks like it’s pointing between the two trails.”

S 2: “Signs can be ambiguous.”

LOD 2: “I’m going to check this out.” (Scouts a few yards up Rainbow Trail, then returns to the group)

LOD 1: (To LOD 2 who returned from scouting Rainbow Trail) “Any blazes?”

LOD 2: “No.”

S 3: “The blazes go this way. And this trail has more use, and it’s wider.” (pointing down the Bog Brook Trail). “I think we should go this way.”
S 1: Agrees.

Pause here for a moment. What assumptions are the students making, and what experience might they be basing these assumptions on? The conversation at the trail junction continues.

LOD 2: “Let’s look at a compass.” (Takes out a compass) “This trail’s going north, and we need to go north.” (- pointing down Bog Brook Trail)

The students decide to take Bog Brook Trail. Within a half-mile they meet a large group of other hikers coming from the other direction. The students ask this other group where they are coming from and where they are going. This other group says they are going to Rainbow Trail, the other option back at the junction from which the student group has just come.

S 1: “Hmm. If they’re going to Rainbow Trail, isn’t that where we should be going?”

LOD 2: (Looks at the compass and takes a hasty and imprecise bearing to try to determine which direction the trail they have been following is heading) “This trail is still heading in the right direction.” (- pointing down the Bog Brook Trail)
S 2: “We need to get this right, guys! We should go the other way!”

After some further discussion, the group turns around, goes back to the trail junction, and heads up Rainbow Trail, which is the correct choice. A half-mile up the trail, we take a break in a clearing off trail, sit down in a circle, and use our notes on the conversation to debrief the decision-making process.

What are some decision-making traps occurring here? How might an instructor utilize this field situation to help these students learn more about decision-making?

Intrapersonal and Interpersonal Processes in Decision Making

Ian McCammon (2004) explains that decision-making strategies describe how people take in information and turn it into a decision. Decision-making styles, on the other hand, describe how a group interacts in coming to a decision. So, in the decision making process, we have an interaction of intrapersonal process (strategies) and interpersonal process (styles) going on.

McCammon further points out that we like to think of ourselves as basically unbiased. We believe that the way we perceive the world is pretty much the way it really

is, the way everybody else also perceives it. But our perceptions are at least partially formed by subjective factors like our own experiences and expectations, our perceptions of our own skill level, our confidence, our unconscious insecurities, how we want to be perceived by our students, and so forth. In short, a lack of awareness of interpersonal and intrapersonal issues can create a huge blind spot in decision making for the outdoor leader.

The (sometimes) unconscious intrapersonal processes of decision-making, then, can lead the outdoor leader into a variety of traps. The student group at the trail junction, for example, utilized a heuristic decision making strategy that led them into a familiarity trap. They decided to take the wider trail that had blazes, because a wide trail with blazes was familiar to them. Perhaps an unconscious thought going on was, "Most trails we have been on have had blazes. This new trail also has blazes, that other trail has no blazes. Therefore, our trail must have blazes."

Table 1 outlines some common decision making strategies, along with the decision- making traps associated with each. For a more detailed description and examples of the decision-making traps, the reader is directed to the McCammon article, available in the referenced NOLS publication, which we utilize as a text for preparing outdoor leaders.

Table 1
Decision Making Strategies with Associated Decision Making Traps

Decision Making Strategies	Decision Making Traps

Heuristics → → → → → Simple rules of thumb. Convenient for novices.	a. Familiarity trap b. Acceptance trap c. Consistency trap d. Expert halo trap e. Scarcity trap f. Social proof trap g. Rules trap
Analytic → → → → → Goals are clear and defined. Complete information is available. Leader has experience to separate relevant from irrelevant factors.	a. Quantification trap b. Right answer trap
Expertise → → → → → Based on real experience and knowledge. Recognition of common themes.	a. Unconscious-incompetent trap b. Challenge/Boredom trap c. Popularity trap d. Certainty trap e. Harmony trap
Random Choice → → → → Time is short, consequences are minimal. Outcomes are similar or ambiguous.	a. Positive outcome trap b. Gambler trap c. Illusory causation trap d. Control paradox trap

The decision-making process has a number of unconscious processes occurring. The traps are often unconscious because it's uncomfortable to look at intrapersonal issues like a need to be liked (expert halo), or that we made a wrong decision earlier (consistency trap). So, elevating unconscious thought processes to consciousness is a useful tool for training outdoor leaders about decision making.

