16TH ANNUAL
INTERNATIONAL CONFERENCE ON
OUTDOOR RECREATION AND EDUCATION

"Preserving the Past,
Protecting the Future"

ICORE 2002

hosted by:

Charleston County Park and Recreation Commission

Charleston, SC

PROCEEDINGS OF THE 16TH ANNUAL INTERNATIONAL CONFERENCE ON OUTDOOR RECREATION AND EDUCATION

ICORE 2002 hosted by

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Charleston, SC

October 24-31, 2002

2002 Conference Planning Committee:

Steve Hutton - Charleston County Parks & Recreation
Dr. Jenny Kafsky-DeGarmo - Brevard College
Audra McBride - University of North Carolina at Wilmington
Rick Harwell - U. S. Navy MWR

Proceedings Edited and Prepared by:

Raymond Poff, Ph.D. - Western Kentucky University
Steve Guthrie, Ph.D. - Unity College in Maine
Jennifer Kafsky-DeGarmo, Ph.D. - Brevard College
Tammie Stenger, Ph.D. - Southeast Missouri State University
Wayne Taylor, Ph.D. - Cumberland College

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The Association of Outdoor Recreation and Education (AORE)
2705 Robin St.
Bloomington, IL 61704

(309) 829-9189 Phone/Fax
www.aore.org

ASSOCIATION OF OUTDOOR RECREATION & EDUCATION
2705 Robin St ~~ Bloomington, IL USA 61704
Tel & Fax 390/829-9189
Email: gebaird@aol.com - **www.AORE.org**
~~~The definitive resource for the not-for-profit outdoor recreation and education profession~~~

Welcome to Charleston and the 2002 International Conference on Outdoor Recreation and Education: Preserving the Past, Protecting the Future!

In April of 1670, 93 passengers aboard the Carolina sailed up the Ashley River to Albermarle Point and founded Charles Towne. From that day forward, Charlestonians have prided themselves on overcoming adversity. Charleston's harbor, said to be formed where the Ashley and the Cooper Rivers flow together to form the Atlantic Ocean, has been fortified for protection during seven different wars. Natural disasters, including a major earthquake in 1886 and hurricane Hugo in 1989 have devastated the area. Arguably however, the greatest period of adversity began in April, 1861 with the eruption of the Civil War in Charleston Harbor. Throughout it all, Charleston, also known as the "Holy City" because of its more than 175 churches and reputation for religious tolerance, has endured and prospered.

With that rich history and tradition, Charleston provides the perfect setting for the Association of Outdoor Recreation and Education to hold this annual gathering. Today, ICORE remains the heartbeat of our Association, and during the next few days we'll join together to examine our shared history, and to help set the course for the future of both our Association and our industry.

To help accomplish that, the ICORE committee has coordinated no less than 10 days of workshops, certifications, trainings, meetings, socials, ceremonies and more. I encourage each of you to take full advantage of these opportunities. Try your hand at a new skill, introduce yourself to new students and professionals, join a committee or run for the Board. But most of all, ICORE is a time for each of us to reconnect with old friends, mentors and colleagues and rekindle our passion for what we do!

The success of every ICORE is dependent on a small group of volunteers who devote countless hours to bring this conference to life. This year is no exception. In addition to thanking the members of the Host Committee, we must recognize the contribution and support of all our sponsors, exhibitors and student scholarship recipients who are also integral parts of ICORE.

On behalf of the AORE Board of Directors and this year's ICORE Host Committee, I welcome you to ICORE 2002. We're excited to have you with us, and we hope you enjoy your time in Charleston!

Sincerely,

Steve Hutton
AORE President
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A Brief History of the International Conference on Outdoor Recreation and Education

1984: Bozeman, Montana. Sponsored and organized by the University Outdoor Programs from Montana, Idaho and Illinois, this was the first National conference devoted solely to non-profit outdoor recreation and education providers. In planning this conference, Mike Caveness met with ACUI and Ron Watters met with NIRSA, these organizations endorsed the conference and allowed the planning group to publicize the event at their annual meetings. Ron Watters met with Jim Rennie in May of 1984 and subsequently the planning team of Rennie, Watters, Caveness, Dudley Improta, Steve Johnson, Gary Grimm, Bill March, Tom Whittaker, and Jim Rogers was solidified.

Buzzing with energy and excitement, this early gathering, simply called the Conference on Outdoor Recreation, reflected the passions of a nascent field. It was enlightening and inspiring as much as it was delightfully contentious and unruly, as was the case during a heated and animated panel discussion on certification. There was always the feeling of camaraderie and optimism that outdoor programs had come upon a vehicle to share common interests and concerns. This first conference included many hands-on sessions, open discussions, and several sessions on programming for participants living with disabilities. 185 participants.

1986: Davis, **California**. Energized and committed to the early foundation set by the Bozeman conference, several Universities from California organized the second national outdoor gathering. The Davis conference added new dimensions, including a sobering dramatization of the court proceedings of an outdoor liability case and a trade show. It was also marked with light-heartedness. At one evening program, the field of outdoor education was parodied by an ad-lib comedy troop. The conference named evolved to: National Conference on Outdoor Recreation. Steve Leonoudakis, Dennis Johnson, Rodney Neubert, and Mike Caveness worked to organize this conference. Following this conference, Jim Rogers wrote an inquiring letter that gave rise to the question of organizing the group as an association. This letter started a series of discussions and debates over this issue that would last for seven years. 274 participants.

1988: **Fort Collins**, **Colorado**. Colorado State University continued the now emerging conference pattern. Remarkably, the Colorado conference, like the two previous conferences was not managed and supervised by an association, as are most other conferences. It was organized in manner of true common adventure, solely by cooperation and volunteer effort. In Fort Collins, as the other conferences, participants debated the formation of an Association, but on the whole, they simply wanted to network and work together cooperatively, unencumbered by the control of an outside authority. 304 participants.

1990: **Boone**, **North Carolina**. The first eastern conference was held in the beautiful Broyhill Inn and Convention Center on the hilly, forested slopes of the campus at Appalachian State University. At Appalachian State University, the Association of Experiential Education made a strong push to assimilate the National Outdoor Recreation Conference into their organization, but conference attendees once again demonstrated their inclination towards independence and declined the overture. During this conference, Dave Webb was recognized by his peers with the Outdoor Leadership Award. At this conference, there was also a great deal of discussion concerning holding the conference every other year or annually. Jim Rennie announced to the group that he planned to host the conference in 1991, starting the trend of an annual conference for our non-association. 303 participants.

1991: **Moscow**, **Idaho**. Returning to the west at the University of Idaho, the conference went through another name change. From its inception, the conference had attracted a strong contingent from Canada, and it now became known as the International Conference on Outdoor Recreation. At the 1991 conference, Jim Rennie was honored as the recipient of the Outdoor Leadership Award. 151 participants.

1992: **Calgary**, **Alberta**, **Canada**. Living up to it's new moniker, the conference headed north of the border and truly became international in scope. At the University of Calgary, conference participants could unwind after a busy day by bouldering on a climbing wall which, to everyone's amazement, was most conveniently located in the Outdoor Program Centre's office. Other participants unwound more unconventionally by taking a wild run down the Olympic Luge course. It was at this conference that participants authorized the formation of an Association Development Committee by a 2/3 vote of those attending to develop a plan to organize the group as an international association and identified conference sites for the next two years. In Calgary, the Outdoor Leadership Award was presented to Jim Rogers. 359 participants.

1993: **Corvallis**, **Oregon**. After nearly ten years of debate about the "A" word, the big step was taken at Oregon State University. The Association of Outdoor Recreation and Education was created by conference participants and became organized under the auspices of The Outdoor Recreation Coalition of America (ORCA). The Conference name went through one final change, becoming the International Conference on Outdoor Recreation and Education. In the initial meetings of the newly formed association, student voting became an important issue, task forces were developed to address issues of common concern, and Ron Watters was honored with the Outdoor Leadership Award. 166 participants.

1994: **Colorado Springs**, **Colorado**. For the first time, a branch of the United States Armed Forces, the US Army Community and Family Support Center hosted the conference. Attendees came from throughout the world and enjoyed one of the most memorable social gatherings of any of the conferences; a barbeque and hoe-down held at the Fort Carson Army Base in a huge tent, which, when the music started, quickly filled with the dust rising above the thunder of dozens of stomping feet. 320 participants.

1995: **Ithaca**, **New York**. Cornell University hosted the conference and decorated the Alberding Field House with live pine trees. Rising above the Alberding forest was the Linseth Climbing Wall, which was available throughout the conference for climbing. Presenting at the conference were some distinguished founders of the modern outdoor recreation movement including Paul Petzoldt, Josh Miner, and Royal Robbins. 319 participants.

1996: **Salt Lake City**, **Utah**. With striking views of the mountains surrounding A. Ray Olpin Union, the University of Utah graciously hosted the 10th ICORE. Featured speakers included Denise Mitten, Executive Director of Woodswomen, Inc, and renowned climbers/adventurers Conrad Anker and Doug Robinson. AORE presented the first Jim Rennie Leadership Award to David Secunda and the first Bill March Student Achievement Award to Russell Parks. 348 participants.

1997: **Merida**, **Yucatan**, **Mexico**. In keeping with it's international title, the 11th ICORE headed south to the beautiful city of Merida, capital of the state of Yucatan. It was a true international partnership with the Universidad Autonoma de Yucatan serving as conference host and the University of Nebraska- Lincoln handling the overall coordination. Visits to the Mayan ruins and the closing dinner and Folkloric Dance show made for an unforgettable conference. Tim Moore was honored with the Jim Rennie Leadership Award, and Brian Wilkinson was recognized with the Bill March Student Achievement Award. 110 participants.

1998: **Fort Walton Beach**, Florida. ICORE '98 came together October 20-24th in beautiful Fort Walton Beach, Florida with the Air Force Outdoor Recreation Community as the host. With the Gulf of Mexico sand dollar throw from the hotel, the 188 conference participants felt right at home. Early arrivals took part in three two-day training seminars and seven 1-day activities ranging from a deep sea-fishing trip to an afternoon dolphin cruise. The Opening Social and Awards Banquet was held at the Eglin AFB Officers Club located on scenic Choctawhatchee Bay. AORE's Jim Rennie Leadership Award was presented to Jim Fullerton, who served the Association as President, ICORE '97 coordinator, hard-working board member, and mentor to many in the outdoor industry. An emotional high point was Tom Whittaker's incredible multi-media session One Foot on the Road to Everest, covering his recent expedition. Spellbound and inspired, we shared a personal odyssey that took him from a "never walk again" prognosis to being the first disabled person to summit Mt. Everest in May 1998. The final day saw a lengthy and difficult membership meeting culminating in the decision for AORE to end it's five-year relationship with the Outdoor Recreation Coalition of America (ORCA) and form an independent, not-for-profit association. The closing social and Hawaiian Luau was held poolside in the courtyard replete with native, and not-so-native dancers. A selection of eleven different post-conference activities was offered to bring ICORE '98 to a close. 188 participants.

1999: Jackson Hole Wyoming

How fitting to hold the 13th ICORE in Jackson Hole, Wyoming, a conference dedicated to the passing of an old friend, Paul Petzoldt. The 13th ICORE was hosted by Clemson University and was held at the Snow King Resort. Attendance was a record high 350 and pre-conference workshops on LNT, WFA and Risk Management were full. The Association leadership reported on a year filled with changes that included a new management company and restructuring the AORE to plan for the future. Highlights of the conference included over fifty educational sessions, over 30 exhibitors, and an excellent keynote address by John Gans, Executive Director of NOLS. Robert Taylor, undergraduate student at Clemson University was awarded the Bill March Student Achievement Award and Rob Jones was honored with the Jim Rennie Leadership Award by the AORE. The conference was the one of the best attended in AORE's history, and the feedback was excellent. Snow King proved to be a superb location with its easy access to the Grand Teton National Park and the beautiful Jackson Hole area. 350 participants.

2000: Miami University, Oxford, Ohio.
If there's one word that can be used to sum up ICORE 2000, it is this: warmth. When participants arrived in Oxford, Ohio they were greeted by welcoming smiles, which set the tone for the rest of the conference. Throughout the conference, the atmosphere had a down-home, mid-western feel to it: friendly, kind-hearted and as comfortable and inviting as a steaming bowl of grandma's soup on a cool November day. It is also a conference that will remembered for its excellent planning and organization, and for one of the most diverse and busy programs of educational sessions ever.

Evening program speakers included Gudy Gaskill, the diminutive, powerhouse of a woman whose persistence and leadership for 27 years resulted in 500-mile Colorado Trail. The following evening Paul Piana, in a refreshingly unpretentious and light-hearted style, narrated a video of a big wall climb and had conference participants nearly rolling in the aisles with laughter.

In a dramatic moment on the final evening, the room was darkened, and a video flashed on the screen. To the score of Chariots of Fire, the video showed a blind man and his dog hiking the Appalachian Trail. The man stumbled and fell, but with help of his dog he rose and continued. And then again he fell, and again and again, but each time he would struggle to his feet and doggedly continue on his way. The video was turned off, the lights came on, and Bill Irwin and his dog Orient walked on the stage. The audience immediately rose to their feet and Irwin was welcomed by a long and thunderous ovation. It was an entrance and presentation few will forget.

These are just a few of the highlights. Of course, there was much more. Participants attended over 50 educational sessions. The pre and post workshops were busy, and the professionals and students networked and shared information. Indeed, the Oxford conference was a significant event in the field of outdoor recreation and education and a hopeful start to the new century. 384 participants.

2001: Pocatello, Idaho.
The 15th ICORE was hosted the Idaho State University Outdoor Program and Cooperative Wilderness Handicapped Outdoor Group (C.W. HOG). The conference theme, “Daring to be Different” was an attempt to bring awareness that including folks with disabilities in outdoor recreation programs could be more reward than liability. The unseasonable warm weather allowed conference participants to get outside to rock climb, kayak, and even construct a yurt in the mountains surrounding Pocatello. 85 educational sessions provided something for everyone. Keynote speakers Steve DeRoche, a double amputee and Mark Wellman, a paraplegic gave moving presentations of their accomplishments trekking, skiing and climbing in the mountains. An old barn style hoe down, complete with a Dutch oven feast, will be remembered for a long time by those that danced the night away. Jim Rogers was honored with the Jim Rennie Leadership Award, and Paul Meinersmann was recognized with the Bill March Student Achievement Award. 305 participants.

2002: Charleston, SC.
The 16th ICORE was hosted by Charleston County Park and Recreation Commission and was held at the Charleston Riverview Hotel. With a conference theme of "Preserving the Past, Protecting the Future", the historic city of Charleston provided the perfect setting for students and professionals to come together to examine our shared history, and to help set the course for the future of both our Association and our industry. Networking and professional development were again hallmarks of the conference, and highlights included 37 educational sessions, 23 hands-on clinics offered during the Festival of Outdoor Learning, keynote addresses by Dr. Dan Dustin and Mike Fischesser, 10 pre and post conference workshops, certifications, trainings and more! Jenny Kafsky-DeGarmo was honored with the Jim Rennie Leadership Award, Bridget Weikel was recognized with the Bill March Student Achievement Award, and Brigham Young University Outdoors Unlimited received the inaugural David J Webb Program Excellence Award. 336 participants.

AORE Leadership Awards

The Outdoor Network Leadership Award
(Pre-dating the Jim Rennie Award)

" For Excellence in Service to the Outdoor Profession in Facilitating Communication and the Sharing of Resources Between Outdoor Professionals."

1990	David J Webb
1991	Jim Rennie
1992	Jim Rogers
1993	Ron Watters

Jim Rennie Leadership Award

The Jim Rennie Leadership Award recognizes contributions to AORE which are far beyond the ordinary and which have had significant and lasting impacts on the Association and its mission or professional work or leadership of unusual significance in the field of outdoor recreation and education.

Jim Rennie started the University of Idaho outdoor program in 1972. He taught leadership programs for the University at-large and later moved on to become an adjunct faculty member of the University of Idaho where his classes focused on outdoor leadership. Jim authored many articles and presented workshops at industry conferences on the principles of outdoor leadership.

1996	Dave Secunda, ORCA
1997	Tim Moore, Miami University, OH
1998	Jim Fullerton, Idaho State University
1999	Rob Jones, University of Utah
2000	Greg Lais
2001	Jim Rogers, Illinois State University
2002	Jenny Kafsky-DeGarmo, Brevard College

Bill March Student Leadership Award

The Bill March Student Achievement Award is presented to an individual who makes outstanding contributions to an outdoor recreation and education program while pursuing an undergraduate or graduate degree.

Bill March served as the coordinator and Assistant Professor in Outdoor Pursuits at the University of Calgary. He was a renowned instructor and mountaineer who led the successful 1982 Canadian Mount Everest Expedition. His book Modern Rope Techniques remains required reading for knowledge hungry climbers.

1996	Russell Parks, Miami University, OH
1997	Brian Wilkinson, University of Utah
1998	No Nominations
1999	Robert Taylor, Clemson University
2000	Tim King, Southwest Texas State University
2001	Paul Meinersmann, Unity College in Maine
2002	Bridget Weikel, Southwest Texas State University

David J Webb Program Excellence Award

The David J Webb Program Excellence Award honors an outstanding non-profit outdoor program which has provided dynamic and innovative services to its participants, demonstrated professionalism and high standards of conduct, and contributed to the outdoor community at large by sharing information and assisting other programs.

David J Webb served Brigham Young University for twenty years, first with Outdoors Unlimited and more recently as the Wilkinson Student Center Recreation Services Administrator. David's professional passion was collecting and sharing institutional outdoor program information by authoring numerous professional articles, making conference presentations, and publishing his highly regarded Outdoor Recreation Program Directory & Data/Resource Guide. Regardless of institutional affiliation, David found commonalties between all not-for-profit outdoor programs, and no outdoor center was too small for David to visit or feature in his writings and presentations.

2002	Brigham Young University Outdoors Unlimited

The 2002 National Outdoor Book Awards

Ron Watters, Chair
National Outdoor Book Awards

2002 National Outdoor Book Awards

Abstract: Each year the National Outdoor Book Award program honors the best in outdoor writing and publishing. This paper includes general information on the program, a list of the 2002 winners, and reviews.

One of the eagerly awaited events at the International Conference on Outdoor Recreation and Education (ICORE) is the announcement of the winners of the National Outdoor Book Awards (NOBA). The announcement is a significant event for outdoor publishers and writers as well, for ICORE is the premiere national event at which winning books are first unveiled to the public and the media.

In support of outstanding writing in the field, the Association of Outdoor Recreation and Education (AORE) is one of the sponsors of the NOBA program. Other sponsors include the NOBA Foundation and Idaho State University. Sponsorship of the program provides AORE members with an important educational benefit in that they are able to keep up with the latest literature in the outdoor field.

The National Outdoor Book Awards (NOBA) nomination process begins with the announcement of the program in the spring of the year. Publishers and authors send their entries into the NOBA central office located at Idaho State University. All books are due by September 1st. Within three days of the September 1st deadline, books are cataloged, packaged, and sent to judging panels throughout the country. The backgrounds of the judges are diverse. Included on the panels are educators, academics, trade representatives, authors, book reviewers, and outdoor columnists. All of the judges serve without pay.

Judging takes place during September and October. Judges use a pre-printed evaluation form and independently score books based on a series of criteria. The best accumulated scores determine winning books. The names of the winners remain a closely guarded secret until they are announced at International Conference on Outdoor Recreation and Education.

Additional information on the awards program is available at the NOBA website: www.isu.edu/outdoor/bookpol.htm

The winners and reviews of the 2002 National Outdoor Book Awards are listed below:

Outdoor Literature Category. Winner. *Rowing to Latitude*. By Jill Fredston. Published by North Point Press, New York. ISBN 0374281807.

In her debut book, *Rowing to Latitude*, Jill Fredston emerges as a fresh new voice in outdoor literature: witty, touching, literate, bold and honest. She also emerges as a true adventurer. Pioneering the use of a recreational rowing shell, similar in shape and size to a sea kayak, she and her husband travel more than twenty thousand miles through the Arctic and sub-Arctic. This book is the story of those journeys, but intricately woven among them are the joys and struggles of her life. It's a marvelous book, one that will carry you away to the great hinterlands of the north latitudes.

History/Biography Category. Winner. *Gifford Pinchot and the Making of Modern Environmentalism*. By Char Miller. Published by Island Press/Shearwater Books, Washington. ISBN 1559638222.

Gifford Pinchot was the first chief of the Forest Service. To this day, his influence is still being felt on the policies which guide the management of lands used by hundreds of thousands of Americans for hiking, climbing, biking, fishing and other forms of outdoor adventure. Yet Pinchot is a controversial figure, the bad guy in a bitter battle with the great conservationist, John Muir. This eminently readable and erudite biography of Pinchot, the first in over forty years, reveals a much more complicated man, and sheds new light on Pinchot's contributions and place in conservation history.

History/Biography Category. Honorable Mention. *Arctic Crossing: One Man's 2,200 Mile Odyssey Among the Inuit*. By Jonathan Waterman. Published by the Lyons Press, Guilford, CT. ISBN1585747300.

This is the story of Jonathan Waterman's attempt to cross the Northwest Passage by kayak, ski, dogsled and sailboat. More than an expedition narrative, Waterman also writes about the history and his encounters with the native people of the north country, the Inuit. Backed by solid research and written in an introspective style, it's an illuminating portrait of one man and culture.

Design and Artistic Merit Category. Winner. *Wilder Mississippi*. Photographs by Stephen Kirkpatrick. Text by Marlo Carter Kirkpatrick. Design by Heidi Flynn Allen. Published by The Marvelous Works, Madison, MS. ISBN 0961935359.

No matter where you are--in the city, in an office, or in a bookstore in a busy shopping center--open this book to the first page, you're suddenly someplace else: to a place of quiet sounds, the flutter of wings, the rustle of a white tail, the drip of morning dew. This

is a book of subtleties, of elegance and of mesmerizing images of Mississippi's natural world. Stephen Kirkpatrick's brilliant and captivating photography is complemented with an equally captivating design. So carefully executed are the design elements that even the text of the book's subtitles resembles reeds protruding from the surface of a pond. It all comes together beautifully and harmoniously, a joyful pictorial hymn, celebrating the wilderness of Mississippi.

Design and Artistic Merit Category. Honorable Mention. *The Southwest's Contrary Land: Forever Changing Between Four Corners and the Sea of Cortes*. By Craig Childs. Designed by Mary Winkelman Velgos. Photography Editor: Peter Ensenberger. Published by Arizona Highways Books. Phoenix. AZ. ISBN1893860191.

For many years, Arizona Highways has been publishing colorful, high quality books of the Southwest--and this is one that excels both pictorially and textually. Craig Childs' sensitive and inspired text is supplemented by intelligent design and magnificent photography.

Nature and the Environment Category. Winner. *Down to Earth: Nature's Role in American History*. By Ted Steinberg. Published by Oxford University Press, New York. ISBN 0195140095

In this fascinating and ground-breaking book, Steinberg investigates American history from a new and unique perspective: from that of the natural environment. He argues convincingly that events as diverse as colonization, the industrial revolution, the civil war, the western gold rush and many others were shaped and influenced by nature. It's an important seminal work and one that leads toward a better understanding of the interrelationship of man and the environment.

Nature and the Environment Category. Honorable Mention. *Listening to Whales: What the Orcas Have Taught Us*. By Alexandra Morton. Published by Ballantine Books, New York. ISBN034543794

This, quite simply, is a wonderful book. Alexandra Morton makes a strong case for the orca's continued life on earth. She does this so remarkably well and in such an engaging style that you'll find yourself quickly drawn into the story of her life and research work with whales.

Nature and the Environment Category. Honorable Mention. *The Southwest Inside Out: An Illustrated Guide to the Land and It's History*. By Thomas Wiewandt and Maureen Wilks. Wild Horizons Publishing. Tucson, AZ ISBN 1879728036

This richly illustrated and designed book describes the earthly processes and events that shape the land and wildlife of the Southwest. The writing and research are excellent and there's something new to be learned on every page.

Children's Category. Winner. *Wild Wings: Poems for Young People*. By Jane Yolen. Photographs by Jason Stemple. Published by Wordsong and Boyds Mills Press, Honesdale, PA. ISBN 1563979047.

Wild Wings is a beautiful collaborative effort between author Jane Yolen and her son, Jason, the book's photographer. The images, both visual and verbal, can't help but engage a child's interest and nurture a desire to learn about birds. For ages: 10-12.

Children's Category. Honorable Mention. *Ladybugs: Red, Fiery and Bright*. By Mia Posada. Published by Carolrhoda Books, Minneapolis. ISBN 0876143346

Through verse and bright, colorful illustrations, children will delight in the tiny world of ladybugs. They'll learn something too as they watch them grow from small larvae with long, skinny legs into bright and beautiful red beetles with shiny black spots. For ages: 3-8.

Nature Guidebook Category. Winner. *Lichens of North America*. By Irwin M. Brodo, Sylvia Duran Sharnoff and Stephen Sharnoff. Published by Yale University Press, New Haven. ISBN 0811726967

When you spend time in the outdoors you'll see them: rocks with crusty patterned growths of orange and yellow, trees with dangling, wispy dark green beards, and forest floors laid with a soft, creamy, moss-like carpet. They're lichens and this is the book to use to identify them: the first definitive guide to lichens in North America. It's a masterpiece of imagery, text and science. Be prepared: it's comprehensive, nearly 800 pages long, but the authors and publisher have carefully designed it to be useful to all, specialists and novices, alike.

Nature Guidebook Category. Honorable Mention. *Bird Tracks & Sign: A Guide to North American Species*. By Mark Elbroch and Eleanor Marks. Published by Stackpole Books, Mechanicsburg, PA. ISBN 0811726967.

Bird Tracks & Sign is an innovative, major new contribution to the study of North American birds and is destined to become an indispensable reference.

Outdoor Adventure Guidebook Category. Winner. *Hiking the Sierra Nevada*. By John Mock and Kimberley O'Neil. Published by Lonely Planet Publications, Footscray, Australia. ISBN 1740592727.

Hiking the Sierra Nevada is a user friendly, rock-solid guidebook with clear writing, useful topographic maps, inviting photos, and it's conveniently sized to fit in the side pocket of your pack.

Outdoor Adventure Guidebook Category. Honorable Mention. *Alaska: A Climbing Guide*. By Michael Wood and Colby Coombs. Published by The Mountaineers Books, Seattle. ISBN 089886724X.

If you're planning a climb in Alaska, this is the book to consult. Nicely designed and well-written, it covers history and climbing routes throughout the state.

Instructional Category. Winner. *The Complete Sea Kayaker's Handbook*. By Shelley Johnson. Published by Ragged Mountain Press, Camden, NH. ISBN 007136210X.

It's all here in one well organized, well illustrated and well written book: equipment, clothing, technique, navigation, safety, camping and trip planning. The title says it all. It truly is the complete sea kayaker's handbook.

Instructional Category. Honorable Mention. *The Mountain Traveller's Handbook*. By Paul Deegan. British Mountaineering Council, Manchester, UK. ISBN 0903908476.

Packed with solid and useful advice, use this creatively designed and colorfully illustrated book to plan treks and explore the mountains of distant lands.

Classic Category. Honorable Mention. *Backwoods Ethics: A Guide to Low-Impact Camping and Hiking*. By Laura and Guy Waterman. Published by The Countryman Press, Woodstock. VT. ISBN 088150257X

Laura and Guy Waterman weren't the first to write about the impacts of recreation on wild lands, but their book *Backwoods Ethics*, originally published in 1979, is still with us today, and still remains a thoughtful and sensible call to action. The book has a significant following, particularly in the east, where many of their original suggestions continue to guide trail building and land management programs.

Preserving the Past/Protecting the Future: Reflections on a Troubled World

Daniel L. Dustin, Ph.D.
Frost Professor
Department of Health, Physical Education and Recreation
Florida International University, Miami, Florida

On June 17th, 2002 at 11:40pm, I watched my 94 year-old mother, Lucille, give up her last breath of life. And what a life it was. Born into the horse and buggy world of Ida Grove, Iowa in 1908, Lucille's life paralleled the unfolding of the 20th century. She witnessed the evolution of the internal combustion engine, the ascendancy of human flight, the birth of talking pictures, the development of the polio and smallpox vaccines, the rise of television, the invention of computers, and most incredibly to her, Neil Armstrong walking on the surface of the moon. This last feat, in particular, helped frame my mother's life. As she told it, she progressed from childhood, moonlit sleigh rides in rural Iowa to a point in time when her fellow human beings actually landed a spacecraft on that same moon and then set foot upon it.

My mother also bore witness to the First World War, the Roaring Twenties, the Stock Market Crash of 1929, the Great Depression, World War II, the Korean War, the Cold War, the Vietnam War, the Gulf War, The War in Kosovo, and, I'm sad to say, the terrorism of September 11, 2001. This last conflagration was especially hard on her. It caused my mom to question just how much progress had actually been made in her lifetime, just how far humankind had really come. I could see the worry in her eyes.

While I felt for Lucille during the last nine months of her life, I was also thankful that my father, Derby, did not live to see the events of September 11th. Derby was part of what Tom Brokaw calls "the greatest generation," the generation that fought World War 11, the war to end all wars. My dad was a brooder, and he, too, would have stewed over the implications of the terrorist assault on our homeland. I know he would have questioned as well whether we are really better off now, whether we are really safer now, than we were during his lifetime. I'm glad Derby was spared that soul search.

What Is Our Role in this Troubled World?

I begin this way, ladies and gentlemen, not to depress you, but to set the stage for your consideration of what it is exactly that we park and recreation professionals have to offer this troubled world. What is our primary role in the United States of America at this particular

time in history? Why does what we do matter now, perhaps more than ever before? A little over a year ago, I was attending the National Recreation and Park Association Congress in Denver, Colorado, when Secretary of the Interior Gayle Norton announced that entrance fees to all federal recreation areas would be suspended over the upcoming Veterans Day weekend. What we typically charged for was, for a limited time, going to be free. I found this announcement odd given the Clinton and Bush Administrations' infatuation with entrance fees to federal outdoor recreation areas. Why would they forgive fees for one weekend? What was so important about guaranteeing access to these places at this specific time? What was the government, in effect, saying?

Your guess is as good as mine. Perhaps it had something to do with our belief that nature is an elixir for spiritual healing? Perhaps it had something to do with our belief that nature provides a sanctuary for introspection and self-reflection, for pondering our moral obligations to others? Perhaps it had something to do with our belief that nature is a safe haven for families and friends to enjoy one another's company, to count their blessings, to give thanks for all that is good in our way of life? Perhaps it had something to do with our belief that nature preserves are at the core of what makes America great, and that on this particular occasion, at least, the citizenry ought to have a chance to reconnect with that ideal? Perhaps it was all these things, and more.

I have always found it curious that parks and recreation are valued more highly in times of national distress than in times of peace and prosperity. The Depression of the 1930s led to the development of outdoor recreation areas and facilities throughout the land as part of Franklin Roosevelt's New Deal. World Wars I and II led to the establishment of college curricula in parks and recreation to prepare professionals to serve the needs of large numbers of military personnel who lacked organized recreation programs when off duty. And in the wake of the urban riots of the 1960s, the Kerner Commission report led to the realization that inadequate recreation areas and facilities were among the most important causes of civil unrest. At its core, then, what we do seems to be appreciated, when it is appreciated, primarily in response to large-scale social, cultural, and political upheaval.

I say "when it is appreciated," because we park and recreation professionals are forever fighting for respect, for legitimacy, for being taken seriously by the larger culture in which we live. We are always engaged in uphill battles. Then, low and behold, when there are no more political games to be played, when there is no more political horse trading to be done, when presidents, for example, no longer have to worry about getting re-elected, when their principal concern becomes their legacy, they invariably set aside some large block, or blocks, of land for recreation's sake, for posterity's sake, as one of their last official acts. Be they Democrat or Republican, it matters not. I refer you to Jimmy Carter and the Alaska Lands Act, George Bush, Sr. and the Manzanar National Historic Site, and Bill Clinton and Grand Staircase/Escalante and a host of other national monuments. So, whatever you think of George Bush Jr.'s politics, take heart in the thought that among the last things he will do in office will be something positive for parks and recreation. I guarantee it.

I also find it interesting that in a recent poll reported in the Tampa Tribune rank-ordering the most significant accomplishments of the ten best presidents of the 20th Century; it was neither Bill Clinton's budget surplus, nor Ronald Reagan's Cold War triumph, nor Lyndon Johnson's civil rights legislation, nor even FDR's New Deal that took the number one spot. No, it was Theodore Roosevelt's concerted effort to develop a national park system that was deemed the most significant presidential accomplishment of the 20th century.