Adding the Accident Equation to Decision Making Traps

Alan Hale (1983) first proposed an accident equation in which the potential for an accident is the result of the interaction of human hazards and environmental hazards. Human, or subjective, hazards include attitudes, behaviors and skills (or lack of skills). Environmental, or objective hazards include the places the program operates, the activities undertaken, and the equipment used. Jed Williamson (in various publications) later expanded on this model.

Combining Hale's accident equation with an understanding of McCammon's decision-making traps yields an assessment tool that can be applied in the field. Before making a decision that will affect a group of students/clients, the outdoor leader can ask herself some questions. Better yet, have a discussion with your co-leader about these questions:

1. What human and environmental hazards are present? How dangerous is this situation for this group?
2. Which decision-making traps might be present? What are the unconscious factors that can obscure your ability to see the hazards? (Of course, lack of conscious awareness may in itself obscure the leader's ability to identify these unconscious factors.)
3. How do the hazards and the decision-making traps combine to suggest the best decision in this situation with this group at this time?

Applying this question sequence back to the scene at the trail junction, an experienced leader would see that students who are still learning their map and compass navigation skills suggests a human hazard, and the changing weather presents a possible subjective hazard that could impact the group. We've already noted that the familiarity trap occurred. Perhaps the acceptance trap was operating as well, where students will sometimes not question a popular peer, leader-of-the-day, or instructor even in the face of ample evidence they are wrong.

So, now we have a human hazard, an impending environmental hazard, and one or two decision-making traps. McCammon (2004) suggests counting the number of hazard clues present and adding this sum to the number of decision making traps that could occur to provide new insights about risk taking. Decision-making is seldom a linear, logical process, and the third question regarding how the hazards and decision-making traps combine, may allow exploration of some of the more qualitative dimensions of decision making. Perhaps in some situations the number of hazards and the number of decision-making traps should be multiplied rather than added together.

Let's apply these three questions to another, more technical outdoor situation with higher consequences. A group of individuals new to winter mountain travel relies for guidance on one of their members who does a lot of recreational rock climbing but lacks an avalanche assessment background We see at least two human hazards here. They traverse a fresh snow slope under a new cornice, while traveling on cross-country rather than metal edged backcountry skis, presenting, perhaps, three environmental hazards. To complicate matters, this group has witnessed three other skiers successfully travel this very route a half hour earlier.

Hopefully, this combination of an unskilled leader with novice individuals in a risky environment would not be occurring in an educational program. But, to illustrate the combination of two models, this group is falling into the social proof trap because they have just seen others engaged in the activity and thus perceive the risk to be low. "Nothing happened to them, so it must be safe for us." The individuals and their "leader" are also in the unconscious incompetent trap, because they don't know what they don't know. And the positive outcome trap may have grown out of the social proof trap because they assume that positive outcomes are more likely than negative ones. "I'll never get buried in an avalanche." What's more, the leader himself has fallen into the expert halo trap, or the students perceive the leader in such a way as to place the expert halo on him. This trap is the tendency to ascribe skills and knowledge to someone in one domain when they show expertise in another. "This person is a 5.12 climber, so they must know how to navigate in avalanche terrain."

An experienced leader analyzing this situation would identify the human and environmental hazards. In addition, she would see four decision making traps, for a total of eight or nine factors, adding up to a poor decision making process. Throwing in the fact that this group really is not conscious of many of the issues occurring, perhaps we should multiply rather than add the hazards and traps together, which results in a higher number, showing the added flaws in a decision making process for such a group.

Teaching Students Decision Making in the Field

The accident equation combined with information about decision making traps provides some useful strategies for teaching our students, aspiring outdoor leaders, about decision making. Having students read this article and the NOLS and Williamson references would be most useful following, rather than prior to, a challenging backcountry expedition. In this way we are utilizing the experiential learning model (Nadler & Luckner, 1997), which places experience (for example, making a wrong decision at the trail junction) before reflection (debriefing the experience and reading about decision making models, for example) and application to a new experience.

As instructors of the group in the example, we told the students at the beginning of the course that as they gain experience we will then be less involved in helping them make decisions. We want them to experience the consequences, both success and inconvenience and annoyance, of their decisions. We told them in advance that we may not intervene when they make a low stakes "wrong" decision, but that we will clearly say something just before they are about to walk off a cliff, or make a decision that has high stakes consequences. In the trail junction dilemma, we stood on the side and took notes of the conversations, aware that the worst thing that could happen would be that we would be hiking eight or nine miles in the wrong direction, maybe in darkness and rain. The group was well equipped to endure this challenge, if they had to. After the LOD's corrected their initial errors and returned to the junction to choose the correct trail, we took a break to debrief the decision making process. We lost an hour or two, but the students learned through direct experience about assumptions, decision making traps, and the value of becoming very precise in map reading, applying magnetic declination, and compass skills. To paraphrase Paul Petzoldt, we learn good decision making by first making some wrong decisions.

A proactive variation of the three-question process is again described by McCammon. In a "pre-mortem" decision making test, the group tests a decision that is about to be implemented by imagining the decision or plan failing. In this imagined aftermath of the failure, people point out the hazard clues they missed, along with the decision-making traps that would more likely be evident afterwards. Then ask the question, "What experiences are we basing this decision on?" They should be identifying domain-specific experiences, rather than gut feelings based on no similar experience.

The three questions above can be part of the decision making debriefing process, and, along with the pre-mortem test, can then be used by students before making subsequent decisions. Thus, the experiential learning cycle has progressed from the initial experience, a "wrong" decision, through the stages of reflection and generalization, the debriefing, to application of the three questions to a new decision making experience. Educating students to recognize and avoid heuristic and other decision-making traps provides a common language for debriefing and teaching outdoor leaders.

Outcomes-Based Model for Decision Making

We have been exploring some of the interpersonal and intrapersonal dimensions of decision-making, and how to bring these ideas into outdoor leadership education. But how can we have a clear process for making decisions about broader curricular questions, such as when, where, and how to instruct the variety of outdoor skills imbedded into our college and WEA outdoor leadership courses?

When planning a recent nine-day backpacking-based wilderness course, some students noticed how close the contour lines were on the map of the desert and canyon region we would be traveling through. The rock climbers in the group salivated at this topographic relief, shifting their focus now on climbing opportunities. But the course objectives focused on expedition travel, human skills (i.e. expedition behavior), professional skills, and to some extent on leadership skills. Does recreational climbing fit into these outcomes?

We can begin by specifying the desired outcomes, with the goal of providing experiences that take students to higher levels of mastery within each outcome set. Outcome sets include the following:

Technical skills
Educational (instructional) skills
Leadership skills
Human skills (i.e. expedition behavior)
Professional skills
Foundational (conceptual) skills

Then the course instructors and students can make decisions about the activity, site selection, and timing that best supports the delivery of those outcomes. Outward Bound (2004) includes some of these questions in a course management model provided to instructors. Most of us would choose action-based experiences in the wilderness as the activity and environment that best supports delivery of our outcomes. Experiential educators have sometimes been accused, however, of being experience-rich but theory-poor. Therefore, we must not neglect the place for reading, writing, and research in helping our students achieve mastery. This balance provides a more solid foundation for outdoor leadership students to make decisions that are informed by not only their own developing and often limited experience, but more broadly by the experiences and reflective thinking of other professionals beyond the students' immediate setting.

A question we can frequently ask ourselves, our co-instructors, and our students is, "Will this decision (about activity, site, timing) best help meet the desired outcomes (educational objectives) of our course/program/organization?"

Summary

Those learning outdoor leadership benefit by opportunities to make real field-based decisions, experience the positive and negative, but not fatal, consequences of those decisions, and then look back at both the domain-specific and unconscious intrapersonal factors related to their decisions. Decision-making strategies are often based

on heuristics, analysis, expertise, and random choice, and each of these strategies are useful when thoughtfully engaged in. But each strategy also brings some traps that the leader can fall into unknowingly. Raising awareness of these traps to a conscious level, through openness and de-briefing, can provide the student leader with an on-going process to make more informed subsequent decisions.