What strange goings on are these? On the one hand, it seems that parks and recreation are given more due when times are hard because of the positive contrast they offer to all the bleakness. Their worth is accentuated somehow. Or, more routinely, parks and recreation are given more due when lame duck presidents become preoccupied with how they will be remembered. On the other hand, when it's business as usual, parks and recreation are taken for granted and our professional community struggles accordingly. I do not, for the life of me, understand why this is so. Perhaps it has something to do with our cultural preoccupation with work, or with our general inclination to deal with problems only after they arise, the preventive power of parks and recreation is largely lost on the American public. And that's a shame. As almost anyone will tell you, it costs more to solve problems than to prevent them from happening in the first place. Go figure.

But this is not really what I want to focus on this evening. What I have said so far is but a prelude to something else I want to say, something deeper, I think, something that has to do not so much with outdoor recreation per se, but with the environment that plays host to it. And it is to that aspect of our work that I now wish to turn.

A World Turned Inside Out?

In Study Out the Land, a book published in 1930, historian T. J. Whipple contended that, "All America lies at the end of the wilderness road, and our past is not a dead past but still lives in us. Our forebears had civilization inside themselves, the wild outside. We live in the civilization they created, but within us the wilderness still lingers. What they dreamed we live; and what they lived we dream." While I have always considered Whipple's historical accounting apt, recent world events have led me to wonder whether those same words, when applied to life in post September 11th America, may soon have it backwards. Allow me to explain.

In my reading and writing about parks and recreation over the years, I have always felt that nature, with all its vicissitudes, provides a welcome relief from our otherwise predictable and routine home life. The outdoors has been for risk-taking, for interacting with nature on its own terms. It has been a place for stretching ourselves, for biting off more than we can chew, and then, gleefully, finding out that we can chew it after all. Recreation, especially the adventure-based kind, has, for me at least, always been about personal growth and development, or, as Abraham Maslow would put it, about self-actualization.

My thoughts about outdoor recreation in contemporary life parallel Whipple's. We live in a civilized world, but the wilderness within beckons us still. We yearn to recreate in a way, and in a place, that mirrors the experiences of our forebears. We yearn to resurrect the frontier.

The value is in the contrast wild America provides with everyday life. But in the end, we always return to the comfort of the modern world where we remain until the call of adventure beckons us once more. This is a common quest, one Joseph Campbell called the "hero's adventure."

The problem I am now struggling with, however, is that this everyday world, this modern world, this civilized world we inhabit, is becoming less and less so. When out in it, we now feel at risk in a way we didn't before. We feel vulnerable. You know what I'm talking about. We have all felt it in the weeks and months since September 11th. We feel less secure. There are more question marks in our day-to-day living. There are more uncertainties. Our home life, itself, is now more unpredictable. Just ask the people in and around Washington D. C. and northern Virginia.

At the same time, strangely enough, wild America seems more civilized than ever. This is especially so as experts like you teach neophytes like me more and more about wild-lands and how to make our way in them, indeed, how to feel at home in them. What you teach us makes wild America less uncertain, less unpredictable, safer. This is the strange turn of events I am now pondering. As our home life becomes more uncertain, more unpredictable, more dangerous, is it possible that we will soon be drawn to nature not for adventure so much, but for its reassuring properties, its calming properties, its civilizing properties?

To be sure, we may still find nature a welcome relief from city life, but perhaps for a fundamentally different reason. We may soon flock to the out-of-doors in search of a kind of peace and tranquility that eludes us back home. We may soon seek in nature a kind of sanity that is absent in our everyday lives. The role nature plays in society may thus undergo a transformation that makes the work you and I do more important than ever. Nature may soon come to be seen as the essential civilizing force in an otherwise uncivilized world.

Now, I know what some of you are thinking. John Muir must be rolling over in his grave. Nature as a civilizing force? Now there's an original thought! But I suggest to you that while a handful of people have all always regarded nature this way, most have not. I suggest to you further that for a majority of Americans, this will be a fresh insight, one that will prompt innumerable nature based soul searches to help clarify life's priorities, life's relationships, life's moral obligations-indeed-the meaning of life itself. I suggest to you, in Muir's own words, that the more we behave like "Lord Man" in our social, economic, and political lives, the more we need nature to remind us that we are but "Fellow Mortals" in the life of the planet.

Many of you in this room tonight facilitate these soul searches. How should you conduct yourselves? What might you say to your charges? That is what this international conference on outdoor recreation and education is ultimately about, is it not? I suggest you pose these questions to each other throughout your stay. They bear repeating. How should you conduct yourselves? What might you say to your charges? As I said to some of you twelve years ago in Boone, North Carolina, in nature's "university" you don't have to do much talking. Knowing when not to talk is the more difficult challenge; that, and being a good listener.

I am not naive about these matters. I am not suggesting nature is benign or benevolent. And I am not a Druid. I don't worship nature. In fact, I think nature is indifferent to our human concerns. But I do think there is an honesty about nature, a "you get what you see" quality that is especially refreshing and reassuring at a time like this when people are disappointing, if not killing, one another right and left. In this regard, I do see the big question marks, the great uncertainties of contemporary life largely as people-centered. In my opinion, the wilderness is within us after all.

About three weeks ago, I attended a Catholic Church service in Venice, Florida, with my fiancée, Kathy Lawson. Venice is one of those older, established Florida communities. There is a nostalgic quality about it. Downtown Venice is crisscrossed by wide boulevards lined with Royal Palms. It is a lazy, sleepy place that invites strolling and quiet conversation.

After church, Kathy and I ambled over to a classic car show on the village square, replete with a band shell and piped-in music from the 1950s and '60s. The autos on display ranged from Model T Fords to 1930s gangster cars to T-birds to Corvettes to Mustangs to MGBs, and more. It was an idyllic Sunday afternoon in quintessential America. It felt really good to be there with Kathy. It felt really good to be alive.

Then, on our way out of town, we drove by Venice's airport where I was stopped dead in my tracks by the thought that prompted this talk. Venice's airport, I suddenly remembered, was where two of the September 11th hijackers took flight lessons. Imagine the impact of that sudden realization on my psyche. Imagine my idyllic Sunday afternoon in Venice, Florida being blown to smithereens.

In that instant, I wanted to run away and hide in Montana's Bob Marshall Wilderness, where I had played as a boy; or to California's Sierra Nevada, where I often hike the John Muir Trail with my sons, Andy and Adam; or to the bottom of Arizona's Grand Canyon, where I used to take students from San Diego State University so they could stand in awe of the inner gorge's three billion year-old Vishnu Schist; or to Wyoming's Medicine Bow Mountains, where I occasionally fly-fish with my now retired academic mentor, the only place in my life where I have seen a mountain lion in the wild.

What I wanted, you see, was some sort of reassurance that the world wasn't going crazy, that I wasn't going crazy. I wanted to go someplace where I would feel protected from the threats pressing in on me. I wanted a safe haven. I wanted the security of home.

Ladies and gentlemen, you are the custodians of the home I am talking about. Please take good care of it. Escort your charges through it in a way that will always ensure its good repair. Show them how the home's furnishings are arranged. Help them appreciate the decor. Introduce them to the home's other occupants. Teach your charges how to have fun there without messing up the place. Above all, model for them the peace of mind that comes with knowing that when all else about us fails and disappoints and hurts, our home will be there

still, on those waters, in those woods, and in those mountains- to take shelter and comfort in. Will you do that for us, please?

Managing Groups at Climbing Sites

By

Aram Attarian, Ph.D.
North Carolina State University
Raleigh, NC

Abstract

Overuse by climbing groups or individuals can seriously threaten long-term access for climbers. This article will familiarize climbing guides and climbing group leaders with information and practices on how organized climbing groups can minimize environmental impacts and conflicts with other climbers, property owners, and resource managers.

Introduction

Over the past decade there has been significant growth and interest in the adventure sport of rock climbing in the United States. The American Alpine Club estimates that there are currently 300,000 to 500,000 active climbers in the United States (Williamson, 1999). Associated with this rise in popularity is a growing concern about human impacts to the climbing environment. Human impacts to soil, damage to vegetation, harassment to wildlife, the growing presence of litter, noise, bolting practices, damage to historic and cultural sites and a variety of social and potential economic impacts have been documented and addressed by researchers (Attarian & Pyke, 2000) Issues of legal liability and climbers lacking the appropriate technical skills and training have also been documented (Archer, 1995; Attarian, 2002, Pyke, 2001).

To compound these problems, popular climbing areas nationwide are receiving a significant amount of use from organized climbing groups, primarily from climbing gyms, summer camps, college and university programs, church and scout groups, and other human service organizations. These dramatic increases in the number of groups engaged in climbing activities have the potential to contribute to an already difficult and sometimes impossible task for resource managers to accommodate the growth of climbing with administering lands for recreation.

For example, managers at the Seneca Rocks-Spruce Knob National Recreation Area, West Virginia reported that climbers felt that large groups were a safety hazard depending on how many guides were in the group and with the impact large groups had on their climbing experience (Monongahela National Forest, 1996). Climbers also reported that large groups tend to monopolize climbing routes for several hours, can be loud and obnoxious, and interfere with rappel routes. Similar findings were reported by climbers in West Virginia's New River Gorge (Attarian, 1999). Almost three out of every four climbers indicated that group size should be limited, and almost half (48%) felt that groups should climb only in designated group areas. Seven out of ten climbers agreed that large climbing groups detracted from their climbing

experience. An overwhelming number of climbers (96%) felt that group leaders should be qualified to teach rock climbing, with 80 percent supporting the submission of credentials as part of the permitting process. Climbers at Crowder's Mountain State Park, NC (CMSP) also expressed concerns when asked about the use of CMSP by large climbing groups (Attarian, Holden & Siderelis, 2003). One fourth (25%) of those surveyed agree to strongly agree that the commercial use of climbing sites was a problem. However, 79% indicated that group size should be limited, while almost half (48%) felt that groups should climb only in specifically designated areas. Close to three fourths (70%) agree to strongly agree that too many climbers in one area cause conflicts with other climbers. Sixty seven percent agree to strongly agree that group leaders should be required to submit credentials as part of the permit process. Well over half (61%) reported climbing groups represented a safety hazard.

To address these problems, climbers and resource managers are identifying and implementing indirect or "light-handed" approaches for the management of climbing groups. For example, in North Carolina's Pisgah National Forest, The Pisgah Climbers Association, (Brevard, NC) in cooperation with U. S. Forest Service managers are developing a set of *Minimum Standards of Commercial Use*. The new standards are being created to make organizations more responsible in their hiring practices and for the USFS to hold organizations accountable for operating within industry standards. The revised standards focus on leader and staff qualifications, group size, staff/participant ratios, anchor and site development, group management, and equipment requirements (Pisgah Climbers' Association, 2002).

In West Virginia's New River Gorge National River, guides and commercial climbing outfitters are cooperating with each other and National Park Service managers to ease congestion, and minimize the impact of climbing on the ecology of the gorge's cliff areas and historic sites. A variety of ideas have been proposed to help mitigate these problems. Some of these include deciding whether or not new parking areas and access points are needed, developing educational and interpretive programs on climbing to benefit *all* park visitors, the possibility of creating a climbing route reservation system via e-mail or Web site postings, or of building sign-in stations at trailheads to popular climbs (Steelhammer, 2000).

Resource managers and organizations promoting rock climbing have also implemented a number of strategies designed to mitigate some of the impacts associated with the sport by controlling group size and instructor qualifications. Examples of these approaches are identified in Table 1.

Guidelines to Manage Groups at Climbing Sites

In rock climbing environments, two primary areas receive the most impact; the cliff-top and the staging area. The staging area, located at the base of the cliff where climbers prepare to climb receives the most impact due to concentrated use patterns (Pyke, 2001). In general, the impacts along the cliff-base and cliff-top closely resemble those of hikers and general park visitors scrambling around the area. Climbing group leaders can follow the guidelines listed below to mitigate potential problems associated with climbing groups, while providing a quality climbing experience for their clientele.

Planning and Group Management - Thorough planning, effective group management, and knowledge of "clean climbing" practices has the potential to reduce resource impacts and social problems. Some of the criteria for choosing an appropriate climbing site should be

based on group size, experience, staff, sensitivity of the site, and carrying capacity. Take into consideration the following when planning a climbing trip:

Choosing a climbing area. When choosing a climbing site for group use, a number of factors should be taken into consideration

- What level of impact can the area withstand?
- Are there any unique environmental considerations or sensitive areas?
- As leader, are you familiar with current access issues?

Table 1
Comparison of Indirect Management Techniques to Manage Group Size for Rock Climbing

Organization or **Agency**	**Comments**
Association for Experiential Education (AEE)	Program has explicitly designated staff to participant ratio for each activity. There are accepted ratios of staff to participant ratios based on the nature of the activity, participant profile, and type of environment for all activities
Colorado National Monument, CO	No individual guide or instructor shall supervise the climbing activities of more than three clients/outing on multi-pitch climbs, or more than four clients/outing on single pitch climbs.
Joshua Tree National Park, CA	All climbing guides and outfitters are required to obtain permits and be accredited by the AMGA* or AEE
Minnewaska State Park, NY	Climbing guides and instructors are required to obtain permits, including proof of insurance, accreditation by AMGA, New York State guides license, and attendance at a climbing orientation session conducted by the park. Park has a limit of 66 climbers/day.
Outward Bound, USA	The instructor student ratio will not exceed 1:6 for any potentially dangerous activity.
Pisgah National Forest, North Carolina	Proposed standards for commercial use: Staff:Participant Ratio = 1:6 Max. Participants- 12 Max Group Size- 15
Seneca Rocks-Spruce Knob National Recreation Area, WVA	A maximum group size of four on weekends and holidays; maximum group size of eight on weekdays. All permit holders must be accredited by the AMGA or AEE.

*American Mountain Guides Association

Group size and staffing ratios. Limiting group size is an acceptable management technique, especially in federally designated wilderness areas (Monz, Roggenbuck, Cole, Brame & Yoder, 2000). To address the issue of group size, resource managers may provide information on alternative climbing sites; impose restrictions on parking such as time and space limits, and increase the distance or difficulty of access (Pyke, 2001). Resource managers implement group size restrictions for a variety of reasons (Table 2).

Climbing group leaders should take into consideration a variety of factors before traveling to the climbing site:

- Is your group a manageable size?
- Do you have adequate staff to manage safety effectively?
- Could you reduce overcrowding through closer communication and scheduling with other climbing groups?
- Timing visits – Do you avoid popular climbing areas during periods of high demand, for example weekends and holidays?
- Skills training – Do you do any preliminary teaching before leaving for the climbing site, or is all of the training (equipment, knots, belaying) done on site?
- Transportation and Parking – What are the parking considerations at the site you plan to visit? Is there adequate parking available?
- Climber education – What opportunities are there for educating participants on the merits of "clean climbing" or LNT?
- What are the local rules, regulations and ethics, for the area you plan to visit?

Table 2

Reasons for Limiting Group Size*

• Environmental impact
• Consistent w/neighboring areas
• Conflict between groups
• Facility/site constraints
• Overall high use of the area
• Public complaints/pressure
• Conflict within groups

* Monz, Roggenbuck, Cole, Brame & Yoder, 2000

Access, Conservation, and the Vertical Environment - A variety of impacts associated with the rock climbing have been identified throughout the United States. Over-use by groups or individuals can seriously threaten long-term access for climbers. Being familiar with up-to-date information on access issues is important to minimize environmental impacts and conflicts with other climbers, property owners, and resource managers. The practices that follow can help reduce impacts and enhance the climbing experience for your group:

Access Restrictions.

- All climbing parties should familiarize themselves with any restrictions and/or closures and make every effort to comply.
- Always use established trails to access and egress climbs rather than creating new ones.

Climbing Site.

- Is the site large enough to accommodate your group? Consideration should be given to safety, resource impacts, and the overall recreation experience of your group and others.
- When in doubt about access, rules, regulations, etc. contact the local managing agency for more information.

- Use belay anchors where they are provided, rather than trees.
- Consider giving something back to your local climbing area by volunteering your group or organization for a service project that could include trail maintenance, litter and trash clean-up or other relevant project.

Transportation & Parking - Parking is always a problem, especially in popular climbing areas. Illegally parked vehicles can upset local residents, other climbers, and road users. This may jeopardize future access. Parking should always be an important consideration in selecting a climbing site, especially with groups (vans and buses take up more space than most vehicles). When planning your trip consider:

Parking.

- Is there sufficient parking at the rock site you plan to visit? If not go elsewhere or make other plans.
- Option - Consider walking to your climbing site, this can add an additional dimension to your group's experience.
- Option - If at all possible, have your group dropped off and picked up later in the day. This eliminates the need to park, especially when parking is limited.
- Respect local residents - Park in designated areas or off the road away from gates and driveways. Always respect the privacy of local landowners.

Climbing Activities - Bouldering, top roping, multi-pitch climbing, rappelling, and other climbing related activities provide groups with challenging and rewarding experiences. However, good practice is essential to ensure group safety, to minimize damage to the vertical environment, avoid crowding, and reduce conflict with both climbers and non-climbers. Rappelling and top roping can monopolize large portions of popular cliffs for hours. By proper planning and site selection, one can mitigate some of these problems:

Site Selection.

- Try and choose areas and routes that are appropriate for the age, skill level, etc. of your group. Would artificial walls or other less popular areas meet your needs?

Group Size.

- Ensure that your group is manageable. Larger groups are more difficult to manage unless your staff/participant ratio is adjusted accordingly. Consider:
    - breaking into smaller groups
    - climbing in high impact sites
    - meeting infrequently as a large group and only on durable sites

Overcrowding.

- Take into consideration the needs of other climbers in the area and make an attempt not to "overrun" a popular climbing area. Instead try and develop a system of rotating around different routes. This could add variety to the day and help reduce possible conflicts with other climbers.

Chalk Use.

- Is it really necessary for your group to use chalk? Chalk is not needed for beginners.

The Climbing Experience - People climb for a variety of reasons. Some like to experience solitude, others are attracted to the sport for its physical and mental challenges, while others simply like to be outdoors. Whatever the reasons, noise, large groups, dogs, litter, and the sight

and smell of poorly disposed human waste can all detract from the experience of others. To reduce the impact that your group may have on other climbers the following practices are recommended:

Education.

- Take time to explain the environmental, social, and ethical aspects of climbing to your group. Education and communication is one of the most popular "light-handed" management approaches used by resource managers to help them reduce the environmental and social impacts associated with the recreational use. This approach is often preferred as it reduces behavior through influencing visitors' decision and choice instead of direct regulations and enforcement. It also stresses modification of behavior while maintaining individual choice and freedom, an important quality of the recreation experience (Robertson, 1982). Managers are interested in the use of education and communication because of its ability to increase the quality of the recreation experience, reduce social conflicts and gain support for management practices (Roggenbuck & Ham, 1986).

Boundaries.

- Establish geographical boundaries for your activities to help keep control of your group.

Keep noise to a minimum.

- No one can (or should) tolerate exceptionally noisy groups. Noise tends to detract from one's climbing experience and can compromise safety. Make every effort to keep your noise level to a minimum.

Create a "basecamp".

- Identify a place for your group to gather, leave equipment, etc. This should be a resilient site that is out of the way and ideally does not interfere with the recreation experience of other climbers or visitors.

Respect the property of others.

- Explain the importance of respecting another climber's equipment. For example, advise group members not to step on ropes, etc.

Dogs.

- Follow local regulations. Most areas require that dogs be on a leash and under the owner's control at all times.
- Always remove dog poop from the cliff and its approaches.
- Best Practice - leave your pet at home.

Human waste disposal.

- Make sure your group knows where toilet facilities are located, or if not available, how to deposit waste properly ("cathole").
- Consider using commercially available waste bags, for example Restop (www.whennaturecalls.com/home.htm) or Pett/Wag bags (http://www.thepett.com). These portable waste disposal systems incorporate single-use degradable waste bags, which gel the waste and neutralize odors.

Conclusion

Climbing group leaders have three important roles to play in conducting a climbing program. First and foremost they need to be efficient and effective in planning and delivering information. Second, leaders need to provide a safe and rewarding climbing experience, and third, they need to educate participants on practices that minimize both the environmental and social impacts associated with large climbing groups. By incorporating the ideas presented in this article, leaders can do their part in creating a positive climbing experience for their participants and minimizing the effects of a climbing group on the climbing resource and the experience of other climbers.

References

Archer, C. J. (1995). Survey of legal issues affecting climbers. Presented at the Access Fund Regional Coordinator Summit, November 10-12, 1995. Unpublished manuscript, Access Fund, Boulder, CO.

Attarian, A. (2002). Rock climbers' self-perceptions of first aid, safety, and rescue skills. Journal of Wilderness and Environmental Medicine, 13, 238-244.

Attarian, A. (1999). Factors influencing responsible rock climbing behavior. Unpublished manuscript. The American Alpine Club, Golden, CO.

Attarian, A. Holden, T. & Siderelis, C. (2003). Managing rock climbing groups at Crowder's Mountain State Park, North Carolina. Unpublished Manuscript. Department of Parks, Recreation and Tourism Management, North Carolina State University, Raleigh.

Monongahela National Forest. (1996). Environmental assessment: An analysis of commercial guided rock climbing at Seneca Rocks, West Virginia. United States Department of Agriculture Forest Service. Potomac Ranger District, Petersburg, WV.

Monz, C., Roggenbuck, J., Cole, D.N., Brame, R., & Yoder, A. (2000). Wilderness party size regulations: Implications for management and a decision making framework. In: Cole, D, N.; McCool, S. F.; Borrie, W. T.; O'Loughlin, J., (comps.) Wilderness Science in a Time of Change Conference— Volume 4: Wilderness Visitors, Experiences, and Visitor Management; 2000 May 23–27; Missoula, MT. Proceedings RMRS-P-15-VOL-4. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 265-273.

Pisgah Climbers' Association. (2002). Minimum standards for commercial users in Pisgah National Forest. [On-line] Internet Access: www.pisgahclimbers.com/PCA_Home.htm

Pyke, K. (2001). Climbing management: A guide to climbing issues and the production of a climbing management plan. Boulder, CO: The Access Fund.

Robertson. (1982). Education as a wilderness recreation management technique. Targeting subgroups and behaviors. Unpublished manuscript.

Roggenbuck, J. W. & Ham, S. H. (1986). Use of information and education in recreation management. In President's Commission on American's Outdoors: A Literature Review (management pp. 59-72). Washington: DC: United States Government printing Office.

Steelhammer, R. (2000, October 27)). At the end of their rope: Success of New River Gorge rock climbing brings overcrowding. Charleston Gazzette.

Williamson, J. E. (1999). Accidents in North American Mountaineering. Golden, CO: American Alpine Club.

Biographical Sketch

Aram Attarian, Ph. D. is an Associate Professor in the Department of Parks, Recreation & Tourism Management at North Carolina State University, Raleigh, NC. His research interests include adventure recreation, outdoor leadership, and rock climbing impacts. He can be reached at 919-515-3709 or aram_attarian@ncsu.edu

Trends in Outdoor Adventure Education

By

Aram Attarian, Ph.D.
North Carolina State University
Raleigh, NC

Abstract

Driven by rapid social, economic, and technological change, trends can help identify important shifts that may indicate a need for change in policy, budget, management and infrastructure (Cordell, et al. 1999). Understanding and following trends can also help program administrators in decision making, encourage the development of new programs, train staff, initiate new policies and procedures, and (re)allocate resources. This article reviews past current and future trends associated with adventure programs.

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Introduction

Over the years, numerous trends in adventure recreation have been explored. Ewert (1987a) identified a number of items that were projected to show an increase by the year 2000. These included growth in adventure programs and activities, participation rates, an increase in lawsuits and participant fees, restrictions on land and water use, greater emphasis on accountability and a movement towards accreditation and certification. Other studies examined the impact of new technologies on adventure recreation (Ewert & Shultis, 1999; Hollenhorst, 1995), the hiring practices of outdoor leaders (Garvey & Gass, 1999), and other variables including demographics rates (Ewert, 1995).

Growth of Adventure Programs

The origin of adventure programs can be traced to the organized camping, environmental, and experiential education movements. In 1962, Outward Bound was introduced to North America, ushering in the modern adventure education movement in the United States. Outward Bound was closely followed by the National Outdoor Leadership School (NOLS) (est. 1965), Project Adventure (est. 1971) and the Wilderness Education Association (est. 1977). By the mid 1970s, over 190 adventure programs were operating throughout the United States, with over half of the programs found in college and university settings (Hale, 1975). The number of adventure programs showed steady growth from the 1970s through the 1980s and into the 1990s, following

the establishment of the Association for Experiential Education (AEE) in 1975. Today, the AEE has a membership of over 670 organizations (AEE, 2000). Much of this growth can be attributed to the emergence of experience–based training and development programs, therapeutic, and women centered programs (Raiola & O'Keefe, 1999). Currently, school and college programs make up approximately one third of the AEE membership, surpassed only by experience-based training and development programs, which account for 41% of the interest groups (AEE, 2000).

In addition to the overall growth in adventure programs, the number of college and university programs has also been on the rise. Some of the earliest adventure programs were established at colleges and universities in the Northeastern United States. For example, Dartmouth College, Williams College and Pennsylvania State University were conducting programs before 1925 (Webb, 2000). Prior to 1970, 22 programs were operating in North America. The most significant growth in college and university adventure programs occurred during the "environmental movement" (1970-1975) when 45 programs were established. An additional 128 programs were created from 1976-1999 (Webb, 2000).

Professional preparation programs in higher education, with an emphasis on outdoor leadership and adventure recreation has also shown steady growth. The Society of Park and Recreation Educators Curriculum Catalog in 1987 listed 17 colleges and universities that offered outdoor leadership courses or degrees. This number grew to 41 programs in 2001 (Houghton, 2001). According to Garvey and Gass (1999), more outdoor professionals are receiving their outdoor training in programs other than Outward Bound and NOLS. This change suggests that there are more opportunities today for outdoor leadership training than in years past.

Participation Rates

Overall, participation in outdoor adventure activities has increased as Americans continue to place greater value on their leisure time. Much of this growth over the past 15 years can be attributed to a variety of socio-economic factors. Free time, a greater awareness of health and wellness, advances in technology, media exposure, the search for unspoiled nature and authentic experiences often coupled with a higher level of environmental awareness, and the shift from a work ethic to a leisure ethic all have contributed to the growth of these activities. Income and education are additional factors influencing the growth of adventure programs, as both have been shown to positively correlated with participation in adventure activities (Cordell et al. 1999).

According to the National Sporting Goods Association (NSGA), participation in adventure activities has led sport growth over the last five years (2001). For example, mountain biking grew 87% to 8.6 million, while backpacking and wilderness camping increased 60% and 50% respectively. Participation in white water activities and rock climbing has also shown an increase (Outdoor Recreation Coalition of America, 1998). The adventure travel industry in the United States has also indicated significant growth. It is estimated that the industry generates over $100 billion annually and that the typical adventure traveler is a 47-year-old woman, with females both planning and participating in at least half of all commercial trips (Bly, 2001).

Another significant factor contributing to increased participation in adventure activities is the aging American population. Older Americans 2000, reported that the percentage of people over 65 who are physically active increased six percent between 1985 and 1995. There is an estimated 35 million people age 65 or older in the United States today, accounting for approximately 13 percent of the total population. The "baby boom" generation will begin to turn 65 by 2011, and is expected to double over the next 30 years, reaching 70 million by 2030 (Older Americans,

2000). This growth has significant implications for adventure programmers. According to researchers, older adults (individuals 55 years of age and older) are becoming more involved in adventure activities and programs (Blanding, 1994; Sugarman, 2000). The 1994-95 National Survey on Recreation and the Environment (1995) reported that 45% of the participants 50-60 years of age and older have participated in outdoor adventure activities. Most programs for older adults are usually low-level adventure programs lasting from four to seven days and are offered primarily through park and recreation departments, YMCAs, and commercial guide and outfitting services (Blanding, 1994; Sugarman, 2000).

Land and Water Use Restrictions, Increased Fees

Over the past 15 years, recreationists and program providers have been subjected to an increasing number of restrictions on land and water use and visitor fees. These restrictions coupled with inconsistent management policies related to educational and recreational use of public lands has led to frustration especially among college and non-profit groups (Munsell, 1996).

As participation in adventure activities and programs continues to grow, greater demands will be placed on the natural settings that support these ventures. For example, the findings of a recent study exploring the use of federally designated wilderness areas by outdoor programs found that 67% of the resource managers surveyed perceived the use of wilderness areas by adventure programs to be on the rise (Gager, Hendee, Kinziger, & Krumpe, 1998). Managers were also asked to identify the potential problems associated with program use of wilderness areas. These included: lack of wilderness stewardship skills and knowledge (42%), site impacts (42%), large group size (41%), overuse in areas already saturated (40%), conflicts with other users (36%), and establishing new trails and sites (34%).

As use continues to grow and questions about resource degradation, solitude, crowding, conflict, and other concerns increase, managers will respond with a wide range of direct (control behavior) and indirect (modify behavior) techniques and practices to strike a balance between managing resources and providing opportunities for recreation (Cordell et al., 1999). Currently, resource managers utilize a variety of techniques to help manage backcountry use. Some of these include initiating use and length of stay limits, dispersal of use, concentration of use, restrictions on the type of use, limits on group size, and seasonal use limits (Hammitt & Cole, 1998).

Access to public land is usually threatened by over regulation, over protective safety restrictions, allocation issues with other user groups, and high user fees. Fees are being utilized more frequently by state and federal land management agencies to help defray the costs of maintaining natural areas. Fees to access public lands are currently being explored through the Recreational Fee Demonstration Project authorized by the United States Congress (1996). This project allows federal land management agencies to charge fees at recreation sites under their jurisdictions. In addition to user fees, charges are imposed on visitors to help defray operational and rescue costs incurred by management agencies.

Additional concerns have been raised by the implications of the Outfitter Policy Act of 1999 (United States Senate, 1999). This Act would establish standards and guidelines for outfitter and guide permits issued by the U.S. Forest Service, the Bureau of Land Management, and the U.S. Fish and Wildlife Service. Presently, there is no specific statutory guidance for outfitter and guide permits. The new Act would direct establishment of consistent permit terms and conditions for "commercial outfitted activity" on affected public lands. Under the definition, all adventure programs, which conduct activities on lands administered by the above agencies, would be

required to have a permit. Without the appropriate permit, anything other than common adventure would not be allowed, thus having a significant impact on adventure programs nationwide (J. Moss, personal communication, February 26, 2001). Future efforts will require adventure programs to be proactive and work with resource managers to help them meet management objectives. Collaborative management techniques (Attarian, 1999b), training outdoor leaders and program participants in *Leave No Trace* practices (Friese, Hendee, & Kinziger, 1998), creative scheduling and coordination with known user groups (D. B. Calloway, personal communication, February 17, 2001), and compliance to rules and regulations (Gager et al., 1998) are just some of the approaches adventure programs can take to address potential access problems.

Trends in Climbing Walls and Challenges Courses

Artificial Climbing Walls: Climbing on artificial walls continues to be a popular recreational pursuit, especially with teenagers and young adults (NSGA, 2000). Recent estimates suggest that over 2.7 million people have climbed on a climbing wall at least once during 1998 (NSGA, 2001). Programs operate climbing walls for recreational and instructional purposes, training, competition, and for marketing products (Attarian, 1999b). The use of climbing walls for recreation purposes originated in the early part of the 20th century when a climbing wall utilizing iron rungs for hand and footholds was constructed in Milan, Italy. During the 1950s and 60s, French and British climbers began to make significant strides in climbing wall technology. The William G. Long Camp, near Seattle Washington, is credited with building the first artificial climbing wall (est. 1939) in the United States. This structure was built of natural stone by the Works Project Administration and was known as "Schurman Rock" (Smutek, 1974). During the 1970s to mid 1980s, most climbing walls in the United States could be found in colleges and universities. It wasn't until 1987 that the first commercial climbing gym, *The Vertical Club* (Seattle, Washington) was built in the United States.

Early climbing walls were built as do-it-yourself projects, incorporating wooden handholds (or other materials) attached to vertical surfaces. New technology and construction techniques, as well as greater visibility combined to create a boom in climbing wall construction during the 1990s. In 1993, the newly formed Climbing Gym Association (CGA) had a membership of 80 gyms nationwide. Today, the association has over 400 member gyms. During the period 1993-2000, new industry standards were developed through the work of the Climbing Wall Industry Group (CWIG). Future trends suggest that artificial climbing walls will continue to be a popular venue with a certain segment of the population. Advanced designs, materials, and construction techniques will continue to create new and affordable opportunities for program providers serving the needs of a growingly diverse population.

Challenge Courses: Challenge courses (synonymous terms include high ropes course, low ropes course, initiatives, group initiatives, and group initiative activities) in the United States have been in use by outdoor programs since the early 1960s. During 1962, two ropes courses were constructed, one at the newly established Colorado Outward Bound School and the other in Puerto Rico, where an Outward Bound-type course was used to train Peace Corps volunteers. Challenge courses remained in the domain of Outward Bound and similar programs until 1971 when Project Adventure began to integrate challenge courses into public school physical education classes. This movement was the beginning of a trend that has led to the current practice of using the challenge course as an instrument to enhance both personal and professional growth.

Over the years, changes in design and construction techniques, materials, training and safety protocols have combined to increase the popularity and utility of challenge courses. Treatment centers, schools, corporations, hospitals, correctional facilities, camps, and other leisure and human service organizations have incorporated challenge courses into their programs to enhance services to all segments of society.

Challenge courses designed and built during the 1960s and 1970s exhibited a number of shortcomings. Many courses were built as "do it yourself" projects lacking established or universal standards, which resulted in poor design and questionable construction techniques. Some programs relied on untrained, questionable staff. During the early 1980s, approximately 700-1000 challenge courses were operating in the United States (Attarian, 1984).
During 1988, the first ropes course symposium was held at the North Carolina Outward Bound School. This symposium was an initial attempt to bring together challenge course designers and builders in order to discuss current state-of-the art techniques. This group met for a second time in 1990, and again in 1991, with over 50 participants. During this meeting it was decided that an official organization should be formed. Today, this organization is known as the Association for Challenge Course Technology (ACCT). The ACCT is responsible for developing, reviewing and standardizing construction, equipment and installation practices, insurance requirements, testing materials, and hosts an annual conference for builders and practitioners in the challenge course industry.

Recent estimates suggest that up to 15,000 or more challenge courses are currently operating in the United States (Jim Cain, personal communication, August 15, 2000). A portion of this growth can be attributed to the adaptability of the challenge course experience and the diverse environments in which these courses can be found**.** With the development of the ACCT, new equipment and building standards have been developed and implemented. More opportunities to network, train staff, and conduct safety audits through peer reviews have also been created. Probably, the most significant impact on the growth of challenge courses has been the creation of experientially based training and development programs (Attarian & Holden, 2001).

A variety of factors will continue to influence the future of the challenge course experience. Some of these include the modification of safety and quality reviews to meet special needs, universal challenge course design (challenge course designs and programs to meet the needs of people with disabilities), and a growing, diverse population. Creative and innovative designs, and portable events, will continue to be developed, along with entry into new program niches. In addition, reliable research and evaluation models, techniques, and methods need to be established to empirically measure the benefits and outcomes of the challenge course experience.

Certification and Accreditation

Certification is a process whereby certain minimum standards of competency have been met or exceeded by a professional as evaluated by a certifying agency According to (Senosk,1977). Certification of individual outdoor leaders has been a topic of debate and discussion since the late1970s (Gass, 1999). However, due to a number of factors, certification of instructors has never materialized as a way to meet the needs of contemporary adventure programs (Gass, 1999). Some of these factors include: (a) the inability to adequately identify and evaluate the soft or "people skills" associated with adventure programming. These skills, unlike technical skills are difficult to train and evaluate; (b) the misconception that certification is the solution to participant safety or environmental protection; (c) certification is costly and time consuming; (d) it tends to exclude experienced but uncertified people; (e) certification reflects only specific skills; (f) it may

attract the wrong people for the wrong reasons; and (g) certification has failed because it wasn't able to examine adventure programming in an all encompassing manner, mainly due to the diversity of programs, their geographic locations, environments, and other factors that make adventure programs unique (Cockrell & LaFollette, 1985; Gass, 1999; Green, 1982). Currently, no formal or "blanket" certification process exists in North America (Gass & Williamson, 1995). Instead, adventure programs certify their own leaders based on criteria established by individual programs and the adventure program industry.

While certification was being considered, another form of professional assessment - accreditation - was being developed. Accreditation is a process in which all aspects of an adventure program are evaluated in terms of meeting specific standards of operation (Gass & Williamson, 1995), or the "recognition that a program or institution has met certain predetermined standards of operation" (Gass & Priest, 1999, p. 37). According to Gass and Williamson (1995), accreditation has a number of advantages over certification: (a) accreditation gives adventure programs the ability to reach standards without sacrificing the flexibility to decide and design how standards are met; (b) it takes a holistic view of the entire program, rather than dividing it up; (c) encourages internal and external reviews in order to enhance program quality; and (d) instills greater public confidence in a program as an accredited program has clearly defined goals and objectives, and maintains conditions under which the goals and objectives can reasonably be met.

Future trends suggest that certification will be required in certain program areas, (e. g., first aid and safety, rock climbing) and as more regulations are imposed on programs (potentially through land management agencies and the insurance industry) on programs, accreditation will become more commonplace (W. Zimmerman, personal communication, December 7, 2001).

Lawsuits

There has been (and will continue to be) a gradual increase in litigation involving adventure recreation activities (Moss, n.d.). The rise in participation rates, participants who don't have a thorough understanding of the risks, and more opportunities for litigation, will all contribute to the rise in lawsuits. Through the 1970s and 1980s, efforts were undertaken by academicians and others to educate adventure program administrators and practitioners on ways to minimize lawsuits based on sound risk management practices and guidelines (Ewert,1987b, 1989; Meyer, 1979; van der Smissen 1975). Other significant efforts to mitigate lawsuits were the publication of several documents including: Accepted/Common Peer Practices in Adventure Programming (Johanson,1984, 1987, 1989*);* A Guide to Conducting Safety Reviews for Assessing and Upgrading Safety in Outdoor Adventure Programs (Wade & Fischesser,1988) and Manual of Accreditation Standards for Adventure Programs (Williamson & Gass, 1993). Also during this period, the National Safety Network (n.d.) began gathering information on accidents and near misses in order to establish a central database. Information for the database, known as the *International Safety Network Injury Information Database* was submitted by adventure programs and served as a valuable staff- training tool by highlighting industry-wide accidents and near misses that previously went unreported.

In the summer of 1992, NOLS organized an annual meeting attended by a variety of wilderness education programs to establish a committee on wilderness risk management. The primary goal of this committee was to "work towards better clarification, understanding, and management of risk in the wilderness" (Gookin, 1998). In 1994, the first Wilderness Risk Managers Conference was started to educate practitioners on the issues of risk management, safety skills, field and administrative techniques in risk management, raising risk management standards, and fostering

communication and interaction with a broader group of risk managers (Gookin, 1998). Recently, the Outdoor Education and Recreation Law Quarterly, was introduced to keep outdoor and adventure program professionals updated on current court decisions and legal trends. Some of the topics covered include: assumption of risk, effectiveness of participant agreements, inherent risk doctrine, issues with minors, negligence, ADA access to programs, and relevant regulatory developments.

Aggressive risk management, hiring and training qualified staff, and placing more emphasis on educating and informing the public on the risks inherent in program activities, will become the norm for preventing lawsuits in the future. Adventure programs in the future will enter into partnerships with insurance companies and other risk management organizations in order to provide state of the art resources to help adventure programs build stronger safety systems.

Evaluation and Accountability of Adventure Programs

Evaluation is a way for adventure programs to document their worth by providing evidence of their contributions to society, or other desirable outcomes the program has achieved. The public has been hesitant to accept the legitimacy of social institutions through pure trust, and instead, requires facts or other evidence to support program outcomes. This concept is supported by Warner (1999), who suggested, "effective evaluation provides the means to learn from experiences, both successes and failures. It will be a critical element in determining the broader acceptance and development of the field" (p. 299).

For many organizations, evaluation is used to determine program success and provide information for decision-making and accountability (Ewert, 1989). Evaluation also helps to measure the effectiveness or quality of administrative policies, personnel practices, facilities, participants, and program outcomes (Flor, 1991; Kraus & Allen, 1987). Evaluation is also valuable as it helps the program improve, establish creditability, gain support from the public and profession, validates accomplishments, and assists in marketing (Flor, 1991).

Even though evaluation is considered an integral part of any program, a large number of programs do not engage in evaluation for a number of reasons (Warner,1999). To be done correctly, evaluation requires an organizational resource base, which, in the case of adventure programming, is still in its infancy. In some programs, evaluation is given a low priority, tends to be narrowly focused, and too much reliability is placed on "university researchers" rather than on program administrators and practitioners. Sibthorp (2001) recommends that more appropriate evaluation tools need to be developed through better design and pilot testing, useful rather than convenient test instruments be chosen, and adventure program professionals should be able to understand measurement limitations and be able to distinguish appropriate from inappropriate measures.

Accountability is often mentioned as a primary purpose of evaluation. It describes the ability of an adventure program to justify or explain the activities and services it provides, whether or not the program is meeting the needs of its participants, and to determine the legitimacy of the program (Henderson & Bialeschki, 1995). Many policymakers, stakeholders, and the public have recently called for accountability information because of the misadventures and deaths associated with adventure programs (for example see Williamson, 1987; Ajango, 2000). One desirable outcome of these unfortunate circumstances might be improved quality of research on adventure programs (Hattie, Marsh, Neill & Richards, 1997).

Adventure programs are also making strides towards accountability by focusing more effort on training program staff. Specialized staff training programs (with an emphasis on facilitation techniques, teaching, medical and rescue skills), in-service training, and certification schemes (e.g., Wilderness First Responder, American Canoe Association - Canoe Instructor, American Mountain Guides Association-Top Rope Site Management, etc.) are some of the approaches that programs are taking in order to provide a safer and more rewarding adventure experience for participants.

Summary

By exploring various trends, it becomes evident that adventure recreation plays an important and significant role in the American leisure experience. Adventure programs, including professional preparation programs, college, university, camping programs, and other public and private sector adventure programs, have increased over the past 15 years (AEE 2000; Coutellier, 2001; Houghton, 2001; Webb, 2000). Recent studies (NSGA, 1999; Outdoor Recreation Coalition of America, 1998) have suggested that more people are participating in adventure programs and activities than ever before, especially women and older adults (Bly, 2001; National Survey on Recreation and the Environment, 1995; Sugarman, 2000). However, because of this growth and interest, the natural resources that support these activities are being compromised. As use increases, resource managers will respond with management actions to help strike a balance between resource protection and recreational use (Cordell et al., 1999). To accomplish this, the potential exists for greater restrictions on land and water use and the implementation of visitor fees to help offset management costs (United States Congress 1996; United States Forest Service, 2000; United States Senate 1999). Certification of instructor skills will also become commonplace, especially in the areas of risk management, leaves no trace practices, and communication skills (Gass & Williamson, 1995). Programs that meet industry standards will seek or be forced into accreditation, as accreditation may become a prerequisite to access sensitive backcountry areas (Gass & Williamson, 1995). In order to provide more opportunities, reduce resource impacts, and provide adventure experiences closer to home, programs will begin to utilize artificial adventure environments, especially climbing walls and challenge courses (Attarian,1999b). Focusing on the importance of risk management will continue as a way to minimize potential lawsuits and enhance the adventure experience (Gookin, 1998). Programs will also be held more accountable for the way they recruit, select, and train staff, how they operate, and achieve program outcomes (Hattie et al., 1997; Henderson & Bialeschki, 1995). Programs will begin to place greater emphasis on evaluation to help determine program success, provide information for decision-making, and accountability (Ewert, 1989; Warner, 1999).

Outdoor adventure programs in its many forms is here to stay. As interest in adventure programs and activities continues to grow, adventure program professionals will continue to be faced with the challenges of how to better serve participants, train competent leaders, design and evaluate programs, manage risk more effectively, address environmental concerns, work closely with land managers, and create a positive public image. By monitoring both adventure program and societal trends we, as a profession, can address these issues competently and be better prepared for the future.

References

Ajango, D. (Ed.). (2000). Lessons learned: A guide to accident prevention and crisis response. Anchorage, AK: Northern Printing.

Association for Experiential Education (2000). Association for Experiential Education membership directory. Boulder, CO.

Attarian, A. (1999a). A collaboration in resource management: The Stone Mountain project. Parks and Recreation, 34(7), 74-88.

Attarian, A. (1999b). Artificial climbing environments. In J. C. Miles, & S. Priest (Eds.), Adventure Programming (pp. 341-346). State College, PA: Venture Publishing.

Attarian, A., & Holden, G. T. (2001). The literature and research on challenge courses: An annotated bibliography. Raleigh, NC: Department of Parks, Recreation & Tourism Management, North Carolina State University.

Attarian, L. R. (1984). Ropes courses and mental health. Unpublished manuscript.

Blanding, C. (1994). The changing face of outdoor enthusiasts. Parks and Recreation, 29(8), 32-35.

Bly, L. **(**2001,February 23). You go, girls women-only groups are happily migrating toward adventure travel, USA Today, 1D.

Cockrell, D., & LaFollette, J. (1985). A national standard for outdoor leadership certification. Parks and Recreation, 20(6), 40-43.

Cordell, H. K., Betz, C. J., Bowker, J. M., English, D. B. K., Mou, S. H., Bergstrom, J. C., Teasley, R. J., Tarrant, M. A. & Loomis, J. (Principal Investigator). (1999). Outdoor recreation in American life: A national assessment of demand and supply trends. Champaign, IL: Sagamore.

Davis-Berman, J., & Berman, D. S. (1994). Therapeutic wilderness programs: A national survey. The Journal of Experiential Education, 17(2), 49-53.

Ewert, A. W. (1987a). Outdoor adventure recreation: A trend analysis. Journal of Leisure Research, 5(2), 56-67.

Ewert, A. W. (1987b). Risk management in the outdoor HPER setting. *Journal of Physical Education, Recreation and Dance, 60*(2), 88-92.

Ewert, A. W. (1989). *Outdoor adventure pursuits: Foundations, models, and theories.* Columbus, OH: Publishing Horizons.

Ewert, A. W. (1995). Current trends in risk recreation: The impacts of technology, demographics, and related variables. In J. L. Thompson, D. W. Lime, B. Gartner, and W. M. Sames (Compliers). Proceedings of the Fourth International Outdoor Recreation and Tourism Trends Symposium and the 1995 National Recreation Resource Planning Conference *(*pp. 60-64). St. Paul, MN: University of Minnesota, College of Natural Resources and Minnesota Extension Service.

Ewert, A. W., & Shultis, J. (1999). Technology and backcountry recreation: Boon to recreation or bust for management? Journal of Physical Education, Recreation and Dance, 70(8), 23-28.

Flor, R. (1991). An introduction to research and evaluation in practice. Journal of Experiential Education, 14(1), 36-39.

Friese, G., Hendee, J. C. & Kinziger, M. (1998). The wilderness experience program industry in the United States: Characteristics and dynamics. Journal of Experiential Education, 21(1), 40-45.

Gager, D., Hendee, J. C. Kinziger, M. & Krumpe, E. (1998). What managers are saying and doing about wilderness experience programs. Journal of Forestry, 33-37.

Gass, M. A., & Priest, S. (1997). Effective leadership in adventure programming. Champaign, IL: Human Kinetics.

Garvey, D. & Gass, M. A. (1999). Hiring preference trends in the outdoor adventure programming field. Journal of Experiential Education, 22(1), 44-49.

Gass, M. A. (1999). Accreditation and certification: Questions for an advancing profession. In J. C. Miles and S. Priest (Eds.). Adventure Programming (pp. 247-252). State College, PA: Venture Publishing.

Gass, M. A. & Williamson, J. (1995). Accreditation for adventure programs. Journal of Physical Education, Recreation and Dance, 66(1), 22-27.

Gookin, J. (Ed). (1998). 1998 Wilderness risk management conference proceedings. Lander, WY: National Outdoor leadership School.

Green, P. (1982). The outdoor leadership handbook. Tacoma, WA: The Emergency Response Institute.

Hale, A. N. (1975). Directory programs in outdoor adventure activities. Mankato, MN: Outdoor Experiences, Inc.

Hammitt, W. E. & Cole, D. N. (1998). Wildland recreation: Ecology and management. New York, NY: Wiley & Sons.

Hattie, J., Marsh, H. W., Neill, J. T., & Richards, G. E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. Review of Educational Research, 67(1), 43-87.

Henderson, K. A., & Bialeschki, D. (1995). Evaluating leisure services: Making enlightened decisions. State College, PA: Venture Publishing, Inc.

Hollenhorst, S. J. (1995). Risk, technology-driven, and other new activity trends. In J. L. Thompson, D. W. Lime, B. Gartner, & W. M. Sames (Compliers). Proceedings of the Fourth International Outdoor Recreation and Tourism Trends Symposium and the 1995 National Recreation Resource Planning Conference (pp. 65-67). St. Paul, MN: University of Minnesota, College of Natural Resources and Minnesota Extension Service.

Houghton, J. (Ed.), (2001). National Recreation and Park Association- Society of Park and Recreation Educators Curriculum Catalog. Ashburn, VA: National Park and Recreation Association.

Johanson, K. (Ed.). (1984). Accepted peer practices in adventure programming. Boulder, CO: Association for Experiential Education.

Johanson, K. (Ed.). (1987). Common peer practices in adventure programming (2nd edition). Boulder, CO: Association for Experiential Education.

Johanson, K. (Ed.). (1989). Common peer practices in adventure programming (3rd edition). Boulder, CO: Association for Experiential Education.

Kraus, R. & Allen, L. (1987). Research and evaluation in recreation, parks and leisure studies. Columbus, OH: Publishing Horizons.

Meyer, D. (1979). The management of risk. Journal of Experiential Education, 2(2), 9-14.

Munsell, S. (1996). Land access, protection and permits. In R. Koesler & R. Watters (Eds.). Proceedings of the 1995 international conference on outdoor recreation and education (pp.51-58). Pocatello, ID: Idaho State University Press.

National Safety Network (undated). The national safety network's international database requests your participation. Bellefontaine, OH.

National Sporting Goods Association (2001). Sports participation rates. [On-line], Available Internet: www.nsga.org/public/articles.

National Survey on Recreation and the Environment, 1994-1995. (1995). Chapter 2: Outdoor recreation participation. [On-line], Available Internet: www.fs.fed.us/research/rvur/recreation/publications/outdoors/outdoor –recreation/chapter2.htm

New Hampshire Fish and Game Department. (2000, June 15). Reckless rescue victims to be billed in New Hampshire, Appalachia, 53, 148-149.

Older Americans 2000. (2000). Administration on aging: Profile of older Americans 2000. [On-line], Available Internet: www.aoa.gov/aca/STATS/profile/default/htm.

Outdoor Recreation Coalition of America (1998). Human powered outdoor recreation 1997 state of the industry report. Boulder, CO.

Raiola, E., & O'Keefe, M. (1999). Philosophy in practice: A history of adventure programming: Improving program quality through evaluation. In J. C. Miles and S. Priest (Eds.). Adventure Programming (pp. 45-54). State College, PA: Venture Publishing..

Senosk, E. M. (1977). An examination of outdoor pursuit leader certification and licensing within the United States in 1976. Unpublished master's thesis, University of Oregon, Eugene, OR.

Sibthorp, J. (2001). Measuring weather…and adventure education: Exploring the instruments of adventure education research. Journal of Experiential Education, 23(2), 99-107.

Smutek, R. (1974, October). Spire rock grows. Off Belay, 17, 39-41.

Sugarman, D. (2000). Adventure experiences for old adults: Examining current practices. Journal of Experiential Education, 23(1), 12-16.

United States Congress (1996). Recreational Fee Demonstration Program, (Pub. L. No. 104-134). [On-line], Available Internet: frwebgate.access.gpo.gov/cgi-bin/multidb.cgi

United States Forest Service (2001). Climbing information: Mount St. Helens National Volcanic Monument (brochure). Amboy, WA: Gifford Pinchot National Forest.

United States Senate (1999). Outfitter Policy Act of 1999. [On-line], Available Internet: http://thomas.loc.gov/cgi-bin/query/D?c106:1:./temp/~c1060dx8AY:e1110:

van der Smissen, B. (1975). Legal aspects of adventure activities. Journal of Outdoor Education, 10(1).

Wade, I. & Fischesser, M. (1988). The safety review manual: A guide to conducting safety reviews for assessing and upgrading safety in outdoor adventure programs. Greenwich, CT: Outward Bound USA.

Warner, A. (1999). Improving program quality through evaluation. In J. C. Miles and S. Priest (Eds.). Adventure Programming (pp. 299-308). State College, PA: Venture.

Watters, R. (1999). Revisiting the Common Adventure Concept: An Annotated Review of the Literature, Misconceptions and Contemporary Perspectives. In Proceedings of the 13th Annual International Conference on Outdoor Recreation and Education (pp 82-94). Boulder, Colorado: Association of Outdoor Recreation and Education.

Webb, D. J. (2000). Outdoor recreation program directory and data resource guide. Boulder, CO: The Outdoor Network.

Williamson, J., & Gass, M. A. (1993). Manual of accreditation standards for adventure programs. Boulder, CO: Association for Experiential Education.

Williamson, J. (Ed.). (1987). Accidents in North American mountaineering, 1987, 5(4), 65-67.

Biographical Sketch

Aram Attarian, Ph. D. is an Associate Professor in the Department of Parks, Recreation & Tourism Management at North Carolina State University, Raleigh, NC. His research interests include adventure recreation, outdoor leadership, and rock climbing impacts. He can be reached at 919-515-3709 or aram_attarian@ncsu.edu.

Teaching Climbing Anchor System: The Easy Way

Dr. Christian Bisson
Thomas Barrington
Northland College
Ashland, WI

Abstract

At time, teaching rock climbing anchor systems to novice climbers or outdoor education/recreation students can be challenging unless one uses a logical approach to building anchor systems. This paper will give you some tools for teaching the intricacies of rock climbing anchor systems in a logical and simple way. Readers will also learn why teaching students how to A.D.D.R.E.S.S. an anchor system can be more effective than teaching commonly known acronyms such as R.E.N.E., S.E.R.EN.E., E.R.N.E.S.T., or S.E.C.U.R.E. A numerical system to assess anchor points and overall anchor systems will also be suggested.

Teaching Climbing Anchor Systems

When young climbers learn to build top rope anchor systems, they often place as many pieces as they can. They take over an hour to complete their set-up and then climb the route in less than 10 minutes. This classic scenario is often the result of a lack of proper training or a lack of confidence regarding what a good climbing anchor system should really look like.

At times, our own teaching compounds this problem when we teach, for consistency or simplicity reason, that top rope anchor systems always need three anchor points. We even advise our students to gain a few years of experience on their own before building anchor systems differently. In reality, we often have difficulty explaining why some situations require three pieces of protection, while others might take four. Or, why two anchor bolts are sufficient, when at times, a single large tree might also be just fine.

One solution to this problem is to better educate novice climbers in the art and science of rock climbing anchor building. This paper will present an easy but effective and logical approach to teaching top rope anchor systems. First, our students need to better understand the reliability of various types of anchor points used in rock climbing. Second, they need a simple way to calculate how many anchor points their system will need. Finally, they need a simple and comprehensive way to assess the crucial components of a safe top rope anchor system.

Types of Anchor Points

It is important to explain to your students that there are actually two major types of anchor points – natural and artificial. Examples of common natural anchors points are trees, boulders and rock formations (i.e., Chicken heads). Artificial anchor points are categorized as either permanent or temporary. Examples of permanent artificial anchors points are anchor bolts, while temporary artificial anchor point are either passive protection (i.e., Nuts, Hexes), or active protection (i.e., Friends). Once they have a basic understanding of what can be used to build an anchor system,

they need a simple scoring technique that will allow them to calculate how many safe anchor points they really need. Teaching how to use an arbitrary scoring system will help them make accurate decisions regarding their anchor system.

Anchor Point Scoring System

Teach your students that when they build an anchor system, their goal is to reach an arbitrary score of 10 or above. In this arbitrary scoring system, a natural anchor point can receive a score ranging from 0 to 5. For instance, a large well-rooted tree can get a score of 5. At the same time, a permanent artificial anchor point can also get a score ranging from 0 to 5. Climbing anchor bolts are permanent artificial anchor points. This means that a well-placed bolt can get a score of 5. Finally, in this same system, a temporary artificial anchor point (i.e., climbing protection) can only get a score ranging from 0 to 4. For example, a well placed "Walnut" or "Friend" can only get a high score of 4.

From this scoring system, your students will conclude that when using solid natural anchors the minimum number of anchor points needed to create a safe anchor system is 2 for an overall score of 10. Now, imagine that the top rope site you are using has a large healthy pine tree (i.e., 3 feet diameter), any experienced climber would feel safe to use only that anchor point, therefore, it is important for your to explain that a single large tree, scoring an indisputable 5, can be used twice to create two solid independent anchor points. In the same line of thought, being presented with only small trees that cannot receive an individual score of 5 will require them to use more than two trees to reach a overall score of 10 or above.

Your students will also conclude that the minimum number of anchor points needed to create a safe anchor system, when using solid permanent artificial anchors (i.e., bolts) is 2 for an overall score of 10. This conclusion is correct only if each bolt is properly placed and solid. (see Table 1).

Finally, they will also understand that when using solid temporary artificial anchors (i.e., Hexes, Walnuts or Friends) the minimum number of anchor points needed to create a safe anchor system is 3 for an overall score of 12 and this qualifies only if each piece of protection is properly placed.

Table 1. Anchor Point Scoring System.

Type	Maximum Score	Minimum Required	Overall Score
Natural	5	2	10
Artificial (permanent)	5	2	10
Artificial (temporary)	4	3	12

Identifying Solid Anchor Points

What makes a solid natural or artificial anchor point? This is where a lot of experience building climbing anchor systems becomes useful. To assist your students, share with them this series of guidelines that should help them develop sound judgment when evaluating various anchor points.

Natural Anchor Point:

A tree will receive a maximum score of **5** if...
- it is 8 inches or larger in diameter.
- it is alive.
- its root system does not move when pushing on its trunk.

A tree lacking any on of these characteristics will receive a score from 0 to 4 based on how precarious it appears. Note: Trees scoring less than a 3 should be avoided.

A boulder will receive a maximum score of **5** if...
- it is larger than 4 feet in diameter.
- it is placed directly on a flat surface.
- it is solid and cannot be moved or tilted by pushing on it.

A boulder lacking any on of these characteristics will receive a score from 0 to 4 based on how precarious it appears. Note: An unstable boulder should never be used since the potential failure of a boulder could be catastrophic.

Permanent Artificial Anchor Point:

An anchor bolt will receive a maximum score of **5** if...
- its shaft is placed perpendicular to the rock surface.
- its hanger does not move.
- it does not show any rust.
- it is placed in a reliable rock.
- its hanger is oriented in the appropriate direction of pull.

An anchor bolt lacking any on of these characteristics will receive a score from 0 to 4 based on how precariously it is placed. Note: Anchor bolts scoring less than a 3 should be avoided.

Temporary Artificial Anchor Point:

A passive piece of protection will receive a maximum score of **4** if...
- it is placed in a reliable rock fracture or formation.
- it is as large or larger than a thumb.
- it is placed appropriately for its direction of pull.
- it has large surface of contact.

A passive piece of protection lacking any on of these characteristics will receive a score from 0 to 3 based on how precariously it is placed. Note: Pieces of protection scoring less than a 2 should be avoided.

An active piece of protection will receive a maximum score of **4** if...
- it is not over-cam (i.e., less than 90°)
- it is not under-cam (i.e., more than 120°)
- it is offering good contact on all cams.
- it is placed appropriately for its direction of pull.

An active piece of protection lacking any on of these characteristics will receive a score from 0 to 3 based on how precariously it is placed. Note: Pieces of protection scoring less than a 3 should be avoided.

Shock Loading Anchor Points

We all know that shock loading an anchor point means putting excessive stress on that anchor point. Even though this is exactly what happens every time a lead climber falls on a protection, shock loading a top rope climbing anchor system is totally unnecessary and should be avoided. However, because today the use of pre-sown webbing is so popular, building anchor systems with the infamous "Magic X" is still a prevalent practice. Remember that a "Magic X" anchor system will always include a shock load.

To help your students become more astute with the use of pre-sown webbing, we are also suggesting that you teach the following guidelines for top rope anchor systems.

- Anchor points that received an individual score of **5** <u>can</u> be shock loaded.

- Anchor points that received a score of **4** or less <u>cannot</u> be shock loaded.

This means that building an anchor system using a "Magic X" on two solid bolts is acceptable. However, building an anchor system using a "Magic X" on three solid pieces of protection, like three well-placed "Walnuts" will not be acceptable because of the potential shock load.

Furthermore, it is also important that you teach the proper way of building a "Magic X" anchor system. For years, the "Magic X" was taught or presented in climbing publication as the simple double strand "V" webbing with a twist in one of the strand (see Figure 1[*]). This simplistic version presents two serious problems, (1) it includes a shock load that is proportional to the length of the webbing – the longer the webbing the longer the shock load, and (2) it provides no redundancy if the webbing fails.

A solution to these problems is to teach your students the improved version of the "Magic X" (see Figure 2[*]). You will notice that by placing two overhand knots near the apex of the "V," you not only minimize the length of the shock load, you also create redundancy within the system. Consequently the improved version should be the only one used when building a "Magic X" anchor system on two solid bolts each scoring a 5 on the above-proposed scoring system.

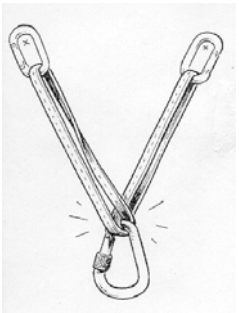


Figure 1. "Magic X"

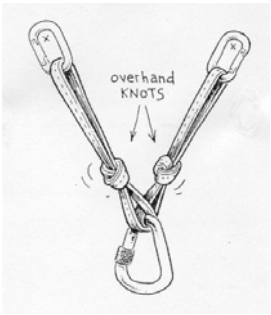


Figure 2. "Improved Magic X"

[*] Illustrations by Mike Clelland (2000).

Using A.D.D.R.E.S.S.

It is important for your students to be able to assess the overall quality of their climbing anchor system. We propose that you teach and use the acronym A.D.D.R.E.S.S. to help them confirm that the most important characteristics of a good top rope anchor system are present. We believe that A.D.D.R.E.S.S. covers more safety components, and is easier to understand than the other commonly used acronyms. A.D.D.R.E.S.S. stands for Angle, Distance, Direction, Redundancy, Equalized, Shock load, and Score.

Angle: The anchor system should not have an angle exceeding 90 degrees at the master point, and ideally should be less then 45 degrees. As the angle of the anchor system surpasses 120 degrees, the force on each anchor point increases exponentially; which means that instead of spreading the total force of the anchor system between individual anchor points the force actually increases.

Distance: The master point of the anchor system should be placed over the edge of the cliff to let the climbing rope run free of friction.

Direction: The master point of the anchor system should be placed just above the climbing route to avoid pendulum from a falling climber.

Redundancy: The anchor system should be redundant. This means that it should have more than one independent anchor point and more than one piece of equipment at its critical points (i.e., two karabiners at the master point).

Equalized: The tension on each anchor point should be equal to all other anchor points.

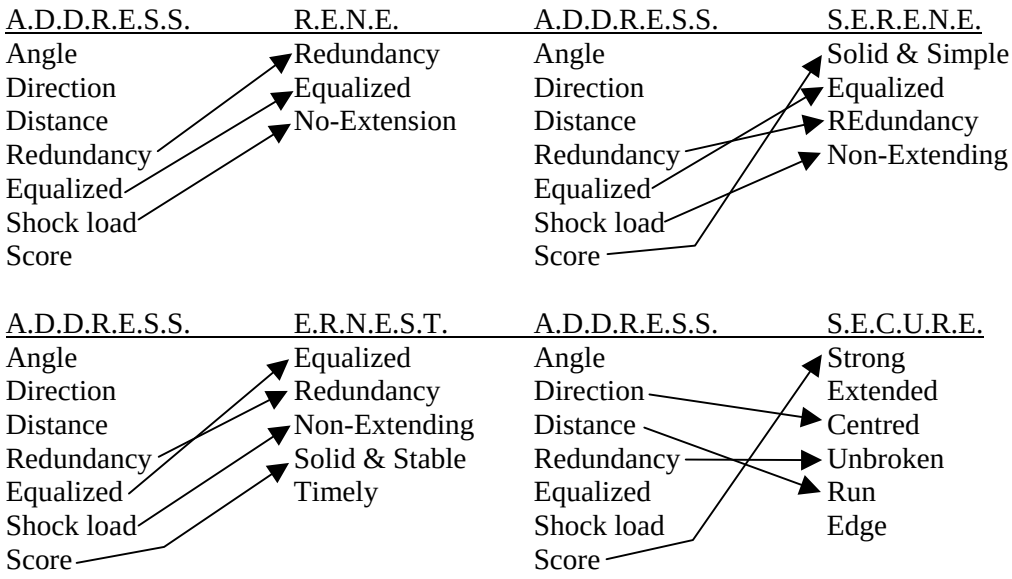
Shock load: Individual anchor points with a score of 5 can be shock loaded only if the elongation created by the shock load is minimized. To avoid shock loading, you must create a uni-directional anchor system. A multi-directional anchor system always implies a shock load. Using the improved “Magic X” most often creates a multi-directional system.