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Liability Escalation in Outdoor Activities

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Outdoors activity lawsuits have become more frequent over past several years. These suits are less common than lawsuits involving product liability or medical malpractice. When those involved are more aware, and prepared, the suits seem to be even less common. To that end this paper discusses five levels of liability based on the author's 50 plus years of observation and involvement in the outdoor activity industry.

The probability of a lawsuit and the likelihood of a judgment follow two theories. These are Negligence of Breech of Duty to Act and Potential Guilt Assigned to Lack of Proper Preparation. The concept of what is proper preparation, will have to be determined by the reader based on their own experience as this five level concept is probably not found in many (if any) other source. This paper lays out five levels of responsibility and negligence with regard to action or omission. Seven factors are discussed in a comparative manner for each of these five levels. This is probably a relatively new concept. Previously I have used this organizational structure to show expected liability perception by the public in three different outdoor cases where I was as an expert witness.

With each of the five levels, a definition and explanation of the level will first be given. This is followed with comparison of seven categorized factors found common to all five levels. This will be followed by two actual case examples. A preventive risk management tip is given to help those in the field minimize problems from other similar situations. A comparative summary of seven factors will then be listed. While the cases are real their identification is intentionally vague except for two very public cases. I will start with the lowest liability level of 'Friends' and move to the highest of Guide.

Friends

Often as simple as Bob calling Jim during lunch saying: "Let's go for a hike. I'll meet you at Castlewood Canyon in 15 minutes." Often there is no structure as to who is leader, i.e. who's in charge of supplies, food, or medical care. There are no requirements of training or skill level. A group consensus or one person with a dominant personality makes the decisions involved. There are often few decisions to be made with fewer expectations. The most complex decision may be "Do you want to get a beer when we get back to the cars?" Parties make their own arrangements for everything, e.g. food (granola bar) transport (drive car to park) equipment (bring own day pack), and permits (park day pass). If one is hurt there is no definitive plan, yet they will help each other often with no idea of how to give good care since they often have little training. A minimum of an eight (8) hour city first aid course is commonly found among outdoor folk.

An example of this is a pair of young boys in a western state who, while hiking, accidentally loosened a rock which rolled over a cliff hitting and killing a woman sitting

far below in "Overhanging Cliff Park." A lawsuit was brought on behalf of the deceased woman's estate with the end result being in the defendant's acquittal.

Tips *don't sit in areas with dangerous names. Be aware if there is an area below you and be careful not to dislodge or drop items*

A second example is of five cross-country skiers who split up when lost. The two strongest skiers left the weaker ones to fend for themselves. The weaker group ended up wandering for three more days under hardship. Friendships were lost, hundreds of man-hours spent in search, yet no lawsuit was filed.

Tips *Have an emergency plan. Rarely is it a good idea to split group into skilled and unskilled. Have a back up plan if sending a help party.*

1. Friends
   A. Organizational structure –rarely any
   B. Advertising - NONE
   C. Legal expectation of care - none
   D. Leader- by default, leaderless, or by strength of action
   E. Medical training-none required
   F. Activity purpose-determined by consensus
   G. Waivers, Hold harmless forms, Consents to treat minors, Acknowledgement of risk- None
   H. Probability of lawsuit with judgment in case of accident- almost non existent

Social groups are often loosely organized. A weekend or after work hike may be planned and everyone just shows up at a prearranged time or place for a quick hike, bike, etc. There are few if any requirements of training or skill level. A group consensus or an individual with a dominant personality makes the decisions involved. There are few decisions (turn back early due to weather) to be made with few expectations (every one will be ready to do the trip). If one is hurt there is probably an expectation of help from one known to have some training, yet no one is required to train or expected help the injured. The well-organized social group probably has some one designated as leader and caregiver who have at least a first aid course but there is no requirement or true standard.

An example would be a well-known mountain club who left a member lost and stranded following a trip. The member due to the temperature and being stranded lost several toes and was awarded more than $700,000 from the club and the trip leader. The clubs paperwork and training was below standard.

Tips: *Have all participants' complete waivers and hold harmless documents that represent the latest thinking based on current cases. Always do a head count*

Another example involves a mountain outing involving a father and son. The club provided meals. The son developed a case of "flu or food poising". He became violently

sick. The club had no medical care. The father treated the son who recovered. Waivers acknowledgements and hold harmless forms were not used. No legal action was taken.