Score: A good anchor system must cumulate an overall score of at least 10.

We have identified four other acronyms used to check top rope anchor systems. R.E.N.E., which stands for Redundant, Equalized, and No-Extension. S.E.R.E.N.E., which means, Solid & Simple, Equalized, REdundancy, and Non-Extending. E.R.N.E.S.T. meaning Equalized, Redundancy, Non-Extending, Solid & Stable and Timely. Finally, S.E.C.U.R.E., which stands for Strong, Extended, Centred, Unbroken, Run, and Edge.

When compared to these four acronyms, it becomes obvious that A.D.D.R.E.S.S. contains almost all the components covered by the other acronyms (see Table 2). Furthermore, we discovered that many essential components defining a good top rope anchor system were not adequately covered by the other acronyms. The advantages of using A.D.D.R.E.S.S. are as follows. First and arguably the most important, no acronym except A.D.D.R.E.S.S. contains a reminder for the angle factor. Second, none of the acronyms except S.E.C.U.R.E. cover the components of direction and distance. Finally, no other acronym contains a scoring system to evaluate in part or the anchor set-up as a whole.

Table 2. Acronyms Comparison Table.



In the end, it appears evident that the acronym A.D.D.R.E.S.S. is a more effective and complete tool for assessing the effectiveness of an anchor system. Table 2 confirms this conclusion by pointing out the similarities between A.D.D.R.E.S.S. and the other acronyms as well as indicating the shortcomings in R.E.N.E., S.E.R.E.N.E., E.R.N.E.S.T. and S.E.C.U.R.E.

Conclusion

By using an effective and logical approach to teaching top rope anchor systems, our students will become more astute climbers and outdoor instructors. Allowing our students to understand the reliability of various types of anchor points used in rock climbing, will help them to better select natural and artificial anchor points. Furthermore, teaching them a simple way to calculate how many anchor points their system should need, will enable them to more efficiently build top rope anchor systems. Finally, teaching them how to A.D.D.R.E.S.S. the crucial components of a safe top rope anchor system, will help them acquire confidence and proficiency in setting up climbing sites for recreational or instructional purposes.

References

Lewis, P. (1998). Toproping. Helena, MT: Chockstone Press.

Mellor, D. (1997). Rock climbing: A trailside guide. New York, NY: W.W. Norton & Company.

Powers, P., & Cheek, M. (Eds.). (2000). NOLS climbing instructor notebook. Lander, WY: NOLS.

Biographical Sketch

Christian Bisson, Ed.D.

Christian has been instructing adventure programs for over 15 years. A seasonal NOLS instructor since 1990, Christian specializes his technical instruction in rock climbing and mountaineering. His formal climbing training started with “La Fédération Québécoise de la Montagne” (Quebec Mountain Federation) and continued with the Canadian Mountain Guide Association. Recently, he received a certification by the American Mountain Guide Association in Top Rope Climbing Instructor. Christian teaches adventure education at Northland College. He can be reached at cbisson@northland.edu.

Thomas Barrington

Thomas has instructed top rope climbing for five years and formally worked for Hallinbeck Expeditions as a climbing guild. He is currently the Ropes Course Manager and Student Director of Outdoor Orientation at Northland College. Thomas is an adventure education student at Northland College. He can be reached at bt8318@northland.edu.

Civilian Jobs With Navy Outdoor Recreation

By

Ed Dunning
Regional Leisure Activities Coordinator

Abstract

This paper describes several types of civilian jobs typically found in Navy Outdoor Recreation, job qualifications, and how to find the jobs.

Employing and retaining first-rate employees is essential to the success of Navy outdoor recreation activities. In 1998 Navy Morale, Welfare and Recreation contracted Mr. David Webb. Brigham Young University to conduct a baseline assessment of Navy Outdoor Recreation. He summarized his assessment with the following statement:

"Employing people trained, educated, experienced and having a passion for outdoor education, recreation, adventures, and business will do the most to improve and grow outdoor adventure recreation in the Navy. Training, educating, motivating and sharing direction and vision with personnel is critical in developing the people. If you are developing the people, the people will develop the program. After selecting qualified people for employment, training is the next most important factor in program growth and financial viability."

The Human Resource information for this paper was taken and adapted from the Department of Navy Civilian Human Resources www.donhr.navy.mil

Types Of Outdoor Recreation Jobs With The Navy Morale Welfare, And Recreation Department

The Morale Welfare, And Recreation (MWR) Department administers a varied program of recreation, social, and community support activities on U.S. Navy facilities worldwide. Our mission is to provide quality support and recreation services that contribute to the retention, readiness, mental, physical and emotional well being of our Sailors. The majority of MWR staff are civilians. Our programs provide active-duty, reserves, retired Navy personnel and their families, and Department of Defense employees with outdoor recreation, sports and physical fitness activities, child development and youth programs, trips and tours, and a variety of food and beverage services. These programs, however, should not be viewed as something special or provided as a substantial bonus to Sailors and their families. These activities are similar to many basic programs found within the civilian community, such as municipal or private fitness centers, YMCAs, college and university student unions, childcare facilities, and the Boys and Girls Clubs

of America. MWR programs are the backbone used to create a hometown environment for the Sailors'.

Every Navy base, MWR Department, and Outdoor Recreation Program is different. On bases where an Outdoor Adventure Center isn't established and on smaller bases, it is not uncommon for staff to be shared between MWR programs. For example you may have sports and fitness staff renting camping gear. Base demographics, the local environment, seasonal opportunities, natural resources, funding levels, base traditions, the base commanding officer, outdoor staff, and the MWR Department are all contributing factors determining what type of outdoor recreation program exists on each base.

The following outline briefly describes some of the jobs that may be found in Navy outdoor recreation. Depending on the position the qualifications and certifications may not apply to a particular job but generally they are highly desirable.

Director, Outdoor Recreation Specialist

Qualifications

- Bachelors or equivalent
- Three years of specialized on the job experience

Certifications

- All certifications are dependent on the equipment inventory, programs, services, and the geographical location. Training and certification match and meet the needs of customer services provided by the local operation.

Rental and Retail Shop Manager

Qualifications

- Bachelors or equivalent
- Two years of specialized on the job experience

Certifications

- Are nationally recognized organizations
- Are dependent on equipment inventory, programs, services, and location

Program Manager

Qualifications

- Bachelors or equivalent
- Two years of specialized on the job experience

Certifications

- Are nationally recognized organizations
- Are dependent on equipment inventory, programs, services, and location

Maintenance Staff

Qualifications

- Vocational or trade school
- High school diploma
- Two years of on the job experience

Certifications

- Are nationally recognized organizations
- Are dependent on inventory, programs, and services

Customer Service Staff

Qualifications

- High school diploma

Certifications

- Are nationally recognized organizations
- Are dependent on inventory, programs, and services

Lead Instructors and Guides—Part-time

Qualifications

- High school diploma
- Two years on the job, specialized experience

Certifications

- Certified by nationally recognized organizations

Assistant Instructors and Guides—Part-time

Qualifications

- High school diploma
- One year on the job, specialized experience

Certifications

- Certified by nationally recognized organizations

Contractors

- Contractor assumes all liability
- Signed Hold Harmless Agreements
- Certified by the appropriate national governing body
- Commercial liability insurance primary coverage of at least a $1 million dollar comprehensive general liability and a $100,000 property damage limit per occurrence
- Cover and pay for their employees workers' compensation benefits, in accordance with state statutes
- Responsible for the loss, damage or destruction of their owned or leased property or equipment
- A certification and reference check through the Better Business Bureau is required

Where To Find The Jobs

Contact Installations

- Personal Contacts

Get to know the Outdoor Program Directors, personal contacts and word of mouth are invaluable.

- Navy Morale, Welfare and Recreation

  You can find an Outdoor Recreation Directory here, www.mwr.navy.mil go to "Select Your Page" scroll to "Outdoor Recreation" or any other area of interest including stateside and overseas job openings.

- Airforce Crossroads

  To find DoD Installations and make contacts this is one of the best sites, it has all military bases, www.afcrossroads.com go to "DoD Installations".

Navy MWR Home Page

- www.mwr.navy.mil go to "Select Your Page" scroll to "Jobs"

Department Of The Navy Civilian Human Resources

- Navy and Marine Corps Jobs and employment information. www.donhr.navy.mil

USA Jobs

- All kinds of federal jobs and employment information can be found on this site www.usajobs.opm.gov.

US Office Of Personnel Management

- Information on federal government employment www.opm.gov

Civilian Personnel Management Service

- Pay and benefits information www.cpms.osd.mil
- Pay tables http://www.opm.gov/oca/payrates/index.htm

Navy Internships

- For overseas and stateside internships contact Rick Harwell, Worldwide Intern Program Manager (901) 874-2497, rick.harwell@persnet.navy.mil and visit the web site at http://mwr.navy.mil/mwrprgms/intern.html.

The Benefits of Working for Department of the Navy

If you are looking for a challenging civilian career or career advancement, consider the Navy. We currently employ 190,000 civilians in a wide variety of occupations in support of our Department's mission.

In addition to a competitive salary, we offer paid vacation time and sick leave, a portable retirement plan with Government matching contributions, affordable health and life insurance plans, and health and wellness services. See the information below for a sample of what the Department of the Navy offers you and go to Department Of The Navy Civilian Human Resources at www.donhr.navy.mil.

Work - Life Balance

- Competitive salaries
- Two and one-half weeks of paid annual leave per year, five weeks of paid annual leave after 15 years of employment
- Thirteen workdays of sick leave per year
- Support of work and family
- Friendly working environment
- Ten paid Federal holidays each year
- Recruitment bonuses*
- Relocation assistance *
- Flexible work hours*

  * Varies by location and position

Career Development

- On the job and formal education and training
- International opportunities for employment
- High level of job empowerment and responsibility

- Merit principles in selection for vacancies
- Structured career planning
- Opportunities for tuition assistance

Retirement and Health Benefits

- Retirement plan
- 401K-type thrift savings plan
- Group health and life insurance
- Recreational activities and programs
- Employee assistance programs

Competitive Salaries

We offer salaries that are competitive. Employees are normally paid every two weeks. In certain circumstances, employees may also receive overtime compensation, holiday pay, night differential, Sunday premium pay, bonuses and allowances. Federal employees receive annual cost of living pay adjustments and also receive other pay increases based on time in position and performance.

Paid Annual Leave

Annual leave accrual rates are determined by an individual's total years of federal service. This includes both civilian and most military service. However, the majority of retired military members will not be eligible to receive annual leave accrual credit for their military service.

Years of Service	Hours/Two Week Pay Period	Days/Year
Less than 3	4	13
3 but less than 15	6	20
15 or more	8	26

Employees typically are allowed to carry a maximum of 30 workdays (240 hours) of annual leave from one leave year to the next.

Sick Leave

Full-time employees accrue 4 hours of sick leave per pay period or 13 workdays per year. Unlimited hours of sick leave can be accumulated and carried over to succeeding years. Sick leave can be used for personal illness, care of sick family members, adoption, and medical appointments.

Support of Work and Family

Comfortably balancing career and family requirements is an important issue to employees and managers within the Agency. The Department of the Navy's foundation of policies and programs is designed to help its employees cope with balancing the dynamic complexities of today's work and family life.

Friendly Working Environment

The Department of the Navy is an equal employment opportunity employer and fosters an environment where employees are valued for their individual contribution to the accomplishment of the Department's mission. Employees have an opportunity to reach their fullest potential in a professional and challenging work environment.

On-the-Job and Formal Education and Training

Education and training is encouraged. Navy employees have access to many excellent training programs and classes. All new employees attend a basic orientation and most receive on-the-job and formal classroom training through a wide variety of courses.

Retirement Plan

New employees with no prior Federal service are covered by the Federal Employees' Retirement System (FERS) three-tier system. Under this system, employees contribute to Social Security and Medicare, a Retirement fund and a Thrift Savings Plan. Its features are "portable" so that employees who leave Federal employment may still qualify for the benefits. Minimum retirement age under FERS is dependent on date of birth, but ranges from age 55 to 57.

401K - Type Thrift Savings Plan (TSP)

The TSP is a retirement savings and investment plan for Federal employees, similar to the same type of savings and tax plan offered under most private corporation 401(k) plans and is one element of the FERS three part retirement system.

The TSP is a defined contribution plan. The retirement income you receive from your TSP account will depend on how much you have contributed to your account during your working life and the earnings on these contributions. FERS participants may contribute up to 11% of their salary under any of five investment funds offered. The Government automatically contributes 1% to your TSP account and will further match participant contributions up to 4% of basic salary, bringing the maximum government contribution to 5%. Employees covered by the Civil Service Retirement System (CSRS) can contribute up to 6% of their salary and TSP. There are no matching government contributions to TSP for CSRS employees.

Two of the main features of TSP are "tax savings" and "tax deferred earnings". This means the contributions you make come out of your pay before taxes, and the earnings made on your TSP account are not taxed until you receive the money.

Further features include a choice of investment options, interfund transfers, loans from your own contributions and earnings, in-service withdrawals and portable benefits if you leave Federal service.

Group Health and Life Insurance

Under the Federal Employees Health Benefits (FEHB) program, employees can choose from a number of health insurance plans that vary in costs and benefits. The Federal Employees Group Life Insurance (FEGLI) Program offers term life insurance at reasonable rates via payroll deductions. The Navy pays a percentage of the employee's premiums under both the Federal Health Benefits and Life Insurance programs.

Recreation Activities and Programs

Generally, civilian employees may also use Department of the Navy recreational facilities that are open to active duty military personnel on a space available basis. This includes libraries, restaurants, movie theaters, gyms, swimming pools, and other facilities. Discount entertainment tickets (theaters, movies, sporting events, and theme parks), vacation packages and cruises, and personal travel (air, train, ship) are also available to employees.

The Following Charts Are An Examples Of Pay Scales In The Northwest.

Pay varies in the US and overseas depending on the area of employment.

NAF Pay Ranges for the Kitsap, WA Wage Area
Issue Date: 12 Dec 2001
Pay Ranges

	Minimum		Maximum	
NAF Level	Yearly	Hourly	Yearly	Hourly
1	14,400	6.90	22,270	10.67
2	17,280	8.28	28,840	13.82
3	21,041	10.08	48,500	23.24
4	29,500	14.14	76,500	36.66
5	54,000	25.87	121,218	58.08
6	90,000	43.12		

2002 General Schedule (GS)
Excludes Locality Rates of Pay.
Effective January 2001

	Annual Rates for Steps (in dollars)									
Grade	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10
GS-1	14757	15249	15740	16228	16720	17009	17492	17981	18001	18456
GS-2	16592	16985	17535	18001	18201	18736	19271	19806	20341	20876
GS-3	18103	18706	19309	19912	20515	21118	21721	22324	22927	23530
GS-4	20322	20999	21676	22353	23030	23707	24384	25061	25738	26415
GS-5	22737	23495	24253	25011	25769	26527	27285	28043	28801	29559
GS-6	25344	26189	27034	27879	28724	29569	30414	31259	32104	32949
GS-7	28164	29103	30042	30981	31920	32859	33798	34737	35676	36615
GS-8	31191	32231	33271	34311	35351	36391	37431	38471	39511	40551
GS-9	34451	35599	36747	37895	39043	40191	41339	42487	43635	44783
GS-10	37939	39204	40469	41734	42999	44264	45529	46794	48059	49324
GS-11	41684	43073	44462	45851	47240	48629	50018	51407	52796	54185
GS-12	49959	51624	53289	54954	56619	58284	59949	61614	63279	64944
GS-13	59409	61389	63369	65349	67329	69309	71289	73269	75249	77229
GS-14	70205	72545	74885	77225	79565	81905	84245	86585	88925	91265
GS-15	82580	85333	88086	90839	93592	96345	99098	101851	104604	107357

Applying For Department Of The Navy Civilian Positions
A 3-Step Process

Department Of The Navy Civilian Human Resources www.donhr.navy.mil.

The Department of the Navy has eight Human Resources Service Centers located worldwide. Each Center recruits individuals to fill Navy and Marine Corps civilian positions occurring in its serviced area. E-mail and mailing addresses for the Centers are found in the Human Resources Service Center Contact List.

To apply for civilian positions at any one of these Centers follow the steps below:

Step 1 - Conduct A Job Search
Our job opportunity announcements are listed under "Jobs, Jobs, Jobs" at www.resume.hroc.navy.mil/JobOpportunities/jobs_employment_opportunites.htm. You can search for job opportunities by position title, by all open positions, or by geographic regions covered by each of our Human Resources Service Centers. Check back often as job opportunity announcements are updated daily.

If you are unable to access our Job Announcements under Jobs, Jobs, Jobs it may be due to a temporary router problem or a problem with your Internet Service Provider (i.e., AOL, MSN and Yahoo). Please try again in a few minutes. If you are still unable to access the site, contact your Internet Service Provider to ensure that they have the correct web site address.

Step 2 - Carefully Read The Job Opportunity Announcement Information
Not all announcements require the same information. Some may contain job-unique requirements and/or special application instructions. For example, positions such as Nurses or Child Care Workers may require that you possess and provide information on licenses or credentialling information, so make certain you read the announcement carefully.

When reading the announcements, also pay close attention to the "Area of Consideration" and/or "Who May Apply" sections. Before applying for a position, ensure that you meet the criteria specified in both.

The "Area of Consideration" block reflects the area throughout which the candidate search is being conducted, for example, "Current Department of the Navy Employees". For such an area of consideration, if you are not a Department of the Navy civilian employee, you will most likely not be considered for the vacancy if you apply.

The "Who May Apply" section further defines applicant eligibility. For further information on "Who May Apply" see the Common Hiring Categories Definitions section.

Step 3 - Format And Submit Your Application
You can apply for most job opportunity announcements with a Resume. However, some announcements may require special application forms. Check the "How to Apply" section in the announcement to determine the correct application format.

- Where a resume is the appropriate application form, the Department of the Navy has developed a Resume Builder to help you create and submit your resume. The Resume Builder is accessible from the bottom of each of our job announcements listed on Jobs, Jobs, Jobs. Once you select the vacancy in which you're interested, scroll to the bottom

of the vacancy announcement and click on the "Take Me to the Resume Builder" button. Block-by-block, the Resume Builder will prompt you to enter all the necessary information needed to create an electronic resume. It will even send your resume directly to the appropriate Human Resources Service Center where you wish to apply.

- Once you have a resume on file with a Human Resources Service Center, you may be able to use it to apply for other job opportunity announcements issued by that Center by using Application Express. Read the "How to Apply" section of the job opportunity announcement(s) you are interested in applying on to determine whether Application Express may be used.

Prior to starting your resume, you may want to get some helpful hints by reading our How to Prepare a Resume information and by reviewing a Sample Resume.

Although electronic submission of your resume using the Department of the Navy Resume Builder is the preferred method, you may also E-mail your resume or submit a Hardcopy Resume. Please see the special instructions for submitting your resume in either format. Links to all the above may be found at www.donhr.navy.mil/Jobs/JobKit.asp.

Common Hiring Categories Definitions

Please refer to the following information in determining whether you meet the "Who May Apply" and/or "Area of Consideration" sections of our listed job opportunity announcements. You will be asked to submit supporting documentation noted for each category prior to any final job offer being made. In some cases, documentation will be required at the time of application. Please refer to announcements for specific information.

If You Meet The Below Definition(s) ...	Your Hiring Program Category Is …
Applicants who are current, permanent career or career-conditional civilian (status) employees of any Federal agency. This does NOT include Federal employees who are currently working on temporary or term appointments**.** Supporting documentation: Copy of your most recent Notification of Personnel Action, SF-50, showing current title, pay plan, series and grade.	Current Permanent Federal Civilian Employee
Applicants who are current, permanent career or career-conditional civilian (status) employees of any Department of Defense agency. This does NOT include employees who are currently working on temporary or term appointments. NOTE: If you meet this definition, you are also eligible as a current permanent Federal civilian employee. Supporting documentation: Copy of your most recent Notification of Personnel Action, SF-50.	Current Permanent DOD Civilian Employee
Applicants who are current, permanent career or career-conditional civilian (status) employees of any Department of the Navy (including United States Marine Corps) activity. This does NOT include employees who are currently working on temporary or term appointments. NOTE: If you meet this definition, you are also eligible as a current permanent Federal civilian employee and a current permanent DOD civilian employee. Supporting documentation: Copy of your most recent Notification of Personnel Action, SF-50.	Current Permanent DON/USMC Civilian Employee

Applicants who worked overseas as an appropriated fund Federal employee, while a family member of a civilian, non-appropriated fund or uniformed service member serving overseas, for an accumulated total of 52 weeks and who received a fully successful (pass) or better performance appraisal. This appointment eligibility is effective for a period of three years following the date of return from overseas to the United States to reassume residence. Supporting documentation: A copy of a Notification of Personnel Action, SF-50, showing completion of 52 weeks of creditable overseas service, AND a copy of your most recent annual performance appraisal, AND a copy of your Permanent Change of Station Orders used to return you to the United States.	Executive Order 12721 Eligible
Former Federal employees who previously attained career status, OR former Federal employees with veterans' preference who previously attained career-conditional status as a civilian employee in any Federal agency, OR former Federal career-conditional employees (without veterans' preference) who separated from Government service within the past three years. Supporting documentation: Copy of your most recent Notification of Personnel Action, SF-50.	Reinstatement Eligible
Current Non-Appropriated Fund (NAF), Civilian Intelligence Personnel Management System (CIPMS), Defense Civilian Intelligence Personnel System (DCIPS) employees or other Interchange Agreement eligibles who have served continuously for at least one year under a permanent appointment, or former Interchange Agreement eligible employees (i.e., NAF, CIPMS, DCIPS) who served under an appointment described above, and who were involuntarily separated within the past year without personal cause (i.e., not because of unacceptable conduct or performance). For further information and a list of other Federal agencies that are under Interchange Agreements, please check http://www.opm.gov/employ/html/sroa2.htm#Interchange Agreements With Other Merit Systems . Supporting documentation: Copy(ies) of applicable personnel actions verifying the above criteria.	Interchange Agreement (NAF, CIPMS, DCIPS, etc.) Eligible
Current or former employees displaced from non-Department of Defense Federal agencies. Additional information on this program and supporting documentation needed may be found at www.usajobs.opm.gov/ei32.htm.	Interagency Career Transition Assistance Plan (ICTAP) Eligible
Applicants who are spouses of relocating active duty military members or DOD civilian employees, may apply to specific announcements regardless of the Area of Consideration, during the 30 days preceding through the 6 months following their sponsor's relocation to the activity's commuting area. Spouses must be appointable under one of the hiring program categories identified on this form. Supporting documentation: A copy of sponsor's Permanent Change of Station order and/or copy of your most recent Notification of Personnel Action, SF-50, if applicable.	Spouse of Relocating Military Member or DOD Civilian
Veterans' Readjustment Appointment (VRA): To be eligible, a veteran must have served in the Armed Forces on active duty (not active duty for training or inactive duty as a Reservist) for more than 180 days and received other than dishonorable discharge. Veterans must have served time which occurred after August 4, 1964, (or February 28, 1961, for those who actually served in the Republic of Vietnam). The 180-day requirement does not apply to veterans who were discharged or released from active duty because of a	Veterans' Readjustment Appointment and/or 30% or More Disabled Veteran

service-connected disability. It also does not apply to members of the Reserves or National Guard ordered to active duty under 10 United States Code (U.S.C.) 12301(a), (d), or (g), 12302, or 12304 for service during a period of war as defined in 38 U.S.C. 101(11) or in a campaign or expedition for which a campaign badge is authorized. "Period of War" includes World War II, the Korean conflict, Vietnam era, the Persian Gulf War, or the period beginning on the date of any future declaration of war by Congress and ending on the date prescribed by Presidential proclamation or concurrent resolution of the Congress. To be eligible for a VRA appointment, a veteran who meets the above definition must be appointed within 10 years of his or her last discharge from active duty. Supporting documentation: DD-214(s) showing type of discharge. Additionally, veterans claiming 10-point veterans' preference will need an Application for 10-Point Veteran Preference, SF-15, and applicable supporting documents, as noted on the form. NOTE: Veterans' preference information and forms may be located on web sites such as www.opm.gov or www.dol.gov/dol/vets . 30% or More Disabled Veteran: Individuals who have retired from active military service with a disability rating of 30 % or more; or, who have been rated by the Department of Veterans Affairs (DVA) within the preceding 12 months as having a compensable service-connected disability of 30 % or more. Supporting documentation: DD-214(s) showing type of discharge. Additionally, veterans will need an Application for 10-Point Veteran Preference, SF-15, and applicable supporting documents, as noted on the form. NOTE: Veterans' preference information and forms may be located on web sites such as www.opm.gov or www.dol.gov/dol/vets .	
Preference eligibles or veterans who separated from the Armed Forces under honorable conditions after substantially completing an initial 3-year term of active service. Supporting documentation: DD-214(s) showing length of active duty service and type of discharge.	Veterans' Employment Opportunity Act Eligible
Individuals with a major physical or mental impairment(s) that limit(s) one or more life activities as certified by a State Vocational Rehabilitation Service or the Department of Veterans Affairs (DVA). Supporting documentation: Recent letter from DVA or State Vocational Rehabilitation Service.	Persons with Disability
A college graduate who has: (1) an accumulated grade point average of 3.45 or above on a 4.0 scale; or, (2) graduated in the upper 10% of their graduating class or major university subdivision for baccalaureate degree. Supporting documentation: College/university transcript.	Outstanding Scholar
Full or part-time students enrolled in high school, vocational institution, college, or university. Supporting documentation: Proof of enrollment.	Current Student
Spouse of an overseas active duty U.S. Armed Forces service member who meets ALL of the following conditions: 1) The spouse and the sponsor were married prior to the relocation (before the Permanent Change of Station). 2) Since the relocation, the spouse has not accepted or declined a permanent position or a temporary position of one year or longer at the new duty station of the sponsor. 3) The spouse is among the best qualified. 4) The position applied for is not above the highest permanent grade previously held in the Federal service. Supporting documentation: A copy of the sponsor's Permanent Change of Station orders. NOTE: Preference can be granted only **once** per PCS relocation. Once you accept or decline a continuing position	Overseas Military Spouse Appointment Eligible

(one that is expected to last one year or more), either appropriated fund (AF) or non-appropriated fund (NAF), at the new duty station, your eligibility for preference terminates whether or not preference was applied.	
A spouse, or unmarried dependent child (including stepchild, adopted child, and foster child) not more than 23 years of age who is residing with a member of the U.S. Armed Forces, or a U.S. citizen employee of a U.S. Government Agency (including nonappropriated fund activities) whose duty station is in a foreign area and has not accepted or declined a permanent position or a temporary position of one year or longer at the new duty station of the sponsor. Supporting documentation: A copy of the sponsor's Permanent Change of Station orders. NOTE: This preference does not apply to family members of locally hired civilian employees.	Overseas Family Member Preference Eligible
Overseas Limited Term Appointment may be used to recruit United States citizens in an overseas area. However, there are certain host nations-specific requirements and limitations to this authority. Contact the local Human Resources Office for specific details.	Overseas Limited Appointment Eligible

How To Prepare A Resume

Don't write your resume for a particular position. Instead, concentrate on defining and identifying all meaningful skills you possess for those career fields in which you are interested. Then describe your experience in terms of specific skills rather than general descriptions.

- Carefully read the information and application instructions provided in the job opportunity announcements listed under Jobs, Jobs, Jobs.
- Review the Sample Resume.
- Use our Resume Builder to create your resume. It will automatically format your resume into the Federal resume format and will electronically send it to the applicable Human Resources Service Center. Our Resume Builder is accessible from the bottom of each job opportunity announcement listed on Jobs, Jobs, Jobs.
- If you wish to build and save a Resume Builder resume for future use and not apply to an actual job opportunity announcement, just select and open any of our vacancy announcements. Scroll down to the bottom of the announcement and click on the Resume Builder Button. Create your resume. Then use the Save button, rather than the Preview button.
- Describe your experience with specific words and phrases rather than vague descriptions. For example, rather than using "communicates orally and in writing", it is better to use "writes complex technical documents and reports; prepares policy statements; and develops and presents Power Point briefings to large groups".
- If you use jargons and acronyms specific to your profession, spell them so that all readers can readily understand what you do.
- Describe your interpersonal traits and attitudes. Descriptions could include such traits as time management, dependable, leadership, sense of responsibility, ability to prioritize, etc.
- You can have more than one paragraph for each experience, but keep paragraphs short by entering a carriage return (blank line) after at least every 20 lines. It's easier to read.
- Don't use fancy treatments such as graphics, italics, underline, shadows, and reverses (white letters on black background) or signs and symbols such as % # * ( ) / = and don't type your information in all capital letters.

- Electronic submission of resumes through the use of the Department of the Navy Resume Builder is the preferred method for applying on the Department of the Navy's job announcements. The Resume Builder is accessible at the bottom of each job opportunity announcement listed on Jobs, Jobs, Jobs. Resumes may also be submitted by E-mail or hardcopy. If you are planning on E-mailing or mailing a hardcopy resume, review the Directions for E-mail Resumes or Directions for Hardcopy Resumes.
- Once you have a resume on file with a Human Resources Service Center, you may be able to use it to apply for other job opportunity announcements issued by that Center using Application Express. Read the "How to Apply" section of the job opportunity announcement(s) you are interested in applying on to determine whether Application Express may be used.

Directions For Hardcopy Resumes

Hardcopy resumes are accepted, however submission of resumes through the Department of the Navy Resume Builder is preferred. Instructions for hardcopy resumes are listed below.

1. Follow the Do's and Don'ts below when preparing and submitting your hardcopy resume:

Do:

- Closely follow the Sample Resume format.
- Please limit your resume to a maximum of five pages in length.
- Type your resume on 8.5" x 11" white bond paper, printed on one-side only.
- Provide a laser printer original if possible. A typewritten original or a high quality photocopy is also acceptable.
- Leave a minimum 1" margin on all sides.
- Use standard typefaces such as Arial, Times New Roman, or Courier.
- Use a 12-pitch font.

Don't:

- Submit a handwritten or faxed resume.
- Fold or staple your resume.
- Condense spacing between letters.
- Use fancy treatments such as italics, underlines, shadows, and reverses (white letters on black background).
- Submit a resume with light or faded print.

2. Include your responses to the Additional Data Sheet. Double-check the servicing Human Resources Service Center. You may access and print the Additional Data Sheet by selecting the appropriate Human Resources Service Center found on the next page.

Human Resources Service Center (HRSC) Contact List

CAPITAL:
HRSC-CAP
Nebraska Avenue Complex, Bldg 3
291 Cryptologic Court NW
Washington, DC 20393-5444
wantajob@cap.hroc.navy.mil

EAST:
HRSC-EAST
Norfolk Naval Shipyard, Bldg 17
Portsmouth, VA 23709-5000
wantajob@east.hroc.navy.mil

EUROPE:
HRSC-EUROPE
PSC 821, Box 121
FPO AE 09421-5000
wantajob@esc.hroc.navy.mil

NORTHEAST:
HRSC-NE
RESUMIX UNIT
111 S. Independence Mall, East (Bourse Bldg)
Philadelphia, PA 19106-2598
wantajob@ne.hroc.navy.mil

NORTHWEST:
HRSC-NW
3230 NW Randall Way
Silverdale, WA 98383
wantajob@nw.hroc.navy.mil

PACIFIC:
HRSC-PAC
178 Main St., Bldg 499
Honolulu, HI 96818-4048
wantajob@pac.hroc.navy.mil

SOUTHEAST:
HRSC-SE
9110 Leonard Kimble Rd
Stennis Space Center, MS 39522-0002
wantajob@se.hroc.navy.mil

SOUTHWEST:
HRSC-SW
525 B Street, Suite 600
Attn: Code 53 – Resume Intake Unit
San Diego, CA 92101-4418
wantajob@sw.hroc.navy.mil

Good Luck And Thank You For Your Interest In Civilian Employment With Navy Outdoor Recreation

Biographical Sketch

Ed Dunning worked eight seasons on trail maintenance and as a crew construction foreman with the US Forest Service in Washington. In 1988 Ed began work at Naval Air Station Whidbey Island, WA as the outdoor rental shop manager he increased operations to include adventure programs, gear repair service, and an outdoor specialty resale shop. He has guided and instructed canoeing, rock climbing, backpacking, skiing, and snowshoeing. From 1998-2002 Ed worked for Naval Personnel Command as the worldwide Outdoor Recreation Specialist/Program Manager. Ed is currently serving as the Navy's Regional Leisure Activities Coordinator in NW Washington.

Ed Dunning
Regional Leisure Activities Coordinator
Commander, Navy Region Northwest
Life and Leisure Skills Coordinator (N472)
1103 Hunley Road
Silverdale, WA 98315

Being "Mindful" in Outdoor Recreation and Education Environments: "Simple How To's" on Influencing Mindfulness Among Visitors/Participants

By

Eric Frauman
Middle Tennessee State University
Murfreesboro, Tennessee

Abstract