Tips: *Encourage personal medical training leading to self-reliance, have a designated (experienced) medical person for outings. Use established sanitary procedures in food handling. Do use full paper work including waiver, acknowledgment, and hold harmless*

2. Social groups

A. Organizational structure – some custodial responsibility, more so if there is a charge and if services are advertised providing expectations
B. Advertising - rare but possibly in organization bulletin
C. Legal expectation of care - some depending on what is stated
D. Leader- minimal training in leadership
E. Medical training- minimal training in first aid often 8 hrs standard first aid
F. Activity purpose-stated, usually fun
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk forms. Possibly a waiver and hold harmless form kept on file for repeat activities
H. Probability of lawsuit with judgment in the event of an accident- Rare.

Camps have activities in an organized structure. Time periods for activities can vary from hours to days. Specialized activities are often involved such as swimming, archery, etc. This society seems to expect a higher care of young children vs. young adults so in some instances camps may be more liable than for college experiential educators. A private credentialing organization agency such as the American Camping Association (ACA) has become the standard for well-run camps. The ACA even has an accredited credential for camps - which Colorado has adopted by statute for all state camps. Most camps require training of their camper counselors in the medical field and counseling as well as other specialized skills. The minimum medical standard from the ACA is a 16-hour wilderness first aid course, which differs from more "city based" 8 hour first-aid class. This wilderness course is recognized from several sources by the ACA.

Camps are usually happy to have counselors with a Wilderness First Responder (WFR). The Waivers, Hold harmless, Consents to treat minors, Acknowledgement of risk- Medical history forms are often well done by the camps and sometimes are required to be signed by both parents. The emotional factors involved with children may cause a lawsuit where there is little logical reason or prevent one where there is reason. Either may occur without reason. Camps are seen as a safe place of fun for society's children and are expected to be well run. Camps usually have an on-site nurse, but the personnel are not expected to be professional level guides This is probably why the ACA decided on a 16 hour level of medical training which is more than just the average person, but less than a professional.

An Example: A young man with a known history of seizures was sent to camp. His parents didn't disclose his prior medical condition on the required medical form for fear of being denied space at camp. The young man ended up having a seizure and died at the remote camp. The parents explored the possibility of a lawsuit in an attempt to blame the death on poor staff training. The camp had well trained and qualified staff members, which actually helped prevent a lawsuit.

***Tips**: good documentation, including forms and well-trained staff prevent problems.*

A second example: A young person dies at camp of heart failure. This individual had a previously unknown congenital heart problem. No legal action occurred.

***Tips** Having a complete physical exam might have caught the signs of this condition allowing treatment and ultimately, the camper's survival.*

3. Camps

A. Organizational structure – Custodial responsibility- ACA standards and the law in some states
B. Advertising – some to noticeable in many places
C. Legal expectation of care- higher for youth than capable experienced adults
D. Leader- Most camps give leadership orientation to their staff
E. Medical training- Colorado 16 hours of wilderness first aid if 1 hour or more from base location WFR
F. Activity purpose- stated, established, advertised, structured
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk-medical history forms – most, but acknowledgement of risk weak or missing, the rest are often done the day of the activity. New forms are used, usually each time
H. Probability of lawsuit with a judgment in case of accidents- strong as society errs in favor of care to children.

Experiential Educators, including college field trips. College trips seem to have followed (improperly) a lower standard possibly because of an "Ivory Tower Effect" by which those leading the trips perceive themselves to be uniquely competent without knowing what is common in the real world. Many of these "guides" or "teachers" are noticeably improving and coming up to the standards discussed here. These folks are not true professional guides but a blend of guides and educators. Some do have some training in leadership, but their medical training is Intermediate Wilderness First Aid (24 hour minimum) to Wilderness First Responders. In addition they have special education knowledge such as leave no trace, history, geology, archaeology, sociology, anthropology, special skills, etc. These people are seen as professionals who educate and take care of the clients totally. There are a detailed course outlines, trip itineraries and often a true curriculum. Trip expenses are paid for in this often 'for profit' venue. Paperwork is done early and includes waivers, hold harmless, consents to treat minors,

acknowledgement of risk forms, and medical history questionnaires. Specific hazardous or adventure activities are often contracted to guide companies with that particular specialization. Participants may be from affinity groups or may be unknown to each other prior to the activity.

Example one: A college field trip with almost nonexistent preparations and training is taken. Students were encouraged to climb as high as they felt comfortable with. Several students ended up getting "rim rocked" (got up but could not get down). One student fell and was seriously injured. None of the staff were medically trained. No disclosure of hazards were made or signed. The university paid a large settlement.

Tips: *Have at least one WFR trained staff on each trip. Always have waiver and disclosure of hazards signed. Prepare students for trip hazards. Don't encourage or let students exceed their skill level.*

Example two: An outing is planned with high school students making an ascent of a 14,000-foot mountain including an overnight stay. During the trip, one male student who was overweight was having hard time getting to the base camp that was established at over 10,000 feet. A teacher with no medical training decided to wait till next morning to take any action with the sick and struggling student. The student died that night from HAPE and HACE. No lawsuit occurred.

Tips *Have at least one WFR trained counselor on each trip. Descend at once when serious symptoms and signs of altitude sickness appear.*

4. Experiential Educators

A. Organizational structure – custodial responsibility is usually very high
B. Advertising – is limited in school materials
C. Legal expectation of care – is high for youth and young adults (higher than for capable experienced adults)
D. Leader- should have some structured training but expected to be noticeable in education pursuit
E. Medical training- probably as high as professional, courts may allow slightly lower such as 24 hr WFA
F. Activity purpose- specifically restricted to activity of educational pursuits
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk, medical history forms are occasionally done the day of the activity. New forms are done each time
H. Probability of lawsuit with judgment in case of accident- noticeable and probably less strong than camps, as these folks are usually young adults who are expected to have some responsibility that children do not have.

Professional Guides are expected to do most all from a safety stand point for the client who hires them. They often belong to professional organizations and may have extensive training in their field. A current WFR is the standard for medical care. They are expected to have leadership skills and safety knowledge in local social aspects,

environmental considerations and the activities engaged in. They are often licensed by the state or country (in Europe). This is expected to be the height of a safe adventure activity. It is not required that the guide must risk their life to save a solo client. In multiple client situations the guide must preserve the group possibly with the loss of a client. The client is expected to pay a fair profit-making price for these services and hopes to have a safe outcome of the activity. There is discussion and debate as to the level of skill and fitness the client should have as not to endanger others including the guide. The outfitter service, which is often the guide, makes these fitness decisions intentionally or by default.

An example is a guide who had lawyer as a client. The client apparently became fatigued and was lowered off rock. Lowering sped up for unknown reason. The client had a hard landing and injured a leg. Suit was started. It is believed to have ended in a settlement.

Tips: *Lawyers for clients have proven to be more problematic than non-lawyers. Always check client's actual skill level and fitness rather than taking their word. Double-check all lowering belaying and rappelling set ups.*

A second example would be the several deaths and injuries following many unfortunate and unusual circumstances, which occurred, on Everest in the same storm including the deaths of two commercial trip leaders. No known legal actions occurred with these deaths.

Tips *Have back up plans. Have and follow "go no-go" plans. Superb commercial guiding staff (notably Neil Beildeman) was responsible for saving many lives.*

5. Professional Guides

A. Organizational structure – custodial responsibility is the highest level of responsibility since the guide is paid for the specific purpose of giving the safest experience to client
B. Advertising - often and in many places
C. Legal expectation of care - the highest
D. Leadership training is not usually required by any entity except the guiding service, however professional competence is expected
E. Medical training varies from 8 hours of first aid – a very low standard in state of Colorado to WFR for AMGA, and certain river operations (Royal Gorge, Grand Canyon, Class 1 Utah River Guides) and select organizations
F. Activity purpose- restricted to activity of discipline of guide
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk, medical history forms are all and done days in advance. New forms are used each time
H. Probability of lawsuit with judgment in case of accident is very strong as they paid money to a professional who must be at fault. Here is where exceeding

professional standards and superb documentation make the difference in winning or losing a law suit.

Five outdoor activity groups compared point by point in Outline summation

1 - Friends

A. Organizational structure - rarely any
B. Advertising - none
C. Legal expectation of care - none
D. Leader - by default, leaderless, or by strength
E. Medical training - none required
F. Activity purpose - determined by consensus
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk forms - none
H. Probability of lawsuit with judgment incase of accident - almost non-existent.