Ever ask yourself, "How come our visitors/participants sometimes don't seem to able to retain and/or apply the information they just received while at other times they do?" Could it be they are seemingly mindless sometimes but at other times quite mindful? A communication model based on the concepts of mindfulness and mindlessness and its application in outdoor recreation and education settings is described in this paper. While a number of studies have found that people often seek understanding of the environments they recreate in, the reality is many people often do not retain, nor can they apply, new information just received (Moscardo, 1999). In this paper, the concept of mindfulness is offered as an underlying foundation for promoting greater attention and awareness of one's surroundings. Principles associated with promoting mindfulness are described to provide professionals with the tools to facilitate mindfulness among visitors/participants.

A Starting Point

It has been well documented that people are visiting and recreating at nature-based destinations (e.g., national parks) around the world in record numbers. The 2000 National Survey on Recreation and the Environment (NSRE) (The Interagency National Survey Consortium, 2000-2001) found 57.1% of Americans visited a nature center in the last 12 months, while 41.9% viewed wildlife, 33.4% hiked in natural areas, and 25.4% overnight camped. Participation in nature-based recreation based on projections through 2050 (Cordell, et al., 1999), suggest increases in many nonconsumptive wildlife, dispersed, and developed land, as well as, water-based activities (e.g., birding, backpacking, camping, canoeing). While a number of studies have found that people often seek understanding of the environments they recreate in, the reality is many people often do not retain, nor can they apply, new information just received (Moscardo, 1999).

Why is it that visitors/participants sometimes don't seem to be able to retain and/or apply the information they just received while at other times they do? Could it be they are seemingly mindless sometimes but at other times quite mindful? Why? What to do?

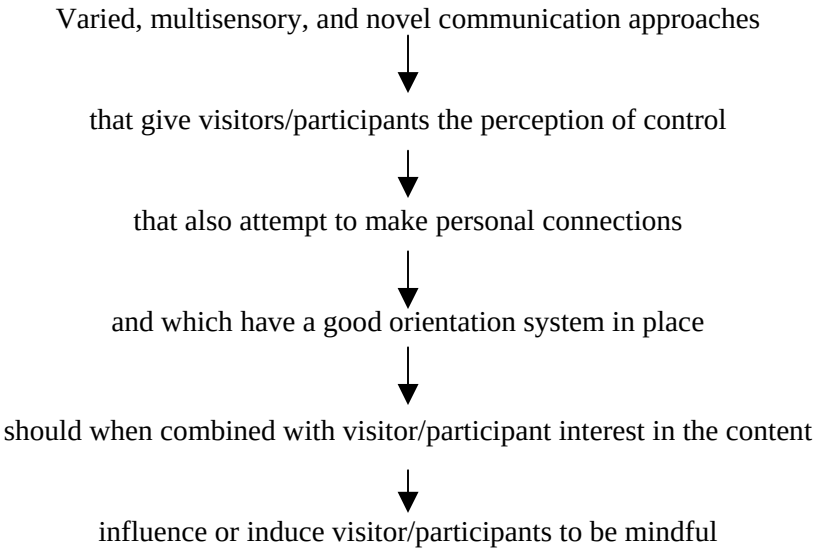
What is mindfulness and who is a mindful visitor/participant?

Given a 25-year research history, Langer and Moldoveanu (2000) suggest mindfulness is a product of both intrapersonal and situational factors and is characterized by a lively awareness and attention to one's surrounding environment. Mindlessness, on the other hand, while not thought to be cognitively debilitating, is a state of mind characterized by a type of disengagement from one's surroundings where information is either not recognized or receives little attention (Langer, 1989; Moscardo, 1999). While personality trait and interest may primarily influence mindfulness, it is also likely to be influenced or induced when a setting, service, or activity: 1) is varied, interactive and involving, 2) facilitates perceptions of control, 3) appears relevant to one's interests, and 4) is perceived as new, different or unique (Frauman, 1999; Langer and Moldoveanu, 2000; Moscardo, 1999). Physiological, learning, and productivity benefits have been observed in healthcare, education, and the business world, respectively, in studies incorporating mindfulness principles (Langer & Moldoveanu, 2000). According to Moscardo (1999), mindfulness is thought to be associated with greater learning, satisfaction, and thinking about new ways to behave in recreation-based settings. Therefore, a visitor or participant exposed to "mindfully" presented information in a recreation setting should theoretically benefit from an educational and satisfaction perspective more so than a visitor who is not exposed (Moscardo, 1999). If resource managers and outdoor educators have objectives that include fostering greater awareness, appreciation, and influencing responsible environmental behavior, then the incorporation of mindfulness principles may benefit the resource as well.

A Mindfulness Model of Communication

It is commonly recognized that good communication can enhance visitor/participant experiences by: 1) providing information on alternatives and options, 2) encouraging safety and comfort, and 3) being a core element of the actual experience (e.g., learning about the setting, a service, or an activity). Good communication can also assist in managing visitors/participants by influencing where they go and informing them about appropriate behaviors. The end product is that good communication should create mindful visitors who are able to retain more information (e.g., learn more), who think about new ways to behave, and who experience a qualitatively different kind of satisfaction (Moscardo, 1999). As such, and delineated below, principles for encouraging mindfulness are: 1) communicate from a conditional perspective when appropriate, 2) provide variety, 3) make connections to visitors/participants and get them involved, 4) help visitors/participants find their way around, 5) tell a good story that makes sense, and 6) get to know and respect visitors/participants (Moscardo, 1999).

The Model



A Closer Look at Mindfulness Principles

Communicating from a conditional perspective. The world is full of facts, figures, and absolutes, or is it? When possible, express and provide information using conditional language such as: "could be", "you might consider", "this may be", and "what do you think?"

Helping Visitors/Participants Find Their Way Around. Design complete orientation systems that capitalize on varied learning styles and that include: directional signs, "you are here" maps, hand-held maps, and physical cues.

Connecting to Visitors/Participants. We can: 1) engage them in conversations, 2) use analogies and metaphors from their everyday lives, 3) tell stories with characters they can relate to, and 4) choose topics within everyday experience. We can also give visitors/participants control by: 1) offering them choices, 2) asking them questions, and 3) encouraging them to participate.

Providing Variety. We can vary: 1) the senses required, 2) the social nature of the experience, 3) the level of physical activity required, 4) the level of mental activity required, and 5) the media used.

Telling a Good Story. Visitors/participants prefer: to be told stories and to have the relationships between pieces of information made clear. Visitors/participants don't like information presented as isolated facts and commonly can only make sense of new information if they can connect it to something they already know. To facilitate understanding communicators can provide advance organizers or instructions to help visitors/participants understand how information is organized and use themes to link information.

Knowing Your Visitors/Participants. Communicators need to get to know their visitors/participants. It is useful to know: 1) how much experience of the place or activity visitors/participants have, 2) why they are visiting or participating, 3) who they are with, 4) their cultural background, and 5) what they already know. Observing visitor/participant reactions or asking for comments and suggestions is also useful.

Coming to Conclusions

A mindfully-oriented communication approach can: 1) fulfill the needs of visitors/participants, 2) enhance their experience, and 3) influence or induce appropriate environmental behavior to protect and preserve the environments we work and play in. While there are certainly other techniques and methods (e.g., Freeman Tilden's Principles of Interpretation, [Tilden, 1967]) that have merit in influencing visitor/participant behavior and understanding, the mindfulness approach may prove to be a simple, yet comprehensive way to facilitate goals that include inform, educate, protect, and preserve. As Langer and Moldoveanu (2000) suggest, a mindful person should see the surrounding context they are recreating in as a source of new information. The by-product is that future encounters with new or existing objects or sources of information in the surrounding environmental context that are purposely in place to be seen and utilized should be experienced with continued information gains for additional future encounters (Langer & Moldoveanu, 2000). On the other hand, if a particular environmental or educational setting is not structured to facilitate a mindful visitor/participant, the likelihood of a recreation site or setting meeting some of its management and communication goals may be diminished as well (Moscardo, 1999). Conversely, when mindful cues are present in the environment the likelihood of a seemingly mindless person becoming more mindful may increase, thereby, increasing knowledge of the setting and potentially influencing overall satisfaction with the experience (Moscardo, 1992; Moscardo, 1999). In the end, the pursuit of a "mindful" visitor/participant may be a worthwhile undertaking that holds benefits for our natural environment, the visitor/participant, and you, the provider.

References

Cordell, H. K., C. J. Betz, J. M. Bowker, D. B. K. English, S. H. Mou, J. C. Bergstrom, R. J. Teasley, M. A. Tarrant, and J. Loomis (1999). Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends. Sagamore Publishing, Inc.: Champaign, IL.

Frauman, E. (1999). The Influence of Mindfulness on Information Services and Sustainable Management Practices at Coastal South Carolina State Parks. Dissertation Abstracts International, 60 (5), 1763A. (UMI No. 9929721)

Langer, E. J., and M. Moldoveanu (2000). The Construct of Mindfulness. Journal of Social Issues, 56 (1): 1-9.

Moscardo, G. M. (1992). A Mindfulness/Mindlessness Model Of The Museum Visitor Experience. Unpublished Doctoral Dissertation, James Cook University, North Queensland, Australia.

Moscardo, G. M. (1999). Making Visitors Mindful: Principles for Creating Sustainable Visitor Experiences through Effective Communication. Champaign, IL: Sagamore Publishing.

The Interagency National Survey Consortium (2000-2001). 2000 National Survey on Recreation and the Environment. USDA Forest Service: Outdoor Recreation, Wilderness and Demographics Trends Research Group, Athens, GA. Retrieved November 15, 2001 from the World Wide Web: http://www.srs.fs.fed.us/trends/nsre2.html

Tilden, F. (1967). Interpreting Our Heritage (rev. ed.). Chapel Hill, NC: North Carolina Press.

Biographical sketch:

Eric Frauman is an Assistant Professor at Middle Tennessee State University whose primary responsibility is coordinating the Outdoor Recreation curriculum within the Recreation and Leisure Services Program. His teaching centers around “speaking for the trees” and his research primarily focuses on the concept of “mindfulness” and its application in learning environments, particularly in natural settings. Dr. Frauman has traveled extensively throughout the United States and is always looking for a new adventure. Email: efrauman@mtsu.edu

Connecting Web-based Learning With Staff Development for Outdoor Experiential Programs

Jimmy Griffin, Ph.D
Jacksonville State University

Chuck Hooker, M.Ed.

Abstract

Outdoor experiential program managers face many challenges in staff development. Issues such as time, availability of staff, cost, effectiveness of various strategies (videos, technical skills sessions, readings), prioritizing issues, and training environment are at the forefront. The use of contract and part-time facilitators compound these issues even more. In answer to the question of how can we assure our staff is well trained in their work area or pursuit as well as in agency policies and procedures we propose a solution, a combination of traditional face to face interaction and web enabled technologies. Even in outdoor experiential education, a field that has traditionally emphasized instructor contact and real time learning, this "hybrid" (H-learning) delivery, offers the best of best worlds. This paper focuses on a training course that took advantage of enhancements using sophisticated e-learning technology, Blackboard 5. Blackboard is a tool that facilitates the creation of World Wide Web-based educational environments, including entire on-line courses. This paper has application for academic institutions, and any outdoor professional entity that offers training on a periodic or ongoing basis.

Face to Face Learning and Electronic Learning

"If we accept the premise that technology is with us and that it brings at least some benefits, there are innumerable possibilities for integrating current technology into experiential education" Stringer, 1999. Journal of Experiential Education.

Academic institutions are increasingly turning to electronic learning (e-learning) solutions to deliver high quality educational materials in a flexible manner. The academic arena is undergoing a revolution as electronic technology becomes more the norm in course delivery. The sophistication of e-learning tools offers enhanced methods of facilitating learning outside of classroom time and can be readily adapted to enhance staff development experiences for outdoor experiential programs.

Traditional course delivery involves face-to-face (F2F) experiences with the instructor and class together in the same location at the same time, and lectures, readings, and discussions being the method. Alternatively, computer mediated on-line learning (e-learning) takes advantage of world wide web enabled technologies and can occur at any time and in any place without the direct presence of the instructor. Examples include simple e-mailing and chat rooms to more sophisticated platforms that contain entire courses such as Web CT and Blackboard. In the field

of experiential education that has traditionally emphasized instructor contact and real time learning the combination of F2F and web enabled technologies, known as "hybrid" (H-learning), offers the best of best worlds.

Outdoor experiential program managers face many challenges in staff development. Issues such as time, availability of staff, cost, effectiveness of various strategies (videos, technical skills sessions, readings), prioritizing issues, and training environment are at the forefront. The use of contract and part-time facilitators compound these issues even more. In answer to the question of "How can we assure our staff is well trained in their work area or pursuit as well as in agency policies and procedures?" we propose a solution: **H-learning.**

"As a cyberjunction, the interactive and integrative aspects of the Internet can transform…learning programs into experiential learning communities. This common meeting point, not bound by time or physical space brings together several important components of experiential learning…" McCarty, 1999. Journal of Experiential Education.

Camp staff development serves as an excellent example. A perusal of Camp Counselor text-books since the 1950's reveals little change has taken place in camp staff training modalities. Staff commonly are separated from each other, and program directors, until their arrival on-site for pre-camp training. They may have been sent a book or two on various pertinent topics. But it is in that intensive week or two of cram course training that camp directors have to insure readiness.

Georgia College & State University (GC&SU) faced a similar challenge as we advertised a new 3 credit hour undergraduate course in Camp Leadership for the Maymester term in 2001. The course focused on the soft skills and technical skills needed to be a successful camp counselor. To meet the challenge of maximizing learning in a short (two-week) time period, we decided to adopt an H-learning approach. This satisfied many requirements:

- Accessibility of curriculum: allowed students a forum for learning outside regular classroom hours (timeframe and location flexibility)
- Established a baseline of knowledge
- Addressed all major learning styles
- Promoted community
- Provided a vehicle for instructors to rapidly disseminate information and monitor student learning (reinforced student accountability)
- Helped meet university guidelines for enhancing computer skills
- Reduced costs through elimination of handouts, lower infrastructure needs, etc

In the realm of web-enabled course delivery there are currently two major players: WebCT and Blackboard. Both companies offer sophisticated e-learning course delivery tools. In 2000 the American Camping Association (ACA) launched an on-line camp counselor training program on the Blackboard platform (www.blackboard.com). The ACA course, based on the ACA text "Camp is for the Camper" addresses soft skills topics from leadership to typical camper problems. We reviewed the ACA course and realized that it closely met our needs. The flexible nature of the Blackboard platform allowed us to easily add, modify, or delete content as needed.

The advantages of this strategy were immediately felt. Students could concentrate on lectures and technical skills learning during daytime F2F sessions, and focus on soft skills sessions after class hours in their own time/place. They were given reading and research assignments each day, which including posting comments "on-line" about the assignments/topics and responding to

other student's comments. The "chat room" feature offered students an avenue for discussing assignments.

From an instructor standpoint, there were many benefits. The Blackboard platform allowed us to tailor the "canned" course content to our training needs. For example, we found that we could easily include Word or HTML documents, Power Point presentations, and audio / video clips into the Blackboard. We were able to develop on-line quizzes including multiple choice, true/false, fill in the blank, short answer, and essay questions. The monitoring tools allowed us to track student progress and quickly assist anyone having difficulties. Another benefit was accountability. Blackboard contains instructor options that allow you to see when (and if) a student logs on, how long they spent on each section of the course, and even the date and time of log in.

Evaluation

Evaluations of on-line learning tools show positive results. The American Camping Association reported high marks from camp directors who utilized their Blackboard course in staff training. Gillis, Hirsch, et.al reported that on-line interactions did not inhibit the sharing of feelings, but some felt more comfortable sharing on-line than F2F.

Conclusion

As the world becomes increasingly wired and high telecommunications bandwidth becomes affordable, web-enabled learning technologies may well become the norm. Our experience suggests that the advantages of H-Learning are transferable to staff development in virtually any outdoor experiential program.

References

Coutillier, C. (2001). Private correspondence regarding outcomes of first year ACA On-Line education.

Daugherty, Grubb, Gillis, and Hirsch. "The scholarship of web based teaching." In R. L. Cole Issues in Web-Based Pedagogy: A Critical Primer. Westport, CT. Greenwood.

McCarty, J.E. (1999). Cyberjunctions: Building learning communities in cyberspace. Journal of Experiential Education. 22(2), 77.

Stringer, A. (1999). Both promise and peril: Information technology and experiential education. . Journal of Experiential Education. 22(2), 63.

Young, J. R. (2002). 'Hybrid' Teaching Seeks to End the Divide Between Traditional and Online Instruction. Chronicle of Higher Education. (online) March 22, 2002.

Biographical sketches:

Jimmy Griffin, Ph.D.

Jimmy received his Ph.D. from the University of New Mexico in December 2000. He has over 20 years experience in experiential education, including education, recreation and therapy. He is currently Assistant Professor of Outdoor Education at Jacksonville State University in Jacksonville, Alabama. jgriffin@jsucc.jsu.edu

Chuck Hooker, M.Ed.

Chuck received his M.Ed. in Outdoor Education Administration from Georgia College & State University in 2001. He is an Information Technology Consultant in Charleston, SC. Chuck also facilitates adventure-based programs for Charleston County Park & Recreation Commission.

Reporting Outdoor Recreation Assessment Data

By

Sarah E. Hardin, Ph.D. and Tammie L. Stenger, Ed.D.
Southeast Missouri State University

Abstract

Conducting research and reporting the results of that research effectively can be an intimidating process. Many of us collect information from our participants but never interpret that information successfully in interactions with administrators who make crucial decisions about our programs. The purpose of this paper is to assist readers in understanding the major principles in reporting data from assessment research, exploring considerations for developing written and oral reports, and identifying key decision points in determining appropriate report formats for certain audiences and situations. Maximizing the impact of information should be the goal of every report.

Collecting Data

The first thing to realize about the data collection process is that most practitioners are already doing it even if there is no formal process in place. Every time a participant speaks to a practitioner regarding his or her reaction to an outdoor learning experience, information is being collected. Documenting enough of these conversations will provide one with a collection of assessment data. Practitioners have a tendency to use evaluative program information to complete the annual report, but never put it into a document that can be used to support or justify existing or expanded programs. The purpose of this paper is to provide simple tips for effective utilization of assessment information in order to maximize the impact of that information.

Some data collection methods currently being employed by each practitioner on an informal basis are: a) informal discussions with participants, b) suggestion boxes, or c) participant/constituent advisory boards. A few formal methods for data collection that can be very useful in demonstrating congruence with organizational goals or establishing program justification include: a) needs assessment, b) satisfaction surveys, c) outcome/benefits assessment instruments, and d) program evaluation assessments. Shuh and Upcraft (2001) provide an excellent resource for those interested in exploring the variety of assessment methods and techniques available.

As stated previously, the focus of this paper is not to discuss these options but to explore how to use the information collected through these options in a strategic and effective manner. We will discuss the major principles of reporting assessment data, considerations in the development of oral and written reports, and the reporting formats that are appropriate for certain audiences and circumstances.

Principles for Reporting Data

There are several key principles in reporting data that influence audience response. They are:

- Define the Purpose
- Use Multiple Reporting Strategies
- Provide Enlightenment
- Know the Point and Get to it Quickly
- Know Your Audience

The first is *Define the Purpose*. One should make sure that from the beginning of the report that the audience very clear about the report's purpose. The purpose was probably apparent to the reporters in the actual beginning of the study and should be made clear to the audience receiving the report. However, sometimes we collect information from people, begin to see some trends, and then decide upon our purpose. A practitioner who needs the information to justify a program should not be uncomfortable using data that was collected before the purpose was actually known. One simply has to make sure that in the report of that data, the purpose is clear (Krueger, 1998).

A second key principle in reporting to audiences is *Know the Point and Get to it Quickly*. Written or oral reports that are abstract and tend to pull in too much information from many different areas can lose the interest of the audience with lightning speed. One should plan to move into the primary information immediately and catch the interest of the audience.

Use Multiple Reporting Strategies is the third principle and it is very important, especially when combined with the fourth, *Know Your Audience*. Due to the fact that people have a variety of information-processing modes, providing information in a variety of formats can be beneficial in attracting different people. For instance, if an oral presentation is being given at a meeting, one should provide handouts and an overhead or computer presentation as well. This keeps the attention of both the visual and audio learners in the group. In addition, understanding audience preferences is important. If an individual who will be making decisions regarding one's program is a "numbers person," he or she should be given the information in a form that is compatible with that style. If he or she prefers in-depth information, provide quotes that supplement the reported data. Using these strategies will assist in actually get the point across. It may be lost if the wrong format is used.

The last principle is simple, yet easily missed: *Provide Enlightenment*. The reporter should give the audience information that they have not gotten before and do it in a way that makes them feel like they are learning something new. One should try to catch them early with an important fact or quote that "hooks" them and whets their appetites for more information.

Written Reports

Krueger (1998) identifies several different methods of reporting data. Obviously, whether a report will be written or oral will depend upon the circumstances surrounding the report. However, if an individual feels that an "in-person" presentation of the information will be more effective than simply sending a report to the audience, initiating the idea of presenting at a meeting is an option. Regardless of the venue of the report, the earlier principles of providing multiple types of reports and keeping the information short and to the point will serve the reporter well.

Written report formats include:

- Raw Data
- Interpretive Summary
- Newsletter Style
- Descriptive Summary
- Bulleted Report

Regardless of the type of report that one uses for different audiences and/or meetings, it is a good idea to have all of the information put into a formal written report. This can be used as a resource for pulling out the most pertinent information in each circumstance as well as provided to the audience if they ask for more in-depth information or supporting evidence of what has been presented. This formal written report will probably follow the format of a research paper, including an explanation of the data collection methods and the raw data. From this report, subsequent reports may be developed that summarize or provide the information necessary to support the assertions of the presenter.

When using qualitative data, Krueger (1998) proposes several methods of reporting. Narrative reports discuss the information in an explanatory fashion. The first of these is the *raw data* report in which all of the information is provided within the report. It is easiest for the researcher because it takes little interpretation in reporting. It may be appropriate when providing data from a very small study, such as in the case where interviews were completed with a few people or one focus group was conducted. However, it does what the reporter actually is usually trying to avoid - leaves the analysis up to the audience. It is also very lengthy and may contain a lot of extraneous, irrelevant information. A narrative report, which provides slightly more analysis, is a *descriptive summary*. In this type, the presenter first makes statements about the data, then provides specific information from the data to support the statement. The *interpretive summary* takes the analysis one step further and actually requires the researcher or reporter to make interpretive statements about the information collected (Krueger, 1998). This is very helpful if the presenter is attempting to guide the audience toward a certain understanding or action. It also makes sense because the reporter/researcher is the expert on this material and more suited to making accurate interpretations than the audience in most cases. These three options can also be used when working with quantitative information. The degree of interpretation provided in the report will depend on the amount, type, and format of statistics presented.

Written reports may also be presented in several other styles that are not considered to be narrative in form. The *bulleted report* places the information in categories and bullet points that bring out the main points of the data. This works well for those audience members who want ‘sound bites’ to quote or want to quickly see the major point. This report format is short, sweet, and concise and the reporter can still provide a quote or statistic to highlight somewhere that is prominent. This format can actually be very effective in sparking someone’s interest.

The newsletter style utilizes bullets, boxes, and narrative information to provide quick reference of facts/statistics in an interesting format. This style is more likely to catch someone’s attention, and therefore, convey more information, than the dry style of a narrative or annual report.

Tips for Written Reports:

- Avoid Dry, Confusing Reports
- Be Clear and Concise
- Expect to Make Many Revisions
- Make Reports Visually Attractive

Oral Reports

A major mistake that many people make is assuming that all oral reports are alike. A presenter should always tailor the style and format to the circumstances and should usually provide some sort of written report as well. Oral report formats include the following and range from the conversational sharing of ideas and findings to formal briefings and presentations:

- Conversational: Structured or Unstructured
- Meeting/Discussion: Formal or Informal
- Formal Presentation

Unstructured conversational reports happen frequently when an individual 'runs into' or has lunch with an upper administrator and the administrator asks, "what's new?" That is the time for the reporter to be ready with an exciting fact -- something that will bowl them over with the outcomes of the program! It's terrible to pass up such an opportunity, but people do it all the time, simply because they are not ready with the facts. Compiling some assessment information will result in the important facts being ready at opportune times. Structured conversational reports, such as those in biweekly staff meetings, may not require a formal presentation. Again, having the material properly compiled and interpreted will allow an individual to provide some of the information verbally and then, if necessary, provide some type of written supporting or follow-up evidence. Having a written report ready will always be helpful in those meetings in which one is asked to provide a quick 'update' or information briefing on what is happening in the organization.

Tips for Oral Reports:

- Mention Major Points First
- Support Statements with Quotes/Stats
- Anticipate Questions
- Limit the Number of Points Addressed
- Choose a Charismatic Reporter
- Address Action Response in the Report

Appropriateness of Report Format

An important element in making any kind of report presentation is matching the report format to the audience that one is attempting to convince, guide, cajole, or otherwise influence. This requires asking key questions before providing the audience with any type of report, be it written or oral. The following checklist will assist a reporter, rookie or veteran, in preparing appropriate reports:

Report Preparation Checklist:

- *Who?*
  To whom will the report be made? What are their positions? To what types of reports have they responded favorably in the past? For instance, if they are a legislative body, they would want a bulleted list and clear information on the recommended action or implications. An academic body might want more supporting evidence and a more narrative style of reporting.
- *Why?*
  Why do they want this information? Did they request the meeting/written report or did you approach them about it? For example, if they asked for the information, the report you provide may be longer and more detailed than if you approached the audience member.

- *When/Where?*
  What is the venue for the report? Whether the report is presented in the middle of a meeting with a lot of important dignitaries or is the primary information for which a meeting has been called, will influence the amount of detail that should be provided.
- *What for?*
  What is the purpose of the presentation? Is it likely that they will want some recommendations for action or is this report for informational purpose only?
- *Control?*
  Does the reporter have any control over the venue or the use of supplemental equipment to make the report more attractive? If the report is a meeting setting, can participants who were part of the study accompany the reporter to attest to various elements in the report? This can be very convincing and is particularly impressive to legislative personnel.
- *Next Step?*
  Is there a way that the reporter or agency can reinforce the information once it has been presented by speaking with or providing information to another group? Perhaps the stage can be set for providing follow-up or supporting information to this audience.

In conclusion, not all reports or reporting formats should be considered to be equal. Different types of reports will influence different audiences in different ways. It is very important to be aware of audience preferences and expectations when providing information that is designed to have an impact on others. How it is presented can be as important and, in some cases, more important, than the content of the information itself. The key to successfully reporting assessment data is to apply strategic thought to its format in order to maximize its impact.

References and Resources

Center for Assessment Research and Development. (1997). Quality and importance of recreational services: Technical manual and survey. Corvallis, OR: National Intramural-Recreational Sports Association.

Hardin, S.E. (1999). Student perceptions of the outcomes of paraprofessional work experiences: A framework for the future. Unpublished Doctoral Dissertation. Florida State University.

Krueger, R.A. & Casey, M. (2000). Focus groups: A practical guide for applied research. (3rd ed). Thousand Oaks, CA: Sage Publications.

Krueger, R.A. (1998). Analyzing and reporting focus group results. Thousand Oaks, CA: Sage Publications.

Shuh, J.H. & Upcraft, M.L. (2001). Assessment practice in student affairs: A application manual. San Francisco: Jossey-Bass.

Biographical Sketches

Dr. Hardin and Dr. Stenger are Assistant Professors in the Recreation program at Southeast Missouri State University. They both maintain a strong interest in the outdoor leadership field. Email: shardin@semo.edu and tstenger@semo.edu.

The McDonaldization of Rock Climbing: Conflict and counter conflict between climbing culture and dominant value systems in society.

Dave Hardy
Liverpool John Moores University

Abstract

Rock climbing in the UK is examined for the influence of McDonaldization, a current interpretation of rationalization, and how climbing responds to this influence. Evidence is identified that guidebooks, equipment, climbing walls and professionalization extend the effects of predictability, control and objectification leading to rationalization. However it is argued that the ethos and ethics of the climbing community act as a counter rationalizing mechanism. This ethos further supports a reversal of the rationalization process, as national climbing institutions attempt to convince society of the wider importance of climbing values to society. It is argued that the professionalization of the ways in which individuals are introduced to climbing is a major threat which could result in a rationalization of climbing culture as it directly affects the development of the very ethos that currently acts as a counter rationalizing mechanism.

Introduction

Commodification of increasing aspects of all our lives are frequently referred to in the popular press whilst its' recognition in academic writing on leisure has become increasingly evident from as far back as Veblen (1899).The control of everyday life through consumption and commodification is discussed in detail by George Ritzer, in his book *The McDonaldization of Society* (Ritzer, 1983) where he highlights the link between commodification and the rationalization process.

Rationalization, first described by Weber (1864 to1920), argues that society imposes a culture dominated by objectification, predictability and control supported by a positivistic rationale that devalues mystery and the intrinsic (Weber 1976). In this paper it is argued that 'rationalization' influences activities, such as rock climbing, which are perceived by society as being outside the 'norm', or irrational, encouraging them to conform to society's dominant value systems. The impact of rationalization processes and its' modern application by Ritzer has been identified as a perspective on leisure development (Ritzer 1993; Rojek 1993; 2000; Smart 1999). This perspective is used here to discuss the impact of these processes on rock climbing.

This paper uses both academic writing and mountaineering literature and reports to discuss how this rationalizing process has influenced rock climbing. In particular the ways in which equipment, training, guidebooks and professionalization have exerted a rationalizing influence on rock climbing.

It is argued that there is evidence that rationalization does directly influence climbing and this direct influence is countered, in many instances by the ethos and ethics within the rock climbing community. Whilst institutions within the climbing community have become rationalized, this rationalizing influence has allowed these institutions to identify and publicize values which they argue are valuable to groups both inside and outside the climbing community. The true danger of rationalization to the current ethics of climbing is that in the long term the way in which people are introduced to the sport could result in a change of ethos within the climbing community. This in turn could, in the long term, neutralize the counter rationalizing elements that are currently active within the climbing community and also the contribution of the climbing community to the balance of values adopted in society.

In the case of rock climbing it is argued that predictability, controllability and objectification, as identified by Heywood (1994) and safety, as identified by Furedi (1997) are elements of the dominant social value system that conflict with the climbing values of adventure and intrinsicity. Rationalizing and counter-rationalizing influences within mountaineering culture are explored both through academic texts and mountaineering literature. In this case mountaineering culture is treated as the common value system of the group of people involved in the lifeworld or, as Giddens (1991) termed it, *lifestyle sector* of mountaineering and rock climbing.

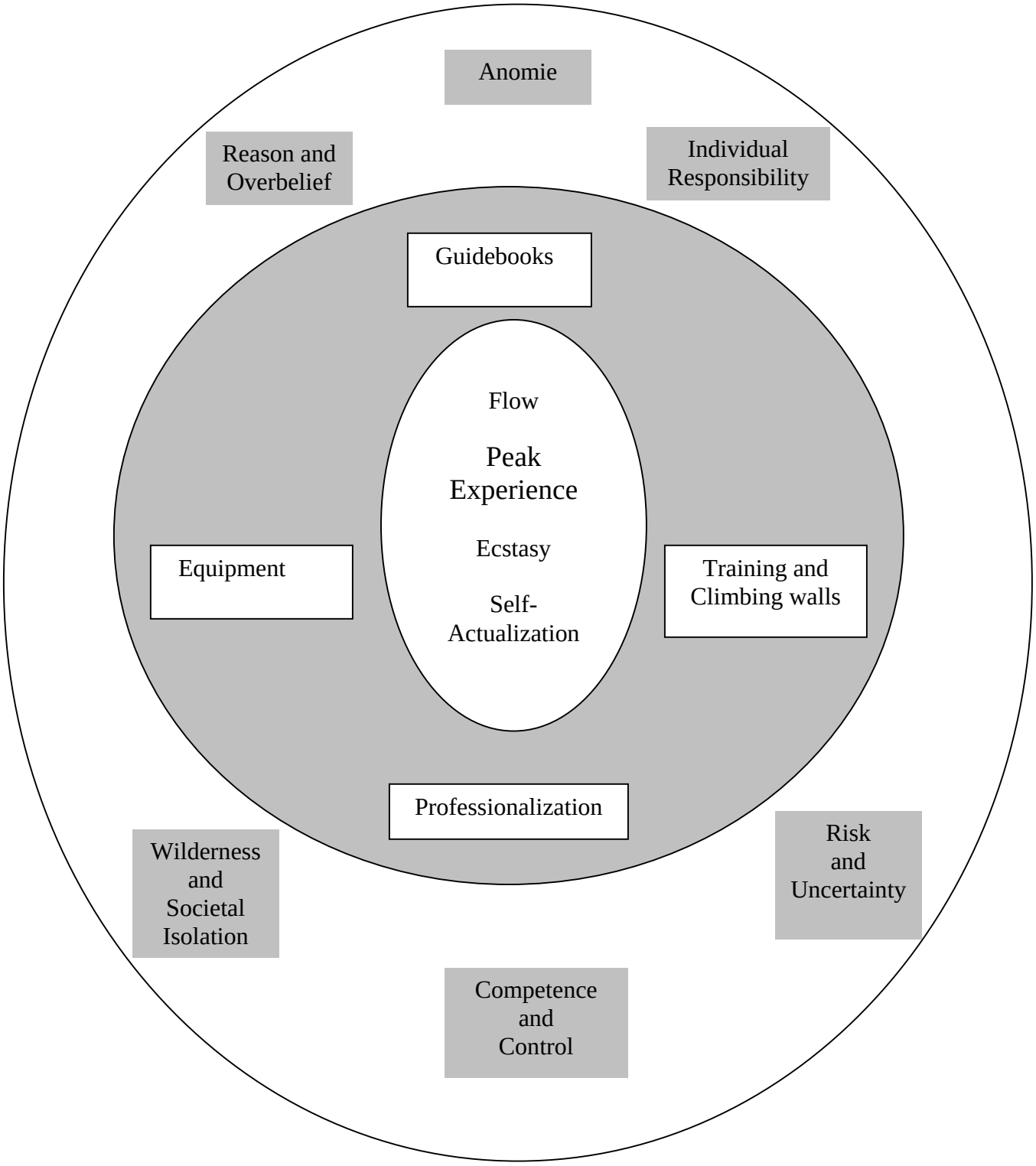
Rock climbing motivation fundamental elements and barriers

A three stage model was developed in order to examine the proposed conflict between the process of rationalization and the fundamental motivation for rock climbing (See Figure 1). Firstly the works of Laski (1961), Maslow (1964), Csikszentmihalyi (1975) and Mitchell (1983) are used to support the view that the fundamental motivation for rock climbing is based on the catharsis leading to what these writers have termed variously Peak Experience, Flow Ecstasy and Self Actualization.

Secondly the works of the same authors have been used, together with other writers both from academic disciplines and mountaineering literature, in order to identify six *fundamental elements* proposed as essential if the fundamental motivation for rock climbing is to be generated. These are anomie; individual responsibility; wilderness and societal isolation; reason and overbelief; risk, uncertainty and adventure; feelings of competence and control.

Thirdly four elements influencing rock climbing culture are identified as *rationalizing factors,* that is factors that tend to create a barrier between the six fundamental elements and the fundamental motivation for rock climbing. These are guidebooks, equipment, training and professionalization. The impact of these on the six *fundamental elements,* and through them, on the fundamental motivations for rock climbing is examined. Some of the ways in which mountaineering culture in turn rationalizes the incoming influences to match the dominant values of rock climbing are identified. It is also suggested that there is some evidence to suggest that rationalization and organization within the rock climbing community has allowed that community or lifestyle sector to strengthen their values. The result is a counter rationalizing attempt intended to influence wider society to accept some of the values fundamental to the ethos of the rock climbing community.

Figure 1. A concept map demonstrating the barrier formed by Guidebooks, Equipment, Training and Climbing Walls and Professionalization between the fundamental elements and the achievement of 'Peak Experiences'



Peak Experience

In order to explore the influence of rationalization on the fundamental motivation for rock climbing the umbrella term 'peak experience' is used (See fig 1. inner circle). In doing this other aspects important to rock climbing culture, such as camaraderie, identity community and others have not been discussed. The problems of achieving a true picture of any mountaineering activity by isolating and looking at one aspect have been highlighted by the prominent explorer of the Everest region George Mallory. Here he illustrates the problems of writing about one aspect of motivation for mountaineering, the visually aesthetic.

> We do not think that our aesthetic experiences of sunrises and sunsets and clouds and thunder are supremely important facts in mountaineering but rather that they cannot be separated and catalogued and described individually as experiences at all. They are not incidental in mountaineering but a vital and inseparable part of it; they are not ornamental but structural; they are not various items causing emotion but parts of an emotional whole; they are the crystal pools perhaps, but they owe their life to a continuous stream. (Mallory 1914: 36)

What he has to say is equally true of motivation in all aspects of mountaineering, a vital element to the discussion in this paper. To catalogue individual elements is to deny the wholeness of the experience, implying that a positivistic and atomistic approach may threaten the validity of any conclusions using such an approach. The purpose of this paper is to begin to construct a theory about the influence of rationalization on individual elements within mountaineering. The inter-relationship of these elements is identified in places in an attempt to view mountaineering holistically, however it is not claimed that this can be generalized to the whole mountaineering experience.

The peak experience itself is difficult to explain or define despite its crucial importance to this study. Participants describe it as a 'wow' experience or a 'buzz'. In discussion everyone who has had the experience seems to understand what is meant, but it seems to transcend the rational and for that matter transcend the descriptive. However, attempts have been made to define what this experience is, and these explanations appear to have much in common.

As the experience is a profoundly personal one a range of feelings is probably more valuable than an attempted definition. Writers have attempted to encapsulate this feeling in short phrases despite Mallory's warning**.** Csikszentmihalyi (1990) suggests that it is identified by a narrowing of focus, limiting the individual**'**s stimulus field. It is a fusion of mind, body and action leading to a feeling of control and power. Mortlock (1984) refers to a feeling of wonder, freedom and exhilaration whilst Laski (1961) refers to an intense out of body experience. The words ecstasy, flow, peak experience and self actualization are frequently found in these descriptions and will be adopted in order to identify this experience and move to discussing its contributory elements.

The 'fundamental elements' supporting the 'peak experiences'

Examination of writing in mountaineering literature and in academic works on the subject identifies a number of key elements that contribute to the achievement of peak experiences (See Fig 1 outer circle). The evidence that these elements are fundamental to the achievement of 'peak experiences is examined here. These will be referred to in this paper as the 'fundamental elements':

- Anomie
- Individual responsibility
- Wilderness and societal isolation
- Reason and overbelief
- Risk, uncertainty and adventure
- Feelings of competence and control

It is around these fundamental elements that the following argument is constructed.

The Fundamental Elements

Mitchell (1983) argues that an essential element of mountaineering and peak experiences is ***anomie,*** the freedom from all constraints, allowing free entry and unrestrained exit. Therefore a climber can start at any time and retreat at will. Csikszentmihalyi (1975) argues that climbing is in fact divorced from societal norms. He describes climbing as having its own reality separate from everyday life, and one that to the climber is more meaningful. The lack of rational reward, that is considered to be useless to or subversive of social and cultural values, is perceived to be central to climbing by participants (Csikszentmihalyi 1975). He suggests that rock climbing lies firmly in the realm of 'deep play', defined by Jeremy Bentham the eighteenth century philosopher as an aspect of life that is irrational, in that the risks far outweigh the potential rewards.

There is support for the importance of the 'deep play' concept to climbing within the literature of mountaineering, although the recording of such ideas may in itself be recognition of societal standards to meet the dictates of editor or publisher. Paul Pritchard (1997) using the title 'Deep Play' typifies this maverick approach to climbing. Pritchard tells us of the wave of new routes given names like 'Doleman' and 'Dolite' celebrating this doubly subversive activity of climbers living on the dole (UK government unemployment payment) whilst celebrating irrational activities, a situation that in Pritchard's view could not have come about in a healthier economic period. This concept of anti-social activity is further reinforced by Jim Perrin's article 'Street Illegal' celebrating the fusion of climbing and drug taking (Perrin 1978).

Mitchell's (1983) analysis of a freely entered activity supporting anomie is also the basis for acceptance of ***individual responsibility without the need for extrinsic rewards*** or pressures (which could be thought of as negative rewards); thus the volition is complete. Mitchell (1983) goes on to suggest that flow exists where the activity is defined as an end in itself. This is further explored by Csikszentmihalyi (1975), who identifies understanding of self as an important element in flow. Clearly understanding of self, one's limits, confidence and abilities is vital in rock climbing when one has a crucially difficult few meters of rock to overcome on an exposed rock climb.

Reports in mountaineering literature state or imply that those who don't take full responsibility are lesser mountaineers. This applies to those who are guided to summits by professional guides who, in the words of Joe Simpson (1997:60), "pander to the egotistical ambitions of individuals who would not otherwise dream of attempting such an ascent". Here Simpson emphasizes the importance in mountaineering of independence and of the intrinsicity of the activity. This is reinforced by the fact that official guidebooks at one time recorded first guided ascents of mountaineering routes and first unguided ascents (although this practice has now discontinued). Thus the prestige achieved by the climber was inversely proportional to the amount of help he accepted and used on a climb.

Wilderness and societal isolation link closely to both anomie and individual responsibility as both may be more easily achieved in societal isolation, divorced from the mores and support of society. The influence of the environment on achieving peak experience is indicated by Maslow (1970), who reported that his group of high self-actualizers enjoyed solitude and privacy more than the average person. These experiences Maslow (1964) refers to as 'peak experiences or ecstasies' Laski (1961) investigated the influence of wild areas and naturalness on the experience of 'ecstasy'. In her investigation Laski (1961) lists thirteen triggers (as she termed elements that promote ecstasy) to experiencing ecstasy including natural scenery.

Laski (1961) discussed natural scenery in some detail as an important 'trigger for ecstasy'. In this case natural is an area where nature dominates even though man made artifacts are present. Thus an old stone wall or ruin is dominated by nature and the natural wilderness does not lose its power, whilst an electricity pylon may be viewed as dominating and thus be an anti-trigger to ecstatic experience. This perspective is supported by Lewis's (2000) contention that sports climbers, by placing bolts, attempt to dominate nature and thus detract from the naturalness of the adventure ethic. Both Mesner (1971) and Littlejohn (1997) support this view from the perspective of the climber. As Littlejohn (1997) states clearly 'with bolts, you dictate to the rock rather than the rock dictating to you'. In this way both climbers and academics assert the importance of natural wild surroundings.

Reason must be suspended and overbelief take its place in order to accept the irrational basis for the activity and outcome. Laski (1961: 183) warns "every feeling loses its strength in the measure that it becomes intellectual. This suggests the power of reason to be what she terms an anti-trigger, that is a factor detracting from the achievement of ecstasy. It is suggested here that reason represents control and organization in any form. Reason also influences wilderness in the form of societal intrusion into the wild environment (the issue of whether reason is natural is not considered here).
This seems to suggest that reason reduces the propensity for ecstasy and peak experience to occur. According to Laski (1961) once it occurs, ecstasy blots out reason. Heywood's (1994) interpretation and application to rock-climbing of Weber's (1974) treatise appears to support this concept.

Weber (1974) argues that the development of aesthetics and eroticism is an attempt to "erode the constraints of rationalization … to escape … reason's iron cage" (Heywood 1994:183). This seems to imply that in order to achieve ecstasy and peak experience reason must be suspended and replaced by overbelief, or a belief in something not supported by any tangible evidence.

Writing in 'Mountain' magazine (1982 No.80:40) Peter Donelly (both a climber and academic writer) states "risk is fundamental to the culture of climbing". A survey of current mountaineering magazines shows ***risk and uncertainty*** as 'normal' elements of mountaineering culture. The hallmark of published obituaries (a regular mountaineering magazine feature)

demonstrating the acceptance of death and the lack of any attribution of blame or fault, treating risk and death as natural parts of mountaineering. This is amplified by Lewis (2000) who discusses the naturalness of adventure climbing and death as part of an organic whole. So in mountaineering risk of death is an accepted part of the lifeworld culture that separates mountaineering from the standards of the wider society.

Mitchell's (1983) study of mountaineering points out that uncertainty supports the previous preconditions for achieving a peak experience in that uncertainty is a quality that tends to divorce the activity from societal standards, particularly predictability and control. Exploring the idea further Mitchell (1983: 156) asserts, "creativity requires a degree of uncertainty". Csikszentmihalyi (1975) identifies risk as a crucial element in deepening focus and leading to the achievement of flow.

In Csikszentmihalyi's (1975) research, a key element contributing to flow was a feeling of ***competence and control***; this feeling is in his view the predominant factor leading to flow experiences. "Danger is accepted as a part of the 'gestalt' of climbing in which feelings of competence and control dominate" (Csikszentmihalyi 1975 :83).
The importance of planning is further developed by Csikszentmihalyi and Kleiber, who state the importance of "matching of challenge and skill with clear goals" (Csikszentmihalyi & Kleiber 1991:96). The importance of this match in the context of rock climbing is demonstrated by the preoccupation in mountaineering circles with accurate grading systems. These systems have become increasingly sophisticated, making it possible for a climber to make a precise match of his or her skill with the difficulty of the route. Mortlock's (1984) argument states that preparation and planning are important prerequisites that enhance his Stage 3 'frontier adventure'. This argument asserts that satisfaction at gauging a level of activity that is truly challenging becomes an important part of this 'peak experience'.

Mitchell (1983:180) refines the argument further: "Flow is found in using a full measure of commitment, innovation and individual investment to perform real and meaningful tasks that are self chosen, limited in scope and rewarding in their own right". Thus asserting that these identified elements are not suspended in some lacuna. But rather must be held in a dynamic balance with each other if they are to contribute to the development of flow.

Rationalization: a barrier to the achievement of 'Peak Experience' in rock climbing'

In the first part of the paper six fundamental elements are identified that, I argue, underpin the achievement of peak experiences through rock climbing. This now allows the argument to move on to discuss the influence of rationalization on rock climbing and motivation for rock climbing. Of all leisure activities rock climbing is often depicted as the quintessential example of escape, if so, to what extent is it as Ritzer (1993:23) suggests, that rationalization extends so that " the escape routes have been rationalized"? Is there evidence to support Heywood's (1994:187) qualified statement that "adventure climbing has itself already gone a considerable way towards its rational transformation"?

Using objectification, predictability and control as features of rationalization the discussion will examine some of the evidence that guidebooks, equipment, climbing walls and professionalism create a barrier (See Fig. 1 shaded section) between the fundamental elements identified and the achievement of Peak Experience.

Historically rock-climbing ***guidebooks*** have not only been a way of passing on information but also a means of communicating the ethos and meaning of the sport. They record the history and development of climbing in the area and special conditions, such as ecological considerations, applying to the route.

However guidebooks can and do have rationalizing influences. Firstly they grade the difficulty of the route. For example, a typical UK description:

'The Maelstrom' 205 feet. Hard Very Severe (1958)
A serious route, protection is poor and the rock friable. Other than that it is an excellent route…
…1. 60 ft. 4c (Pretty 1989:126)

The grade 'Hard Very Severe' gives the overall level of seriousness, that is the risk of death. The '60 ft. 4c' indicates the length and technical difficulty of the first section in relation to steepness, size of handholds etc. The juxtaposition of the grades tells me that 4c is normally too easy to merit Hard Very Severe and thus the seriousness referred to in the text is emphasized. This in itself could be taken to bring the individual climber into a clear rationalized structure at the cost to anomie and societal isolation. At the same time the climber selects a climb that, once completed, is arguably objectified by becoming a commodity named 'Maelstrom' whose value is 'Hard Very Severe 4c'. Thus the route can be acquired as a sign by the climber and climbing becomes an extrinsically rewarding activity; within the climbing community, consequently influencing the path to achieving peak experience.

The ways in which guidebooks have developed in recent years also provides evidence to be considered in relation to rationalization. The development of guidebook semantics reflects Hausler's (1996) continuum, applied to mountaineering on Everest, moving from exploration to aesthetics and finally consumerism. During the early exploratory stage information is given in a precise but anecdotal form, as in Whymper's (1893) classic *Scrambles Amongst The Alps*. The guidebooks published in the post-war period include detailed description; however, this was normally supplemented with aesthetic and cultural information. The Climbers' Club series (Newton 1990) is a good example, including information on natural and mountaineering history in the guidebook. More recently the popularity of guidebooks such as the *Rocfax* series suggests a move away from the aesthetic and mystical towards concern with what can be objectified, consumed and rationalized. These guidebooks depict precisely and efficiently selected climbing routes in a graphic form conveying extremely high levels of information with little historical or aesthetic influence.

Increasing numbers of guidebooks that select the best routes in a large area have been published in the last thirty years, such as *Rock Climbing in Snowdonia* by Paul Williams (1990) and *Classic Rock* by Ken Wilson (1978), thus discouraging exploration and independent route selection. *On Peak Rock* Dawson (1996) makes decisions for the climber by categorizing routes on the basis of 'evening crags' and 'family and picnic crags'. In addition almost all guidebooks use a starring system grading climbs from one to three stars, with more stars signifying higher quality. All these elements could be seen to lead to higher degrees of objectification and predictability as argued by Heywood (1994), who in his analysis suggests that guidebooks allow climbers to objectify, predict and control, thus leading to a rationalization of climbing.

The discussion shows that the opportunity exists for climbers to rationalize their sport as they are able to control levels of risk and can be assured of higher levels of predictability and opportunity

for commodification. This does not mean they necessarily do so, just that these developments make the possibility more accessible. While the evidence does seem to show some obstruction to elements encouraging peak experiences, at the same time it opens up others. The details of the guidebook allow the climber to select a route at a level of difficulty that develops the elements of competence and control and a level of risk that gives optimum stimulation. Thus the climber selects a climb that he or she knows will result in completing a climbing route that keeps to what Csikszentmihalyi (1975) describes as the edge of control between anxiety and boredom. Uncertainty remains, merely changing its positions and focus. What becomes predictable is the selection of a climbing route that is almost certain to lead the climber into areas of uncertainty and risk. Only the type and level of unpredictability becomes predicable. One climber interviewed argued that a guidebook with climbs selected from a wide range of geographical locations would encourage climbers to explore new areas to be faced with unfamiliar terrain that would present fresh uncertainty and new adventure. Another that guidebooks allow him to select an easy route in an isolated setting and so develop his aesthetic sense one day, whilst testing the threshold of his control the next (Hardy 2000).

The guidebook may often interpret the application and influence of other potentially rationalizing factors. The style of early ascentionists is described together with what is now considered a 'fair' means of completing the climb. Thus in some ways one rationalizing influence, guidebooks, may control or influence another, equipment. In his consideration of ***equipment*** Heywood (1994) suggests, with some hesitation and qualification, that higher equipment standards, such as improved climbing footwear, make climbing more controlled, more predicable and relatively safe. In other words it is more rationalized. This could be taken to indicate that competence and control elements would encourage peak experience, but that reducing uncertainty and thus reducing risk would discourage peak experience. Good equipment could also be considered to reduce individual responsibility, which would discourage peak experience. Whilst superficially this seems true, a closer inspection reveals a range of issues that need consideration from within the mountaineering culture.

The process of equipment development is often the result of the involvement of individual climbers, for example: the Whillans harness by the Himalayan climber Don Whillans and 'friends' by the Yosemite climber Yvon Chouinard. Yvon Chouinard discontinued production of rock climbing equipment when climbers using his equipment attempted to sue for compensation following injuries – a sign that some climbers do not subscribe to accepting personal responsibility and search for a rationalized transfer of blame. This process could be argued to be an example of developing competence and control that would lead towards achieving a peak experience, both on the part of the inventor and later that of the user as it becomes part of the planning process. Although the examples quoted are outstanding exceptions, they represent the process that many climbers go through in extending their control and exploring their limits through equipment organization. Thus the development of equipment could be seen not just as some external commercial influence but also as part of the process leading to the dynamic development of competence and control. Particularly when a survey of manufacturers will demonstrate that most climbing equipment is designed and made by climbers.

The use of runners to limit fall potential on rock climbs has long been an accepted technique. More recently the development of equipment devices, nuts and camming devices in particular, has made this process of limiting the fall easier; thus climbing is now safer. Heywood (1994) suggests that this tends to lead towards rationalization as the element of risk is reduced and the climber becomes more dependent on technology.
Wilson (1998) identifies bolt placement with a 'changing cultural preoccupation with convenience'. He argues that bolts replace the development of all-round mountaineering skills

with easy ready- made solutions, placing enjoyment above adventure in the hierarchy. This is supported by top climber Pat Littlejohn's (1997) observation that roadside bolted crags are like 'fast food' and are a denial of the natural affinity between the climber and the rock that mediates the activity of rock climbing.

Drasdo (1969) counters this argument, suggesting that these advances should be seen as supporting improvements in performance rather than determinants of the margins of safety. Anecdotal evidence does not seem to support a move towards a risk-reducing culture evolving in mountaineering. Observation at any popular climbing area will show that the average climber is now climbing at a much higher technical standard than would have been evident twenty years ago. This seems to show that climbers are not reducing their risk, but are, as Drasdo (1969) suggests, selecting a level of risk that gives them an optimum balance between uncertainty and control for achieving the stimulation that they desire.

The climbing community's response to these rationalizing influences is to reassert those values as described by Tejada-Flores's (1967) article 'Games climbers play'. Climbing ethics control a range of problematic areas in mountaineering, including protection of the environment, but here we are concerned with only a small selection that influence the equipment issue. The relevant ethic here is the maintenance of uncertainty, as 'from this very uncertainty stems the adventure and personal satisfaction of climbing' (Tejada-Flores 1967:20). Thus, as the environment changes, and the development of equipment and knowledge changes in relation to the environment, so the relevant ethic or game rule changes. In Yosemite, California, the big walls of El Capitan were once climbed using prussiking, sack hauling and other siege tactic techniques. As equipment and knowledge of the routes developed and the effective difficulty was reduced, the climbing community of the area arrived at a consensus. It was agreed that, to preserve the margin of uncertainty and the opportunity for peak experience, the ethics of the route should be to climb with less equipment than earlier climbers. The climbing 'game' with fewest rules is the expedition to the major ranges where the natural difficulty is considered sufficient in itself to preserve the margins of uncertainty and ensure stimulation. There have been exceptions to the application of this ethic, for example, after much debate, bolting has been accepted in certain areas (mostly limestone) in the UK, as the rock does not yield natural cracks that would allow the placement of removable leader placed protection. Without this agreement the margin of risk in these areas would be disproportionately high, so bolts are agreed in order to maintain the margin of uncertainty.

The 'game' is self-policing and so cheating can and does occur and is accepted as long as it neither damages the environment nor challenges the definition of the ethics. Drasdo's (1974) article 'In praise of cheating' discusses cheating in relation to what he calls 'competition ethics'. He identifies the pre-eminent ethic to be that the activity must allow 'the catharsis of exertion and fear'. It is therefore personal so long as it does not offend the environmental ethic of mountaineering and is accepted by the individual as cheating. Challenging the definition of the ethics by openly acting against the rules would expose the climber to criticism, putting him or her into Huizinga's (1949) 'spoilsport' category. In recent years the controversy over bolting has been the most obvious example of this phenomenon with disputes ranging geographically from Siddiqui's bolting on Harpur Hill, Derbyshire, UK (Siddiqui 1994; Walker 1995; Ward 1994) to Cesare Maestri bolting on Cerro Torre, Patagonia. Both issues that were vigorously pursued by climbers anxious to preserve the ethics of the sport.

So as the forces for rationalization work to commodify and rationalize the activity the culture, ethos and ethics of the sport work to preserve the values of the 'game'. In this way

mountaineering ethics preserve levels of risk, competence and control and individual responsibility in supporting peak experiences.

Training is another area for possible rationalization as increasing numbers of climbers build their own climbing training facilities at home in lofts and garages, while the increasing accessibility of climbing walls around the UK makes training easily available to others. Heywood (1994) has argued that improved training leads inevitably to better preparation and improved ability to attempt particular routes with greater predictability.
However, the outcome tends to be that climbers climb more difficult routes and so, as suggested by Tejada –Flores (1967) and Drasdo (1969), margins of safety remain unchanged.

However the climbing wall itself could be argued to be a rationalized form of mountaineering *per se*. Coloured handholds carefully grade routes so that two or three different standards of climb can be completed on the same section of wall, all in a heated and well-lit environment. Bolts are placed at regular intervals and checked regularly by engineers. Judgment on the part of the climber is redundant. The predictability of climbing walls makes them the perfect venue for climbing competitions. Competition sponsors are identified and a rank order is established. Thus a complete rationalization of climbing is achieved via convenience of facilities, predictability and clear extrinsic rewards.

The problem here may not be the potential for widening safety margins proposed by Heywood (1994), but the influence of this rationalized environment on the ethics that climbers may subscribe to in the future. These ethics are particularly exposed as in the view of Tejada-Flores (1967) and Drasdo (1969) they are controlled by the views of the average climber rather than by some considered debate, although these do have some influence. Wilson (1998) points to the danger that climbing competitions could 'transform the sport into something more like conventional athletics'. (Marstad, 2000) warns against the effect on climbing of 'the influence and attitudes from the messed up world of international sport'. The impact of litigation consciousness on U.K. climbing walls is reviewed in Summit (BMC Summit2001, Nos. 22 and 23). The articles by climbing wall professionals discuss how they can protect themselves from litigation by imposing safety tests on visiting clients. This, it could be argued, would interfere with the individual responsibility of the climber, at the time, but more importantly may tend to rationalize the developing ethos of the climbing community that provide the counter rationalizing influences. This could be one of the most crucial long term developments in rock climbing as increasing numbers of climbers are introduced to climbing at climbing wall (gymns) rather than within climbing clubs or with friends and thus will be introduced to attitudes and ethics mediated by these professionals.

The issue of the rationalizing influence of the climbing wall results in part from the fact that they are organizations and rationalization, to some extent, is an inevitable result of this status. This lead questioning if a ***professionalised*** and thus rationalized organization, in this case the British Mountaineering Council (BMC), whose stated role is to represent climbers and the sport of climbing, can be expected to protect climbing; the ultimate irrational activity?

The work of the BMC is hugely varied and includes training, guidebooks and the equipment issues already discussed. To identify if the balance promotes rationalization would not be possible, however, some indications may be evident from an examination of a recent copy of *Summit*, the BMC official journal. An abbreviated summary of page content indicates that of 48 pages in total the following pages were predominantly devoted to the topics noted here:

Safety and risk reduction	7 pages	Action	4 pages
Access	6 pages	Advertising	19 pages
Equipment development	3 pages	Others	9 pages

(*Summit*, No.18 Summer 2000)

On the surface this seems to lead the reader towards a rationalized view of mountaineering rather than supporting the ethos of an anomic mountaineering that thrives on uncertainty. The journal satisfies the reader by giving technical information and establishing and advising on responsible and predictable actions, using commercial adverts to support the publication. Thus there is evidence to support the argument that the journal tends to encourage objectification, principally via adverts, predictability and control via equipment and safety articles, thus leading toward rationalization. Of the two action articles, one describes an official BMC international meet in Slovenia. The other describes the involvement of the BMC in developing sponsorship to support expeditions under the *Excellence in Sport* strategy, in line with Sports Council (a government agency which promotes sport) policy. These both lead to extrinsic motivation or objectification of the activity. The access articles are all connected to the current negotiation of the Countryside Act and include pictures of BMC access negotiators out walking with John Prescott, the Deputy Prime Minister, a clear link to the predicable and rational.

Recent copies of 'Summit' (BMC Summit 2001 Nos. 21, 22, 23, and 24) include a range of articles that seem to encourage a rationalization of rock climbing. Commenting on the development of the BMC young persons training scheme Anne Arran (2001) claims "the BMC does not have a training model … This might be seen as unacceptable for a responsible national body" which could be taken to mean that the BMC are introducing the scheme in response to pressure. Issue number 23 states 'our sport is not above the law' arguing that rock climbing may have to accept the dominant social values of society under the pressure of litigation.

This trend towards institutionalization and rationalization does not always support a trend towards rationalizing climbing as an activity. There is evidence that rationalization of climbing into a national organization can then lead on to the values of climbing being formed into an argument that counters that of wider society. The irrational activity of mountaineering at night is defended by the British Mountaineering Council when it based its' defense of night access on the principle of 'freedom' in the British parliament. (BMC Summit 2000 No. 19) Whilst mountaineers Alan Blackshaw and Bob Barton joined with sociologist Frank Furedi and others at a meeting at the Royal Geographical Society in London to support the value of risk to society. Stating that 'speakers will challenge the trend to excessive caution' (RGS 2000) this conference eliciting a response from the British Prime Minister agreeing that; 'risk is an inescapable part of our lives'. This was followed in December 2001 by a conference staged by the British Mountaineering Council entitled 'Risk and Adventure – A Sporting Balance' raising the uncomfortable question of balance rather than the predictability of rationalizes activity.

Summary

The discussion so far identifies changes that encourage predictability, control and objectification within the culture of rock climbing and suggests that these changes have the potential to interfere with a fundamental motivation for rock climbing. Is this, as Heywood (1994) suggests, the process where dominant social values force all into Weber's 'iron cage' of rationalization?

It is true that equipment development has resulted in safety gaining a more prominent place in mountaineering culture. This could indicate that climbers are searching for higher levels of safety, persuaded by the dominance of safety as powerful social influence, as suggested by Furedi (1997). This development could equally be attributed to climbers searching for novel unpredictability leading to that stimulation to be found only at the very edge of control and exploration

Weber asserts that the most powerful tool in rationalization is through institutions whilst Ritzer (1993) states that the pressure to rationalize in the modern world comes from persuasion and consumption rather than the forces of production. If this were so the evidence discussed shows the influence of persuasion tending to rationalize the British Mountaineering Council (BMC) in line with Anne Arran's exhortation for it to be seen as "a responsible national body"(BMC Summit, 2001 no. 21). However I would argue that the BMC acts as a rationalized buffer organization between the irrationality of mountaineering and the highly rationalizing influence of other sectors of society.

Weber identifies economic goals as replacing mystical and religious goals at the top of the value system of society, '…material goods have gained an increasing and inexorable power over the lives of men' (Weber 1976 :181). Thus Weber suggests that society imposes a dominant culture of objectification supported by a positivistic rationale that devalues mystery and the intrinsic. The reported meetings between BMC officers and the Deputy Prime Minister could be an example of this process at work. It could however be the representatives of the mystical and aesthetic dominant value culture of mountaineering (BMC officers) attempting to rationalize wider society to accept its values (via the Deputy Prime Minister).

The more recent political activity of the climbing community has argued for the importance of accepting risk, not only within climbing but also to society as a whole. This could be interpreted as strengthening the rationalization of the climbing community to the point where it feels capable of exerting a counter rationalizing influence on society.

This last point would agree more closely with Bhabha's (1998) postmodern view of culture as a collection of contestable views. In which case the culture of mountaineering and rock climbing could be viewed not as a separate element but as a view that defines the whole and on which, as Durkheim (1938) argues in relation to crime, a healthy balance depends. Alternatively, if Weber and Ritzer are correct and a one way rationalization process is at work, the result could be the de-differentiation discussed by Rojek (2000) in the context of wider tourism issues. Escape from Weber's 'iron cage' into a dedifferentiated society would be pointless, as there is nowhere to go!

REFERENCES

British Mountaineering Council (BMC) Summit (2000), Nos.18, 19. Manchester: BMC.

British Mountaineering Council (BMC) Summit, (2001)Nos.21,22,23,24 Manchester: BMC.

Bhabha, H. (1994). The Location of Culture London: Routledge

Csiksentmihalyi, M. (1975). Beyond Boredom and Anxiety. San Francisco: Jossy-Bass.

Csiksentmihalyi, M. and Csiksentmihalyi, I. (1990). Adventure and the Flow Experience. In: Priest, S. and Miles, J. (Eds).(1990). Adventure Education. State College,PA:Venture Publishing

Csiksentmihalyi, M. and Kleiber, D. (1991). Leisure and self actualization. In: Driver, B. and Brown, P. (Eds.1991) The Benefits of Leisure. State College, PA: Venture Publishing.

Dawson, C. (1996). On Peak Rock. Manchester: British Mountaineering Council.

Donelly, P. (1982). The Four Fallacies. A series of four articles published in: Mountain. Nos.80, 81, 82, 83.

Drasdo, H. (1969). Margins of Safety. Alpine Journal, No 74.

Drasdo, H. (1974). In Praise of Cheating. Mountain. No.39.

Durkheim, E. (1938). The Rules of Sociological Method. New York, The Free Press.

Furedi, F. (1997). Culture of Fear. London: Cassell

Giddens, A. (1991). Modernity and Self Identity Cambridge: Polity Press.

Hardy, D.(2000). The Rationalization of the Irrational Unpublished Dissertation, Dept. of Sociology, University of Lancaster, UK.

Hausler, O. (1996). The Conquest of Mount Everest: from scientific exploration to exploration of self. Unpublished dissertation, Department of Sociology, Lancaster University, U.K.

Heywood, I. (1994) Urgent Dreams: climbing, rationalization and ambivalence. Leisure Studies. 13, 179-194.

Huizinga, J. (1949). Homo Ludens. London: Routledge.

Laski, M. (1961). Ecstasy: a Study of Some Secular and Religious Experiences. London: Cresset Press.

Lewis, N. (2000) 'Protecting adventure': the ethic of aesthetics of adventure climbing. Between Nature Conference, Department of Sociology, University of Lancaster.

Littlejohn, P. (1997) The Great Alpine Theme Park. Alpine Journal, Vol.102.

Malory, G. (1914). The Mountaineer as Artist. Climbers Club Journal 1914, Reprinted in: Gifford, T. (1997). The Climbers Club Centenary Journal. UK: The Climbers Club