2 - Social groups

A. Organizational structure - some custodial responsibility, affected by whether there is a charge and if advertised what is stated
B. Advertising - rare but possibly in organization bulletins
C. Legal expectation of care - higher for youth but not as high for adults
D. Leader- minimal training in leadership
E. Medical training - minimal training in first aid, often 8 hrs standard first aid
F. Activity purpose - stated, usually fun
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk forms - possibly waivers and hold harmless forms kept on file if repeat activity
H. Probability of lawsuit with judgment in case of an accident is rare.

3 - Camps

A. Organizational structure – custodial responsibility (ACA standards and the law in some states)
B. Advertising – often in many places
C. Legal expectation of care - fairly high for youth not as high for capable experienced adults
D. Leader- Most camps give leadership orientation for staff
E. Medical training- Colorado is 16 hours of wilderness first aid. If one hour or more from the base location - a WFR
F. Activity purpose- structured, established, and advertised,
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk, medical history forms - most but acknowledgement of risk is weak or missing, the rest are often done the day of the activity. New forms are used each time.
H. Probability of lawsuit with judgment in case of accident - strong as society errs in favor of care to children.

4 - Experiential educators

A. Organizational structure - custodial responsibility usually is very high
B. Advertising - limitedly in school materials
C. Legal expectation of care - high for youth and young adults more than for capable experienced adults
D. Leader- should have some structured training but expected to be noticeable in the educational pursuit
E. Medical training- probably as high as a professional, courts may allow slightly lower such as 24 hour WEA
F. Activity purpose- specifically restricted to the activity of educational pursuits
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk-, medical history forms - occasionally are done day of activity. New forms are used each time
H. Probability of lawsuit with a judgment in case of an accident is noticeable. Probability is less strong than camps as these folks are usually young adults who are expected to have some responsibility that children do not have.

5 - Professional guides

A. Organizational structure - custodial responsibility is the highest level of responsibility since the guide is paid for the specific purpose of giving the safest experience
B. Advertising - often in many places
C. Legal expectation of care - the highest
D. Leadership training is not usually required by any entity except the guiding service however professional competence is expected
E. Medical training- medical training varies from 8 hours of first aid – a very low standard in state of Colorado to WFR for AMGA and certain river operations (Royal Gorge, Grand Canyon, Class 1 Utah River Guides) and select organizations
F. Activity purpose- restricted to activity of the discipline of the guide
G. Waivers, hold harmless, consents to treat minors, acknowledgement of risk, medical history forms – all, and done days in advance. New forms are used each time
H. Probability of a lawsuit with a judgment in case of an accident is very strong as the client has paid money to a professional who is often thought by the client and others to be at fault Here is where exceeding professional standards and superb documentation make the difference leading to a court win or loss.

The author Carl Weil, a 3rd generation outdoor guide, has performed approximately 2,000 risk management reviews in the outdoor industry mainly in North America. His experiences include working as a horse packing outfitter, youth camp director, outdoor school director, backpacking guide, climbing guide, hiking guide, as well as an outdoor risk manager and expert witness. He has experienced all the above categories written about.

In nine of the ten cases cited in this paper he was engaged as an expert for, or was otherwise involved with the case. He has worked with approximately 20 insurance companies from consultant to program designer. He has done approximately 2,000 outdoor business risk management reviews. He has been involved in over 100 cases, of which more than 50 have gone to trial or to the deposition stage. He is listed and widely used as an outdoor expert by the 3 most recognized groups; TASA, Defense Registry, and the Speak National Directory of Experts. He has for the for the past 14 years taught and still teaches outdoor medical care and skills, full time, in his position as director of Wilderness Medicine Outfitters. He was an active risk manager for 16 years prior to his current position. He has worked part time as an expert witness during the past 30 some years.

Notes:

1. AAC requires a minimum of 16 hr WFA for counselors of accredited camps (1998)
2. Colorado adopted AAC medical accreditation standards for all Colorado camps (2000)
3. American Mountain Guide Association requires WFR for Certified Guide status (1990s)
4. State of Utah requires WFR or equivalent for class one river guides (1990s)
5. State of Colorado only requires 8 hours 1st aid and CPR for river and hunting guides.