Marstad, M. and Moffatt, J. (2000). Training Techniques, Part 2. On the Edge, August 2000.

Maslow, A. (1964). Religious Values and Peak Experiences. Columbus, Ohio: Ohio State University.

Maslow, A. (1970). Motivation and Personality. London: Harper and Row.

Mesner, R. (1971) The Murder of the Impossible. in Wilson, K. (1998). Games Climbers Play. London, UK Baton Wicks.

Mitchell, R. (1983). Mountain Experience: The Psychology and Sociology of Adventure. Chicago: University of Chicago Press.

Mortlock, C. (1984). The Adventure Alternative. Cumbria, UK: Cicerone.

Newton, A. et al. (1990) Gogarth. Glasgow: Climbers' Club/Ernest Press.

Perrin, J. (1978) Street Illegal. The Climbers' Club Journal No. 97.

Pretty, M., Farrant, D., Milburn, G. (1989). Tremadoc and Cwm Silyn. Glasgow: Climbers' Club/Ernest Press.

Pritchard, P. (1997). Deep Play London, Baton Wicks

Royal Geographical Society (2000). Risk and Adventure in Society Conference report compliled by Ian Lewis, Penrith, UK: Institute for Outdoor Learning

Ritzer, G. (1993). The McDonaldization of Society. London: Pine Forge.

Rojek, C. (1993). Ways of Escape. London: Macmillan.

Siddiqui, S. (1994) Open letter (response to Ward 1994 in the same magazine). High, No.145, December 1994.

Simpson, J. (1997). Dark Shadows Falling. London: Jonathan Cape.

Smart, B. (1999). Resisting McDonaldization. Trowbridge, Wilts: Cromwell Press.

Tejada-Flores, L. (1967). Games climbers play. Ascent, 1967. Reprinted in: Wilson, K. (1998). The Games Climbers Play. London: Baton Wicks.

Veblen, T. (1899). The Theory of the Leisure Class London, Alen and Unwin

Vitali, P. (1997). Bolting in the Alpine environment. Alpine Journal, Vol.102.

Walker, D. and Bennett, R. (1995). The BMC reply to Big Sid. High, No.146, January 1995.

Ward, M. (1994) Harpur Hill showdown. *High*, No.144, November 1994.

Weber, M (1976*) The Protestant Ethic and the Spirit of Capitalism*. London: Allen and Unwin.

Whymper, E. (1893) *Scrambles amongst the Alps* London Thomas Nelson

Williams, P. (1990) *Rock Climbing in Snowdonia*. London: Constable.

Wilson, K. (ed.1978) *Classic Rock*. St. Albans: Granada.

Wilson, K. (1998a) *The Games Climbers Play*. Birmingham: Baton Wicks.

Wilson, K. (1998b) A future for traditional values: will rock climbing degenerate into a 'theme park exercise'? *Alpine Journal*, Vol.103.

Biographical Sketch

Dave Hardy

Dave teaches on undergraduate programs in Outdoor and Environmental Education, and Leisure and Tourism at Liverpool John Moores University, UK. He is a mountaineer with wide experience in Europe and North America and a close involvement with the sport as one time secretary of the Association of Mountaineering Instructors. He holds the Mountaineering Instructors Certificate, as well as a range of other sport coaching awards, and a MA in Leisure and Tourism. His current interests are in research into mountaineering as cultural phenomena, risk in society and the effects of outdoor experience on individual behavior.

Email d.p.hardy@livjm.ac.uk

Reaching Students Via the Experiential Classroom Process

By

Jim Herstine, Ph.D., Jeff Hill, Re.D., and Bob Buerger, Ph.D.
University of North Carolina at Wilmington
Wilmington, North Carolina

Abstract

Faculty at the University of North Carolina at Wilmington (UNCW) recognize that the presence of diverse and unique natural resources in a locale presents an excellent opportunity to supplement the traditional formal classroom learning environment with the extraordinary advantages of the experiential classroom learning process. As a result, the faculty within the Department of Health and Applied Human Sciences and the Environmental Studies Program at UNCW have formulated two special summer intersession courses to bring students into direct and personal contact with not only the natural resources of inland and coastal North Carolina themselves, but the professionals and resource managers responsible for their protection, conservation, management and development. This paper presents and discusses the general concept and justification surrounding the experiential learning process, the specific course objectives and requirements for the two courses developed and implemented at UNCW, the course itineraries, and, a discussion of the overall value of the courses to the students at UNCW.

Concept and Justification

Basically, all learning is experiential in nature. However, not all learning is facilitated through the formal structured classroom teaching and educational process. Experiential learning is defined by the Allegheny College Center for Experiential Learning (ACCEL) as "a component of the educational process in which students are active participants in events and activities leading to the accumulation of knowledge, skills and values in settings beyond the classroom. These learning activities may promote intellectual development, cross-cultural and global awareness, civic and social responsibility, ethical development, career exploration and personal growth. This learning occurs through the acquisition of knowledge, reflection and hands-on participation" (ACCEL, 2002). Experiential learning can therefore be described as a process by which the direct experience of the learner is reflected upon and from this emerge new insights or learning.

David Kolb is recognized by most as one of the key figures and contributors in the development of experiential learning theory. According to Kolb, learning, change and growth are best facilitated by an integrated, active process that begins with a concrete **experience**, leading to **reflective observation**, followed by **expansion** through abstract conceptualization, and, concluding with active experimentation and **application** (Algonquin, 2002). In layman terms, experiential learning is an active process of engaging in an experience, collecting data about the experience through observation and critical thought regarding the experience, analyzing the data

and developing concepts and theories about the experience, and, modifying one's knowledge and behavior to apply the information to the real world. Experiential learning follows a cycle of experience, reflection, expansion, and, application and relies heavily upon the old saying of "*Tell me, and I forget. Show me, and I remember. Involve me, and I understand*".

Experiential learning at UNCW is therefore dedicated and committed to this concept of involvement in the learning and educational process. As such, the two courses developed by the faculty through a cooperative effort of the Department of Health and Applied Human Sciences and the Environmental Studies Program rely heavily upon the experiential learning philosophy. The students are presented opportunities for direct experience, reflection upon the experience, analysis of the experience, and, application of the knowledge gained through the experience. Small group interaction and discussion are integral aspects of the courses and are utilized throughout the experiential process. The idea behind the two courses is to exposure the students to real world situations; place the students in direct contact with real world managers and decision-makers; and, to simulate real world challenges as closely as possible. One of the goals of the courses is to stimulate creative thinking thereby encouraging the students to be creative thinkers in all aspects of their lives.

Course Objectives

The courses are constructed with six basic course objectives. (1) Students will gain a knowledge and understanding of historical, biological, geophysical, ecological, developmental, environmental, recreation, and, economic issues related to the Cape Fear River Basin and the North Carolina coastal zone. (2) Students will gain a knowledge and understanding of use conflicts inherent in the Cape Fear River Basin and in the North Carolina coastal zone system. (3) Students will develop and apply skills necessary for safe and environmentally sensitive participation in and management of river and coastal recreation resources. (4) Students will receive training and certification in basic American Red Cross First Aid and CPR. (5) Students will receive training in basic canoeing and/or kayaking. (6) Students will learn and apply critical thinking and decision-making skills through issue discussion and analysis. All course objectives are approached through a combination of in-class work and direct, hands-on, experiential learning on the coastal, sound and estuarine waters, wetlands, and upland areas of the Cape Fear River Basin and the North Carolina coastal zone.

Objective (1) is accomplished through the use of guest speakers, the showing of four videos related to the Cape Fear River Basin and the North Carolina coastal zone, various field trips to appropriate locations and sites, and, individual research by the students themselves. Objective (2) is accomplished through the use guest speakers, the videos, and, various field trips to solid waste treatment facilities, hog farms, national estuarine research reserve components, wildlife refugees, river dams, wetland projects, downtown restoration projects, etc. The students accomplish Objective (3) by attending a full day's workshop on "Expedition Planning" by instructors from the UNCW Campus Recreation, Discover Outdoor Center. A certified instructor from the American Red Cross conducts a daylong training workshop with the students on first aid and CPR to accomplish Objective (4). Objective (5) is accomplished by having a certified instructor in basic canoeing and/or kayaking lead the students in a full day's workshop in paddling practices and techniques. The students accomplish Objective (6) by participating in role-playing exercises, small group exercise assignments, field site visitations with resource managers and decision-makers, leading group discussions, and, conducting field experiments.

Course Requirements

The course requirements for the students fall within three main categories—assigned readings, oral presentations, and, written assignments. Prior to the start of the experiential learning class, the students receive a "Required Reading List". The list includes the URLs for the various field sites to be visited, the URLs for specific information regarding the field sites to be visited and issues to be discussed, and, copies of scientific and educational articles and pamphlets addressing the issues and behaviors to be studied. The purpose of the "Required Reading List" is to "force" the students to read about and become familiar with the various field sites to be visited and the issues to be discussed prior to the commencement of the actual class. The students submit a summary of the topics on the reading list to the instructors for grading on the first day of actual classroom work.

Various oral presentations are required of the students for successful completion of the course. The oral presentations include role-playing exercises, in-class special topic teaching assignments, in-the-field special topic teaching assignments, and, in-class and in-the-field debates and discussions. For example, the students in the Cape Fear River Basin class were required to make in-class oral presentations on such topics as the history of the river, the economic significance of the river, the recreational uses on the river, the flora and fauna of the river, the geography of the river basin, and, the ecology of the river. The students follow up these in-class oral presentations by leading the class in discussions of the topics in the filed as the class paddles down the Cape Fear River from it's headwaters near Raleigh, North Carolina to the river's mouth at Southport, North Carolina.

The written assignments for the class include the summary of the "Required Reading List", the preparation of a "State of the Coast Report", the maintaining of a "Field Journal", and, a final examination.

Course Itineraries

The itineraries for the courses are typically as follows:

CAPE FEAR RIVER ISSUES AND EXPERIENCE	
Day One	Course introduction, video, guest speakers (3)
Day Two	Expedition planning
Day Three	Basic canoeing skills
Day Four	Guest speakers (2), tour of Cape Fear Museum
Day Five	First aid and CPR
Day Six	Guest speakers (3), presentations, and, pre-trip checkout
Day Seven	Travel to Jordan Lake—guest speaker at park
Day Eight	Paddle Cape Fear River and camp—guest speaker at park (Raven Rock State Park)
Day Nine	Paddle Cape Fear River and camp—guest speaker at park (Lillington)
Day Ten	Paddle Cape Fear River and camp—guest speaker at park (Fayetteville)
Day Eleven	Field site visitations (2), class discussion
Day Twelve	Field site visitations (2), class discussion
Day Thirteen	Field site visitations (2), class discussion
Day Fourteen	De-briefing in classroom

NORTH CAROLINA COASTAL ISSUES AND EXPERIENCE	
Day One	Course introduction, video, guest speakers (2)
Day Two	Kayaking clinic
Day Three	Expedition planning
Day Four	First aid and CPR
Day Five	Travel to Outer Banks and camp—stop at Lake Mattamuskeet National Wildlife Refugee (paddle Lake Mattamuskeet) and Jockey's Ridge State Park—guest speakers (2)
Day Six	Field site visitations (3)—The Nature Conservancy at Nags Head Woods (paddle Kitty Hawk Bay), Currituck Banks Estuarine Research Reserve Component and Corolla/Currituck County—2 guest speakers
Day Seven	Field site visitations (4)—Kitty Hawk Woods (paddle Buzzard Bay), Oregon Inlet Coast Guard Station, Bonner Bridge and Oregon Inlet, Pea Island National Wildlife Refugee (paddle Pea Island National Wildlife Refugee)—3 guest speakers
Day Eight	Field site visitation and guest speaker—Cape Hatteras National Seashore; ferry from Ocracoke Island to Cedar Island
Day Nine	Field site visitation, paddle and guest speaker—Cape Lookout National Seashore
Day Ten	Field site visitations (2)—Rachel Carson Estuarine Research Reserve Component (paddle Taylor's Creek) and Hammocks Beach State Park (paddle to Bear Island)—2 guest speakers
Day Eleven	Return to Wilmington, North Carolina
Day Twelve	Field site visitation and paddle—Masonboro Island Estuarine Research Reserve Component
Day Thirteen	De-briefing in classroom

Conclusions

Both the Cape Fear River Issues and Experience and the North Carolina Coastal Issues and Experience class are highly successful at UNCW and consistently receive "Excellent" ratings through the Student Perceptions of Teaching (SPOT) evaluations conducted at the end of each class at UNCW. The faculty believes that one of the reasons for the success of the courses is the small class size, the depth and breath of material covered, and, the intimate student to faculty ratio.

Only 12 students participate in the Cape Fear River Issues and Experience class with a 6 – 1 student to faculty ratio and only 15 students participate in the North Carolina Issues and Experience class with a 5 – 1 student to faculty ratio. The student to faculty ratio is smaller for the North Carolina Issues and Experience class due to the fact that the students are utilizing kayaks for transportation and there is more open water paddling at the field sites.

As a way to summarize and conclude this paper, it is worthwhile to demonstrate how Kolb's experiential learning cycle is incorporated into both of these experiential learning classes. According to Kolb, the experiential learning cycle progresses from Experience to Reflection to Expansion to Application. Each of these four "steps" in the experiential learning cycle is addressed in specific ways in each of the two courses. Here are some examples:

EXPERIENCE
Visit Hog Farm Visit Waste Water Treatment Facility Visit State Parks Visit National Seashores Visit National Wildlife Refugees Visit National Estuarine Research Reserve Components Paddle Cape Fear River Paddle Coastal Sounds and Estuaries

REFLECTION
Meetings With Field and Site Managers Small Group Exercises Role-Playing Exercises Debates Field Journal

EXPANSION
Required Reading List Discussion of Videos Field Measurements Field Research Presentations Debates Role-Playing Exercises

APPLICATION
"State of the Coast Report" Role-Playing Exercises Debates Final Examination Class De-Briefing

References

Algonquin College of Applied Arts and Technology (2002). "Learning on the Internet" URL: http://www.algonquinc.on.ca/edtech/gened/styles.html

Allegheny College Center for Experiential Learning (ACCEL) (2002). "What is Experiential Learning?" URL: http://www.alleg.edu/accel/accel_info.html

Biographical Sketches:

Jim Herstine, Ph.D., CPRP, CPSI
Assistant Professor, Parks and Recreation Management Curriculum, Department of Health and Applied Human Sciences, University of North Carolina at Wilmington. B.A. in Psychology, M.A. in International Relations, M.S. in Recreation Administration, and, Ph.D. in Forestry
herstinej@uncw.edu

Jeff Hill, Re.D.
Associate Dean of Technology and Infrastructure, College of Arts and Sciences and Associate Professor (tenured), Department of Health and Applied Human Sciences, University of North Carolina at Wilmington. B.A. in Psychology, M.S. in Instructional Systems Technology, Ed.S. in Instructional Systems Technology, and, Re.D. in Outdoor Recreation and Resource Management
hillj@uncw.edu

Robert Buerger, Ph.D.
Professor and Coordinator—Environmental Studies Program, University of North Carolina at Wilmington. B.S. in Outdoor Recreation, M.S. in Park and Recreation Administration, Ph.D. in Natural Resource Management and Policy
buergerb@uncwil.edu

Making Tough Calls From the Field: Cellular and Satellite Technology Used in the Backcountry

By

Tommy Holden
North Carolina State University
Raleigh, North Carolina

Abstract

There is an ever-growing use of cellular and satellite (cell/sat) phones in the backcountry. This wireless technology is appearing in both the general public's outings and in many outdoor adventure programs. There are many positive and negative implications to carrying wireless technology into the backcountry. Backcountry travelers need to be aware of how this technology influences decision-making skills in the backcountry and other's recreation experiences. This paper looks at the current issues regarding cell and satellite phone technology and addresses the need for future research in the area of technology and its effect on the wilderness experience.

Recent Trends

Over the past 10 years cell phones have become common in everyday life. As of 1996, there were about "50 million cellular phone users in the United States" (Pratt's study as cited in Hall, 2002). Many people rely on cell phones much like a day planner or their personal secretary. Decreasing costs in phone plans, phones, and increased coverage have led to the increase in popularity. The same is true for satellite phones. While the satellite phone isn't as popular as the cell phone, decreasing costs in phone plans, phone, and increased coverage has led to a dramatic increase in their popularity in the last 5 years. Both cell and satellite phones have made their way into the backcountry. According to a 1996 *Backpacker Magazine* poll, almost half (45%) of 1,355 individuals surveyed said, "a cell phone had a place in their backpack" (Morris study as cited in Hall, 2002). Although there are many different uses and reasons why people carry phones, park managers are beginning to feel the effects of this wireless technology in the backcountry.

One of the issues park managers and search and rescue personnel are beginning to address, is that people tend to rely falsely on the cell/sat phone for safety. They are using the technology as a safety net, and venture into the backcountry ill prepared. Borrie states, "The predominance of cellular or mobile telephones raises the expectation that emergency assistance is only a phone call away. Technology can provide a false sense of security and ability to cope" (p.2, 1999). As a result, more and more people are getting injured and/or having to be evacuated by search and

rescue teams. Of 139 climbing accidents reported in 1996, 8% were by cellular phone and of the 150 climbing accidents reported in 2000, 12% were by cellular phone (Attarian, 2002).

Another issue managers face is the use of phones detracting from a visitors' wilderness experience. Many people go into the backcountry seeking solitude, the last thing they want to hear when they reach the peak of their 10-mile hike is a ringing phone. In the same *Backpacker Magazine* poll mentioned above, most of the people surveyed who didn't take a cell phone in the backcountry said, "the reason they go into the wilderness is to get away from technology" (Morris' study as cited in Hall, 2002).

Cellular Technology

Cellular technology uses frequencies much like radios. A cell tower emits a frequency that travels a certain distance from the tower (Brain, 2002). This area is called a "cell." Coverage is then limited to the number of towers in the area where the user is traveling. Typically there is less coverage in mountainous areas due to the fewer number of towers. Cell reception is possible in buildings, although the reception may decrease (Brain, 2002).

Some of the advantages of using a cell phone versus a satellite phone are that the cell phone is less expensive, the calling plans are less expensive, the technology is relatively user friendly, and as long as there are towers nearby, a signal can be received even under a heavy canopy. One of the disadvantages of using a cell phone is the coverage is "spotty" in backcountry settings due to the limited number of cell towers. Another disadvantage is that the standard battery that is issued with the cell phone offers very limited battery life, one that wouldn't last more than 3 days on a full charge.

Cell phone plans are now available for $50-$100, which includes a charger and nickel cadmium (NiCad) or nickel metal hydride (NiMH) battery, and in some plans the phone is included for free. Batteries can be upgraded to a lithium ion battery for $39-$59. It is also possible to purchase prepaid plans that include a phone and a $25 calling card for around $99 (AT&T Wireless, 2002).

Satellite Technology

Satellite technology relies on orbiting satellites to send and receive signals to and from the users phone. The signal is sent from the phone to the satellite, back to earth to a "transmission box," which coverts and sends the signal to its destination (Iridium Satellite Solution, 2002). If the orbiting satellite is not in the user's vicinity, the user will not be able to place a call. Usually, the orbiting satellites will come into range within 15 minutes to one hour. The satellite phone consists of "line of sight" technology, which means that the clearer the path from the phone to the sky, the better reception the user will receive (Iridium Satellite Solution, 2002). For example, a satellite phone user will have a better chance of placing a call if they are in a wide-open field rather than a heavily covered canopy in a gorge. The signal has a better chance of reaching the orbiting satellites if there are no obstructions above the satellite phone user. This allows the satellite phone to be more reliable in remote areas than a cell phone.

Typically, satellite phones are far more expensive than cell phones. New satellite phones range in price from $600 to $1300. A refurbished phone with an extra battery and charger will cost around $350. Calling plan prices have been significantly reduced over the past few years.

Currently, for $35 a month, the user will get 30 anytime calling minutes with $.99/minute for additional air time minutes (Iridium Satellite Solution, 2002).

Batteries

Choosing the correct battery to supply power to either the cell/sat phone can be crucial. The last thing an instructor needs is to have a battery go dead when they are placing an emergency call. Battery life varies depending on the type of battery you choose. Most cell phones are equipped with nickel metal hydride (NiMH) or nickel cadmium (NiCad) batteries when they are purchased new. These batteries are usually less expensive and smaller than other types of batteries; however, they typically have a shorter life and suffer from a "memory" effect (Brain, 2002). Memory effect means that a battery "remembers" the battery life remaining when it was last charged. For example, if I have a battery that has 4 bars, meaning it has a full charge, and every time the battery drops to 2 bars, or half the life left, I charge the battery back to full charge. The battery starts "thinking" when it gets to 2 bars, that's the end of the battery life. So if I take my phone out on a course and over the span of 2 weeks the battery drops to 2 bars, then I need to place a call, as soon as I turn the phone on, the battery will die due to the memory effect. Even though the battery shows it is at half charge (2 bars) the battery thinks it is at the end of its battery life.

The other type of battery used in cell/sat phones is the lithium-ion (Li-ion) battery. Satellite phones are typically supplied with these batteries when purchased new. The batteries tend to have a longer life and are not subject to the "memory" effect (Brain, 2002). One drawback is that the lithium-ion batteries are more expensive than NiMH or NiCad batteries. For cell phones, a lithium-ion battery will cost from $39-$59 (AT&T Wireless, 2002).

All batteries will suffer from being exposed to direct sunlight or heat. If the batteries are exposed to these conditions for long periods of time the battery charge will decrease rapidly and the battery life will be shorted significantly. Although it is not recommended by manufacturers to disconnect the battery from the phone to prolong the battery charge when not using the phone, I have found that the battery will keep the charge significantly longer if the battery is disconnected from the phone.

Choosing the Right Technology

With all the different types of wireless technology, it is important that the technology chosen is right for you and your program. Cost is a very important determining factor. As mentioned before, cell phone plans tend to be less expensive than satellite phone plans. It is important to determine how much your program is willing and able to spend on the technology. A second factor to consider is where your outings will take place. If your outings occur mainly in a mountainous area, you might not be able to receive a cell phone signal. In that case, you would be better off purchasing a satellite phone. Coverage maps provided by both cell and satellite phone companies are usually not accurate for backcountry settings. I would recommend scouting the coverage area before investing in either type of technology. A third factor to consider is determining the mission of your programs. Questions to consider might be, "Are you offering a wilderness program in which the main objective is to leave all aspects of 'city life' at home, or are you running a weekend type activity based program where taking a phone along with you is to be expected?" Determining a sound philosophy for carrying a phone based on your program's mission is an important factor. Another factor to consider is the length of your trips. If you are

running weekend trips, the battery life might not be such a big issue. If you are conducting 2-4 week programs, it might be wise to invest in one or two back-up batteries to last the entire course.

Implications of Phone Use

There are many issues and implications associated with the use of cell/sat phones. Many times the use of the phones affects not only the instructors on courses, but also the students. One positive result of this technology is that it can include a savings in human and material resources. Being able to place an emergency call from the field allows instructors to stay in the field with the group longer and is able to provide quicker response times to the injured person. The phone allows the instructor to communicate directly with a student's doctor, or base camp, which in turn reduces the stress levels in the instructors. Participant experience and program safety can also benefit. Many times a student might feel they are not so "alone" in the wilderness if they know the instructor is carrying a phone with them and as a result are able to endure the month long wilderness course. This can also be a negative point since it has the potential to give the student a false sense of security, or a "safety net". Carrying a phone may take away from the group's self-reliance. Some people feel that the group may rely heavily on the ability to place a call when in need of help and not rely on the strength of the group. Another implication to students is that carrying a phone detracts from the wilderness experience, or their sense of being in a wilderness.

One potential concern for instructors is the false sense of security the phone provides. Are the instructors making riskier decisions as a result of carrying the phones? A program manager would hope not. One would hope the instructor would make the same decision with or without a phone.

Conclusion

Currently, there are a limited number of studies and literature on the implications of cell/sat phone use in the backcountry. It is important for the research community to investigate the implications of this technology in the backcountry because of the impact it has on instructors and students. Some key questions that need to be addressed are, "Do backcountry visitors use cell/sat phones as a 'safety net' when entering the backcountry, possibly entering the backcountry ill-prepared?" "Does the use of a cell/sat phone change a group's perception of being in the 'wilderness'?" and "Does the use of a cell/sat phone change an instructor's decision-making process in certain situations?"

These and many other questions have arisen due to the increased popularity and accessibility of cell and satellite technology used in the backcountry. As mentioned before, park managers and search and rescue personnel are seeing more calls placed from phones. As a result, park managers may place guidelines on cell/sat phone use for visitors entering the backcountry.

Programs will need to develop a sound philosophy on the use of technology. Currently, the instructor or the program is having less of a choice on whether to use this technology. With liability such a prominent issue in adventure recreation, many programs are being forced to provide this technology to the instructors as part of their risk management plan. Although many might have mixed feelings about this technology, it is important that instructors and program managers are familiar with their program's mission. The featured article in the summer issue of Outdoor Education and Recreation Law Quarterly stresses the importance for programs to develop a sound philosophy concerning cell/sat technology. The article suggests the

administration of the program evaluate the client's expectations in terms of cell/sat phones prior to the program's beginning. The article states "what the program wishes to accomplish will guide its approach to what it provides, and what it withholds, from the field experience" ("Gearing Up or Down," p. 4, 2002). With a clearly defined mission and philosophy, the client will have a clearer expectation of the program. With a sound philosophy at hand, the program will be able to provide students with the most beneficial course possible.

References

AT&T Wireless. (2002). AT&T Free2Go Wireless. [On-Line]. Retrieved October 16, 2002. Available: http://attws.com/personal/buy/select_prepaid.jhtml?aaa=1

Attarian, A. (2002). Rock Climbers' Self-perceptions of First Aid, Safety, and Rescue Skills. Wilderness and Environmental medicine, 13, 238-244.

Brain, M. (2002). How Batteries Work. [On-Line]. Retrieved October 16, 2002. Available: http://www.howstuffworks.com/battery3.htm

Brain, M. & Tyson, J. (2002). How Cell Phones Work. [On-Line]. Retrieved October 16, 2002. Available: http://www.howstuffworks.com/cell-phone1.htm

Borrie, W. (1999). The Impacts of Technology on the Meaning of Wilderness. [On-Line]. Retrieved November 19, 2002. Available: http://www.forestry.umt.edu/personnel/faculty/borrie/papers/technology.htm

Gearing Up or Down: High Tech? No Tech? (2002, Summer). Outdoor Education and Recreation Law Quarterly, 2 (2), pp. 4,19, 20.

Hall, A. (2002). Cell Phones in Wilderness. [On-Line]. Retrieved January 15, 2003. Available: http://www.wilderness.net/wmdep/natr3495/phones.htm

Iridium Satellite Solutions. (2002). About Iridium-Our Story. [On-Line]. Retrieved October 16, 2002. Available: http://www.iridium.com/corp/iri_corp-understand.asp

Biographical Sketch

Tommy Holden is a Visiting Lecturer in the Outdoor Leadership Program at NC State University. He is in his last year of doctoral work concentrating in Adventure Recreation and Outdoor Education at NCSU. He is also an instructor for the North Carolina Outward Bound School instructing mountain and sea kayaking courses during summer months. His address is North Carolina State University, Department of Physical Education, Box 8111, Raleigh, NC 27695. Telephone: 919-515-6869. E-mail: Tommy_Holden@ncsu.edu.

Industry Standards in Managing Top Rope Sites for an Introductory College Rock Climbing Class

Chris Jones, Ph.D., Utah Valley State College

Abstract

Industry standards for rock climbing are established through professional publications of accredited or highly recognized organizations (i.e., American Mountain Guides Association, Climbing Magazine, and National Outdoor Leadership School). Practices for top rope site management in college rock climbing classes change every year as industry standards are upgraded and revised from new concerns for risk management and technology. However, new technology introductions can lead to unsafe practices for managing top rope sites involving students. Because of the current variability among practices for managing top rope sites, there is a need to publish accepted standards for managing top rope sites for college courses. Solutions such as AMGA Rock Guide certification still exclude academic instructors from gaining certification due to the extremely high number of required days per year of instruction to qualify. College rock climbing instructors should follow tried and accepted methods which are simple and resistant to an overabundance of technological and industry changes. A simple system of methods is discussed as well as the implications of this system for college educators. It is concluded that a simple system approach may be more critical than complicated and rigid industry standards.

Planning the Class Outing Using Industry Standards

During the last decade, there has been an effort to develop a set of commonly recognized industry standards. Many of these standards have involved the selection and purchase of equipment. However, despite the many innovations in technology during this time, little has changed with regard to the ability of equipment technology to increase the safety for top rope site management. For example, Petzl's Gri Gri has been chosen as a new tool of the educational industry. However, this device has had much criticism from veteran climbers because it is easily misused by beginning belayers (i.e., students). The Gri Gri has the large disadvantage of having its friction abilities nearly "turned off" by a belayer simply opening the device completely. In these instances, back-up belayers have no opportunity to arrest a fall. This creates a larger risk than the most commonly used ATCs or sticht plates which function extremely well with back-up belayers. Other similar devices to the Gri Gri have been introduced from equipment manufacturers but none have, yet, been able to produce a beginner friendly auto-locking device. Further introductions in equipment technology have included thinner ropes, 10.5 rather than 11 mm. However, while ropes have been rated higher for UIAA factor 2 falls, the use of thinner ropes has not increased safety in top rope site management. The selection of 11 mm ropes should still be preferred with heavier use. However, many climbing shops simply have stopped supplying 11mm ropes. To simplify the equipment needs of the college climbing instructor, below is a

recommended list of climbing hardware for managing a single top rope site (multiply the list by number of ropes):

(1) 3 lengths of webbing (30 ft. long doubled) at least 1 inch tubular tied with water knot and taped down or fixed.
(2) 3 lengths of accessory cord (15 ft. long doubled) for equalizing and setting a ground anchor.
(3) Doubles of a standard rack to protect cracks up to 6 inches in width and smaller (name brand cams, preferably aluminum stoppers rather than steel, and large hexcentrics).
(4) Carpet or other to pad webbing. Rope tube to pad rope.
(5) Locking carabiners – preferably steel or high gate open strength rated aluminum.
(6) ATC belay devices and figure-eight.
(7) 60m by 11mm UIAA Certified climbing rope (minimum rating of 12 falls) & wide rope bag.
(8) 10 Sewn runners and aluminum non-locking carabiners.
(9) UIAA Certified adjustable helmets.
(10) Fully adjustable harnesses (legs & waist).

Choosing a Site

Top rope sites should be chosen carefully for large groups. College classes often have enrollments as high as 15 students or slightly more depending on assistant instructor availability. Thus, a top rope site should ideally be chosen with a large flat belay area and be free of foreseeable falling objects. Characteristics of the less than ideal top rope site include the following: (1) Unstable tallus directly above climb, (2) Animals above climb, (3) Climbers above climb, (4) Loose or Rotten Rock on climb or above, (5) Sharp Edges in areas of rope contact with cliff that are difficult to pad, (6) Indirect lines with the possibility of pendulum falls even with attempts to use directional anchors, (7) Belayers and climbers cannot be viewed by instructor while climbing is occurring, (8) Steep belay stances, (9) Belayers are forced to belay in rock fall zone (i.e., tight areas with ledges), (10) Areas where rock and fall zone free areas are not available for nonclimbers waiting to climb, (11) Routes do not exist with a varying difficulty matching the range of ability in group.

Setting up the Site

Instructors should always set at least three solid anchors and equalize them either mechanically or manually. Mechanical equalization can most easily be achieved by using a twist in one side of a one-inch tubular piece of tied webbing or sewn runner. Manual equalization should be performed using the “Big W” technique with runners, accessory cord, or webbing having less than a 40-55 degree angle to the central carabiner below (Fyffe & Peter, 1990). When utilizing chain anchors (commonly only a set of two bolts), the instructor should back-up the anchor using the last bolt below or place additional natural protection. Use equalized runners with locking carabiners clipped to the bolt hangers directly (if the hanger is wide enough) and do not thread the top rope straight through the chains as this will weaken the chains by thinning the steel. Large diameter, wide trees are ideal anchors to sling with tubular webbing which, in any circumstance should end just over the lip of the climb with carabiners hanging free of the cliff when possible (you do not want students on the lead when finishing routes). You should place opposing carabiners in a position that is free of edges which could put pressure on the spines or gates.

Procedures to Prepare Students to Climb

College students often think that looking dangerous is more glamorous. The instructor needs to refute any attempts at glamour and place bright, ugly, green neon helmets on each of their pretty scalps. (1) Helmets should be worn by every single student even when hiking steep terrain and always when within rock fall range of the cliff area. (2) Instructors should choose appropriately sized harnesses for students then initially instruct for doubled-back buckles and harness fit. (3) Handout a skills checklist to ensure that attention is paid to the instructor. (4) The figure-eight follow knot should be instructed to students. (5) Next, instructors must demonstrate industry standard belay techniques. Those belay techniques accepted by the American Mountain Guides Association and the Climbing Gym Association include the pinch and slide method, letting go of the rope with the non-brake hand and maintaining a snug grip with the belay hand which remains close to a brake position even while slack is pulled. After demonstrating the belay technique, the instructor should observe each student mock belay repeatedly and check them off. Be sure to help students rid themselves of out-of-date or incorrect habits in belaying (i.e., pinch and slide method holding two ropes in one-hand). (6) Instruct proper commands for top rope climbing and check students off while observing verbal practice of commands. (7) After completing the checklist, set students in teams of three to climb. Require a back up belayer to hold two hands on the rope while standing behind the primary belayer with a small amount of slack (to reduce shock-loading) between the primary belayer and themselves. The primary belayer should be clipped into a solid ground anchor which positions them outside of the rock fall zone if at all possible (if known loose rock is present then abandon climb and move). (8) Place ground anchors with slack enough to move out of the way of rock fall but not enough to engage the cliff in a fall. (9) Most importantly of all steps in this paper! Before climbing is engaged, require each student climber to check with the instructor for a visual inspection of their harness buckle and knot before leaving the ground. Also, check belayers for proper threading of devices, harness buckles, and locking of carabiners. The instructor is now ready to start running the system of top rope site management and allow students to begin climbing.

Running the System

The instruction day should include learning for those who are not climbing because bored students are dangerous students. (1) Before students climb have nonclimbing students engaged in knot tying or anchor building at the ground level using trained and trusted assistants to help check students off. (2) Keep your eyes on running the system and the critical skills involved with safety. Constantly scan the top rope site making sure that students follow the system rules and procedures. Always check and recheck whether students are attempting to climb without first having the instructor check their knots and harness buckles (be careful not to rely on less experienced assistant instructors to check harnesses and knots). (3) Watch and listen for rockfall constantly and remind students to call “rock” if they encounter a loose or hollow flake to warn others. (4) Instructors should always discourage other parties from hiking above, rappelling, or climbing near your site. Invasions of your site can create risks of rock fall or tampering with equipment. (5) Be sure that all students rotate their roles as belayers and climbers and observe each while immediately correcting any deviance from the original instruction methods of belay technique. (6) Keep the climber on the direct rope line and maintain directionals to protect swings. (7) Be sure that climbers keep their hands and feet wide when falling and do not grab the rope. (8) Never allow the students to place their fingers through the anchors while ascending or descending a climb. (9) Observe that students reclip directionals and use commands when lowering.

Taking Down the Site

When climbing is concluded, take down the site with caution. This down time can be the most dangerous because students are waiting to leave with less activity available. (1) Always leave an assistant instructor with the student group to keep them entertained. (2) Be sure that the group and assistant recognizes that bouldering and soloing is not permitted and keep the entire group contained out of the rock fall zone. (3) Call ropes before dropping and move students far away from rope whipping distances in advance. Whipping ropes can travel far and cause blindness. (4) Pull ropes onto rope bags to prevent dirt and sand from entering sheath causing internal abrasion of core. (5) Inspect and organize gear (run fingers over rope sheath to examine for damage while stacking). (6) If carabiners or metal hardware have been dropped, mark and separate them for later disposal. (7) Collect helmets after reaching a flat walk-out area or at the college vehicle.

Implications for College Instructors

There are vast implications for the above methods of instructing a beginning rock climbing class. College Outdoor Recreation instructors have few printed guidelines to follow which are simple and functional in their approach to managing a top-rope site. The above methods provide the instructor with a system to follow which can become a mental checklist to employ at the site. Putting this system into practice effectively requires the instructor to have years of training and experience with the system. Furthermore, while these methods are derived primarily from experience in the trade, agreement among professionals on one industry standard simply will not occur. To complicate academic professions with expensive certifications such as AMGA Rock Guide will never substitute for experience and the use of a quality simple system. Thus, those experts who establish industry standards should be cautious not to exclude experience for certification. The best that college climbing instructors can hope for is to continue publishing practices which are tried, true, and effective and discover some common methods of agreement.

References

AMGA Rock Guide Program Retrieved September 15, 2002, from http://www.amga.com/courses/rock.html.

Fyffe, A. & Peter, I. (1990). The handbook of climbing. London, England: Stephen Greene Press.

Lewis, S.P. & Cauthorn, D. (2000). Climbing: From gym to crag. Seattle, WA: Mountaineers.

Biographical Sketch

Dr. Chris Jones is an Assistant Professor and Program Coordinator for the Outdoor Recreation Program at Utah Valley State College where he teaches rock climbing among other academic courses. Dr. Jones holds a B.A. in Psychology from Tennessee, an M.S. in Parks, Recreation, and Tourism Management from Clemson, and a Ph.D. in Forest Resources Science from West Virginia where he worked with Steve Hollenhorst. He has been a climbing instructor and adventure therapist. Dr. Jones has enjoyed rock and ice climbing since 1987 and has published widely on the topic of adventure recreation behavior. For further information about this publication use the following addresses: Dept. of P.E. & Rec., 800 W. Univ. Pkwy, Orem, UT 84058-5999, jonescd@uvsc.edu.

GIDI, Glow In The Dark Team Building Initiatives

By

Ted Jones
North Carolina State University
Raleigh, North Carolina

Abstract

GIDI stands for Glow In the Dark Initiatives. Innovative team building initiatives are always needed to increase options for programming. GIDI is a unique twist on team building because it makes use of an innovative glowing maze in a dark setting. GIDI can be thought of as virtual caving and allows opportunity for nocturnal challenge course programming. Unusual diversity issues can be explored in the scenario, which includes aliens, moon colonists and a variety of social issues attached to the challenges in this new environment. A historical review of GIDI, safety aspects, resources and future potentials are included in the paper.

Introduction

Glow **I**n the **D**ark **I**nitiatives (**GIDI)** utilizes over 200 feet of glow in the dark shoelace material to create a 3 dimensional maze in a dark room. A black light or ultra violet light is used to "charge" the glowing materials and to provide ambient light. GIDI is designed as an intermediate to advanced level initiative best utilized after a group has matured and is in the "performing" stage. (Ronke, Tait & Wall, 1997) It can be adapted to different groups and different uses. GIDI also has enormous potential as a purely recreational activity.

Activity Instructions

The purpose of the activity is for participants to negotiate a maze without touching it. If you are familiar with the traditional "spider web" initiative, it may help you visualize the maze and the concept of not touching the "web". (Ronke, Tait & Wall, 1997) GIDI can also be thought of as "virtual caving" since participants' body movements are similar to those used in a cave. Form fitting clothing and tied back hair is recommended for participants. Initially individuals attempt the maze while the rest of the group stays in a separate area. While the individuals are attempting the maze, the group is facilitated to brainstorm and discuss strategies related to GIDI and participate in consensus building activities.

To begin the facilitator introduces topics for consensus building as part of the scenario (See Appendix A). The group is charged with coming to consensus on issues that reflect the type of decisions faced by leaders in society. For example the scenario may require the group to decide

between funding two distinct and separate programs, for example, having to choose between losing funding for cancer research or funding for protection of wildlife. This also keeps the group meaningfully occupied and focused while individuals attempt to negotiate the maze.
When the first participant successfully completes the maze, he or she is given a tool, and allowed to assist the next group member in completing the maze. This is accomplished by verbally coaching the peer through the maze and temporarily moving the web with the tool as needed. He is also allowed use of a radio to communicate with the waiting group.

Expected Outcomes

GIDI provides physical challenges requiring balance, strength, flexibility, and coordination. Navigating the maze also adds to body and kinesthetic awareness. A key for success in negotiating the maze is to utilize slow movements, which is a difficult concept for most participants to accept. If participants do not realize this fact experientially and incorporate it into their strategy, it can be an important hint provided by the facilitator. Comparing it to the slow, controlled movements of Tai Chi exercises can be a useful comparison.

In the standard GIDI model, each group member has a chance to try the maze alone. As he leaves the group, the relationship between group and individual is revealed. An individual's efforts affect the group even while they are physically separated, which provides obvious metaphors to situations in life. Peer pressure is apparent as the individual can either fail or succeed while the group waits. The outcome is dramatically illustrated as they return to the group setting defeated by the maze or emerge heroic by becoming the first to reach the end. Ideally the maze is technically very challenging so that nearly everyone experiences failure by touching the maze and then returning to the group. This usually produces frustration, a topic to be explored in the final debriefing. To reach consensus, the group must communicate, express individual views and arrive at mutual decisions. The consensus issues should be customized to meet the maturity of the target population as well as the goals of the program. Issues to choose from may be related to the particular group or organization's goals or mission statement or related to issues to which they are connected to at their given age. For example, teenage participants may be faced with the choice to choose between issues important to them at their age, such as choosing between MTV or Video gaming or between high-school sports or dating.

The degree of success that the first participant experiences the maze and presence and use of the "tool" provides key topics for discussion in the debriefing. After several participants have completed the maze and are available to assist others, they can guide two or more new participants simultaneously. This can speed up the process considerably. As with most initiatives, the final debriefing is often the core of the learning experience. Reflection and discussion of the event and its effects on the group and its members should highlight key concepts. This should also increase retention of lessons learned.

Diversity is an issue that can be brought to the forefront if the original scenario (See Appendix A) of moon colonists assisting aliens is used. A mature group, guided by good facilitation can direct the process so that it expands into some interesting, emotional issues.

A few examples of questions and topics that could arise are:

- Why should we help another species we do not even know?
- Are the aliens dangerous?
- Can we trust each other?
- Should we risk human lives (moon colonist lives) to save aliens?
- Do the aliens have thoughts, feelings or souls?

Participants may be encouraged to attempt the maze again, spread out individually within the maze, just for fun. Participants can assist in breaking down the maze if there are time constraints. This often elicits spontaneous feedback, as participants in the relaxed, informal setting make comments.

Logistics Challenges:

- For a typical maze covering about 300 square feet, allow 11/2 hours to set up the maze, and about 30 minutes to break it down. Ideally it can be set up once and used by several groups over a period of days or weeks.
- The maze is difficult to store in large pieces without becoming tangled. The course is often re-built from scratch, which is time consuming.
- The room should be *totally* dark. Exit signs or the light coming under a doorway may destroy the necessary pitch black.
- A black light requires an AC electric outlet or a portable battery powered light.
- Setting up in different locations leads to new configurations of the maze and unexpected challenges or outcomes.
- If participants are utilized to break down the maze, it is important to delegate specific responsibilities and explain how and where to store materials.
- Designated boundaries should be used to ensure safety and limit creative cheating (Ronke, Tait & Wall, 1997), such as simply walking around the maze.
- The absence of attachment points on walls can pose challenges setting up the maze. Small eyehooks permanently attached to the wall can drastically reduce set up time and promote reproductions of earlier mazes that may be more predictable.
- Smooth floors and carpets require different set ups. Smooth floor participants are prone to slide under the maze, so placing glowing objects on the floor requires participants to channel up and over.
- Many of the props used in the GIDI maze are only available in retail stores during Halloween, so it is important to stock up then.
- Glowing props fade in a matter of minutes, reducing the visual effect. When participants are out of the room, lights should be turned on, to “charge” the maze. Black lights charge better and faster than regular lights. Experiment with variations of lights.
- If no attachments are permanently available for anchoring the maze, marked suction cups can be used on smooth floors, or Velcro type hooks and loops can be used on carpet. Marked dumb bells work for either type of floor, but may be a safety hazard.
- Small key chain style carabiners make good connections to anchors for the maze and allow it to be collapsed and reset easily.

Safety

- Black lights provide enough ambient light for people to see fairly well. If not used, movement of participants in the area should be limited. A designated safety zone should be provided to participants with a circle of glowing shoelace near the end of the maze. Additionally each person should be given a glowing necklace or other glowing marker to make them visible. Glowing tattoos are available online but are expensive.
- Using small bungee cord (2-3 mil) at the major maze attachment points provide some "give" to the maze increasing safety for the participants and for the maze.
- Participants should be instructed to move slowly at all times in the dark environment and avoid horseplay.
- All unnecessary obstacles such as chairs and desks should be removed from the area. If not, they should be clearly marked with glowing laces or other props, as should the junction of walls and floors.
- Brittle plastics should not be used on the floor as they may break and become hazards.
- Participants with sedentary life styles may be overly physically challenged, requiring them to have to place entire body weight on their arms or bend in a way that produces strains or muscle pull.
- Facilitators should have headlamps or flashlights available for emergencies and should be familiar with exits for evacuation.
- A first-aid kit should be always be available.
- Require that one part of the body must touch the floor at all times, to prevent jumping or climbing.

Facilitating Challenges

- Initially individual participants enter and attempt to negotiate the maze. This can lead to a long waits for a large group. The activity is best suited for groups of 8-14 participants.
- It is difficult to determine if the maze is too difficult or too easy for each new group.
- It is helpful to have someone test the maze that is of similar size and abilities of the participants.
- It takes at least two facilitators to run GIDI in its original form. One facilitator should monitor participants in the dark room and the maze while the second facilitator keeps the group on task and involved in consensus building. Facilitators should communicate with each other to maintain an appropriate challenge level. The maze may need to be modified if it is too difficult or too easy.
- Point out to the group during the introduction that if they touch the maze or have other problems, to avoid pulling down the maze.

Brief History

The concept originated from my purchase of glow in the dark shoelaces, sold as a Halloween novelty item at CVS Pharmacy around 1997. I later received inspiration for GIDI while watching the video *Entrapment*. In *Entrapment*, Catherine Zeta Jones and Sean Connery star as a pair of jewel thieves. In this film, Jones is shown practicing to maneuver through infrared beams that would trigger an alarm, in preparation for a jewel heist. The physical movements she made were quite graceful and obviously difficult. Her

contortions reminded me of caving and trying to move through small passages while avoiding cave formations. I realized that I could re-create the challenges using the glow in the dark shoelaces. Halloween was my next opportunity to purchase a quantity of the laces. After several failed attempts, I was able to purchase 120 yards of the lace material directly from the Rhode Island Textile Company to make the first maze. My initial glowing mazes were set up in my living room. Setting up the maze was an enjoyable creative process in itself. It became difficult to be satisfied with a maze, as I often kept adding more challenges and visual embellishments. Eventually new ways to channel participants to specific routes through the maze became apparent. To add more artistry to the maze I began to collect all types of glow in the dark toys or objects and incorporating them into the initiative from toy stores, online, and at crafts stores. As many of these items were only available at Halloween, aliens masks and related items became prevalent and led to the development of the original scenario. (See Appendix A) As it became difficult to traverse my living room with the maze in place, I developed systems that allowed me to break down the maze temporarily. This was the first step in making GIDI more portable. By stringing together hula-hoops (marked with glowing tape) a framework similar to a hoop style-backpacking tent was produced. This and a few removable anchor points allowed the maze to release like a constricting spring.

The first group to participate in GIDI was my Challenge Course Programming Class in the physical education department of NC State University in the fall of 2001. The students provided the first feedback about the course and the scenario. Since then several of those students have helped set up and facilitate GIDI for other groups. The NCSU Gymnastics Team, Girl and Boy Scouts, Ultimate Frisbee Team and several corporate conference workshops have participated in GIDI in the interim.

Conclusions

Glow In the Dark Initiatives opens new doors for challenge course programming by:

- Providing an opportunity for programming in a darkened facility or nocturnal atmosphere, it promotes participants to think in new ways.

- The standard GIDI initiative provides physical challenges along with opportunities to develop teamwork while exploring consensus building and diversity issues.

- Setting up the GIDI maze can be itself be an enjoyable creative and recreational experience.

Future Potential

There has been an increase in the number of glow in the dark items available for purchase in recent years. Also new long lasting and brighter glowing materials are being developed and used in the Pentagon and other areas. They are utilized to guide people during emergency evacuations. These materials are prohibitively expensive, but glow for hours without charging. They provide enough light to see through a smoke filled corridor or in a dark building.
These new materials offer the opportunity to develop innovative GIDI concepts. For example they could be applied in a wilderness setting without ac current, to develop a labyrinth style maze

or to replace traditional daylight components of challenge courses. This may also be accomplished using the glowing shoelaces and battery powered black lights.

Other games and initiatives can be performed in a dark setting and GIDI is a thought-provoking stimulus in that direction. There are many glow in the dark balls and other toys readily available. Using glowing materials to mark boundaries and people should be combined with common sense to develop safety guidelines for new activities. GIDI style mazes could be built on a large scale and used as a more positive alternative to "horror houses" traditionally promoted at Halloween. Different routes and challenges could be designed for different ages and populations. GIDI can also be done in the light without glowing string making it more affordable and versatile. An alternative way to use the maze is to allow participants to go through the maze and count the number of touches, with the lowest score in the fastest time as a personal goal.

Resources

Rhode Island Textile produces the glow in the dark shoelace material. They are wholesalers, so a license or federal tax number is needed to purchase from them. A minimum purchase of $120.00 was required when I purchased two spools of laces in November 2000. This is enough for two large rooms of maze. Contact Rhode Island Textile at (401) 722-3700. If you are interested in a smaller amount, please contact the author at teddykuma@aol.com. Please include GIDI in the subject heading.

Craft stores often carry an assortment of glow in the dark materials. *Michael's* a national chain offers several useful items, including Moon balls and stretchy glowing string. A variety of retail stores offer glowing toys and props during the Halloween season. Professional photo suppliers sell high quality glowing tape, and portable support poles, which are useful a center pole for building a GIDI maze.

Appendix A:

GIDI Moon Colony Scenario

The earth is dying from overpopulation, pollution and nuclear fallout. The only hope for the survival of humankind is a small moon colony of researchers, artists and other representatives of a diverse population. Human survival is expected to last 10 years at best, under current conditions.

- NASA is in charge of the international moon colony and has sent a directive to the colonists as follows:
- We have been contacted by an unknown alien race seeking your help in rescuing the surviving eggs from a crashed space ship on the moon. The eggs represent the survival of their species. They have advanced technology and resources they will barter to help save human kind on the earth.
- It is a dangerous mission because of glowing plasma rays and some glowing venomous animals that were on the ship. If you are touched by any of these you have to return to the colony for decontamination and send another colonist to attempt the rescue.

- For each egg you save, they will provide the resources to fund one important social issue. Unfortunately each time a colonist is injured, one resource will be lost for human kind.
- Your mission if you choose to take it, is to send the all the colonists through the dangerous maze while gathering alien eggs (4 glowing moon balls found throughout the maze)
- The remaining colonists in the meantime will discuss and reach a consensus on which social issue must be sacrificed.

In a nutshell, participants should attempt the maze individually, and are required to return to the group if they touch any glowing objects. While another participant attempts the maze, the group should discuss strategies on solving the initiatives and the consensus building topics.

Examples **of Social Issues for GIDI Consensus Building**. Two issues should be stored in film cans and opened one a time as participants return from the maze. The group must come to consensus on which social issue to fund and which to cancel. If the group successfully completes the maze and saves the aliens, funding provided by the grateful aliens brings all lost resources back. The group should also pay attention to time management by determining who goes next to the maze and how the group can best solve the challenge.

- Loss of funding for breast cancer research
- Loss of funding for continued preservation of Giant Pandas and Asian One-horned Rhinos
- Loss of funding for heart disease research
- Loss of funding for the production of alcoholic beverages
- Loss of funding to bring minorities to become Moon Colonists
- Loss of funding for the visual arts
- Loss of funding for ecological research related to man's impact on the moon.
- Loss of funding for the development of sports on the moon.
- Loss of funding for the preservation of the historical artifacts from earth, including many of the world's museums most valuable pieces.
- Loss of funding for recorded music
- Loss of funding for the preservation of the original Constitution of the United States

Reference

Rohke, Tait, & Wall, *The Complete Ropes Course Manual*, (1997). Wall's Outdoor Associates, Inc., Kendall/Hunt Publishing Company, Dubuque, Iowa.

Biographical Sketch

Involved in outdoor recreation since 1975, Ted Jones earned a BS in Parks and Recreation from Appalachian State University and an MA in Experiential Education from Mankato State University. After working in the outdoor field and teaching at Applachian State University for several years, the author studied outdoor recreation in Japan as a Monbusho Scholar and learned Aikido. Following completing his studies in Japan, Mr. Jones taught at a Minnesota based university in Akita, Japan for three years. After a year in Indonesia as program director for an outdoor-based management-training program, the author returned to North Carolina where he currently teaches in the Physical Education Department of North Carolina State University. He can be contacted by email at Ted_jones@ncsu.edu or telephone at 919-513-1563.

Leadership Development For Developed Leaders

By

Rená Koesler, Ph.D.
Longwood University
Farmville, VA

Abstract

Much of the research on outdoor leadership suggests a variety of characteristics and criteria one should possess in order to be a good and responsible outdoor leader. Knowing the factors for good leadership also helps outdoor adventure professionals better teach and train aspiring leaders. It is also important to emphasize that leadership is in a constant state of development and extends beyond training and personal characteristics. Knowing about the factors that impact one's ongoing development as a leader helps maintain one's motivation and desire to continue a leadership role in his/her perspective job. Leadership development is not simply for the young and pursuant outdoor leader but also for those "seasoned" practitioners and professionals who have been in the outdoor adventure field and considered a "developed leader". Research indicates that one's *self-efficacy* has a significant impact in the process of developing outdoor leadership (Koesler, 1994). The results of a recent questionnaire sent to "developed" outdoor leaders helped to identify factors that impact leadership development, factors that inhibit leadership development, and recognized ways in which leaders can continue their motivation, ambition and development as a leader, regardless of age and time spent in the profession.

Introduction

Most outdoor professionals recall the first few outdoor adventure trips in which he/she participated. Perhaps it was a weekend trip with an outing club. Perhaps it was an extended trip such as the National Outdoor Leadership School (NOLS), Outward Bound (O.B.) or the Wilderness Education Association (WEA). Perhaps it was on a river or in the mountains. Regardless, there was something about that trip that enticed you enough to want to extend those memories and experiences into a professional career.

Many outdoor professionals began with cleaning and repairing equipment. Others may have started with the logistical preparation such as organizing gear, packing equipment, preparing meals, loading and driving vehicles filled with eager participants to the road head. Once in the field, you may have assisted the lead instructor by teaching basic classes such as how to pack a backpack or how and where to poop in the woods. These opportunities are thrilling to you since you know you are building the foundation for becoming an experienced outdoor leader. After developing more skills and experience, you were able to move into a lead instructor level. Once you have developed your confidence and expertise at this level, you realize you want to have the responsibility in directing and coordinating an outdoor program. As a Director of an outdoor

program, you may have the opportunity to teach and become more involved in professional organizations. You are finally considered a "developed leader" in the field among your peers and staff. Where do you go from here?

In the process of developing your skills, knowledge, and experience in the outdoors, it's common that one gradually transfers his/her motivations away from a "ME" way of thinking and toward a "WE" way of thinking. When people first start out in their chosen career, particularly the outdoor field, people tend to be most concerned about self (e.g., what can I do to improve my skills in order to get a particular job, what peak can I bag or river can I run?). However, as people continue to develop their leadership positions, the "WE" (e.g., what can we do to improve the lives of others?) view of success tends to involve many more people. In the "ME" stages there are likely to be more mentors available and people that inspire us. The length of time in any profession provides different challenges and perhaps less obvious things for people to attain or jobs in which to aspire. How does one continue to develop his/her leadership after years of leadership and service in the profession? How does one maintain and enhance his/her desire to developing leadership and continue contributing to the growth of the profession?

Currently, there is little known about what happens to leaders once leadership has been attained. Koesler (1994) found that having a mentor, reaching goals and receiving positive and immediate feedback were important factors for influencing one's self-efficacy. Furthermore, self-efficacy was a significant factor in a participant's continued ability and desire to develop his/her leadership.

Purpose

The purpose of this paper is to determine those factors that impact and inhibit leadership development and to identify ways in which leaders can continue to develop and shape their leadership in the outdoor profession.

Self-Efficacy

Self-efficacy refers to a person's personal judgment of his/her perceived capability to perform or attain a particular skill or task (Bandura, 1997). Self-efficacy theory has provided a conceptual framework utilized by many fields to understand behavior and explain success and/or continued participation in a variety of disciplines. Some of these disciplines are academic achievement (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000), sport performance (Moritz, Feltz, Fahrback, & Mack, 2000), work performance (Stajkovic & Luthans, 1998), career development (Hackett & Betz, 1981), and high-risk sports (Brody, Hatfield, & Spalding, 1988). These studies revealed that self-efficacy had a positive impact on individual success, confidence, and future development.

A study was conducted at the National Outdoor Leadership School (NOLS) to determine the factors that impact leadership development after completing a 30 day NOLS course (Koesler, 1994; Propst, & Koesler, 1998). Based on the success of the research conducted in other disciplines, self-efficacy was selected as the theoretical component for assessing its potential impact on the leadership development process. Additional variables (i.e., mentoring, goal attainment and feedback) were selected to determine their impact on self-efficacy (Figure 1).

A pretest and posttest design was administered to 231 students directly before the start of their course and upon completion of their course. Twenty variables (e.g., rappelling off of a rock face, climbing a beginner level climb, climbing a peak over 12,000 ft., reading a topographical map, route finding , leading a small group, organizing an emergency evacuation, etc.) were selected to identify pre-course self-efficacy (i.e., how confident one perceives his/her ability to perform a skill/task) followed by changes in self-efficacy after participation in a 30-day NOLS course (i.e., post-course). Additional questions relating to the variables of mentoring, goal attainment and feedback were also asked pretest and posttest.

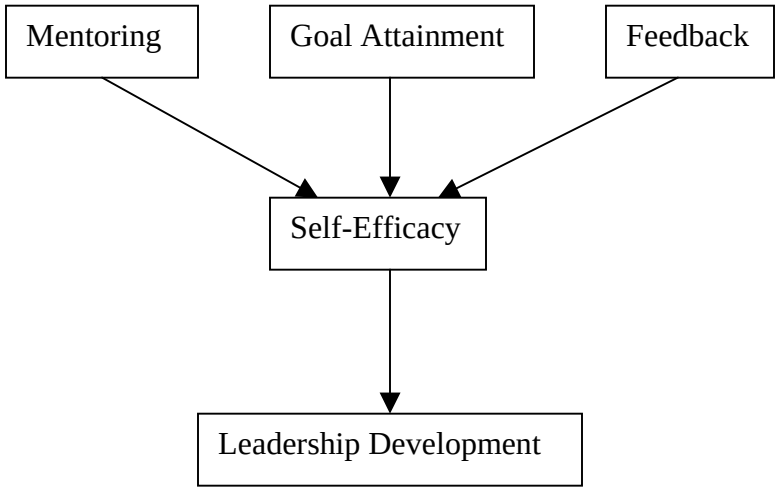


Figure 1. Leadership Development Model

Summary of Findings

1. Males had a higher self-efficacy at pre-course than females. Given that wilderness skills are often seen and stereotyped as male dominant, females may have perceived their abilities to be less than males at the start.

2. There was a significant increase in self-efficacy at post course for both males and females. In other words, both males and females had the same self-efficacy score at post course. This result suggests that the outdoor wilderness experience had a greater impact on females than males and there was a much greater change for females.

3. Positive feedback was most significant for females and immediate feedback for males. This result suggests that females need and rely on positive feedback to boost their self-efficacy whereas males need the immediate feedback received when they directly engage in a task. The success or failure of this skill or task provides them immediate feedback.

4. Mentoring revealed to be a significant factor for enhancing self-efficacy for both males and females.

5. Mentoring was a significant and direct impact on leadership development for females. In other words, not only does having a mentor important for enhancing self-efficacy but it also

influences a females desire to want to continue her involvement in outdoor education and leadership.

Survey Questionnaire

The question explored in this project was, does the same model that was used in the earlier study at NOLS among young developing leaders apply to "developed" leaders?

In early Fall 2002, a questionnaire was sent via email to thirty (30) professionals with whom the author was acquainted either from professional conferences or from spending time with in the outdoor field over the past twenty years. Below is a synopsis of the preliminary demographic information from respondents

Responses were received from 22 people; 11 males and 11 females.
Age Range: 27-55 years
Years in field: 5-30 years
Representation of Program Types: Non-profit, County Recreation and Park Department, University Outdoor Program, Academic Outdoor Program, Guide Service.

After receiving demographic information, respondents were asked five questions related to their experiences as a leader and factors impacting their development as a leader.

Questionnaire Results

Question 1: What factors had a significant impact on your initial development as a leader in the outdoor field? Mentoring and experience had the most significant impact followed by leadership positions, love of outdoors and involvement in organizations.

Question 2: Now that you are considered a "leader" at your place of business, what do you do to enhance your growth, ambition, and development as a leader? Networking, continued field experience, attendance at conferences, expand training, maintain certifications, taking personal trips and be around people who inspire and challenge.

Question 3: Has there been a point in your leadership career where you have experienced a loss of professional direction and motivation in the outdoor adventure field? If so, at what age did this occur and what were the reasons for this loss of direction? 14 people out of 22 responded with a "Yes." Of those 14, 8 people said they experienced a loss of direction between the ages of 40-47 due to the following reasons: too much field time, concerned whether he/she is still making a difference, not getting attention to applied research, lack of support from supervisor and burn out. 4 people out of 14 said they experienced loss of direction in their 30's due to too much field time, attendance in graduate school and instability of job. 2 out of the 14 people experienced a loss of direction in their 20's due to ethical dilemmas, difficulty in finding a job, ego and image disillusion. In essence, the results reveal that there are different dilemmas that create loss of direction at certain stages in one's life.

Question 4: Have you made changes in your career to enhance your development as a leader in the outdoor adventure field? 16 out of 22 people said "Yes." Some of the ways that changes have been made is to move to teaching and away from just program development, move to administration to create less field time, location change to a more supportive environment,

change in responsibilities, ongoing credentials and experience, and engaging in a variety of things to keep one challenged.

Question 5: What factors are important to you in order to maintain and enhance your expertise and leadership in the outdoor profession so that you continue to make contributions to students, the community and to the profession? Most of the respondents indicated that personal time in the outdoors was important to remind self why he/she is in the field, supportive colleagues and administration, networking and attending conference, spend time in field to stay in touch, read, write and stay current in issues and trends.

The participants at the ICORE session (approximately 75) were asked if they felt the model that was used earlier could also be applied to those leaders already developed. Based on the responses revealed in the session, the result was "Yes." Developed leaders still need and desire mentors even though the role of a developed leader is to be a mentor. Some session participants indicated that as we grow in our profession we become the mentor and it is more difficult to find mentors; those people whom we respect, who inspire us, support and encourage us. It was also revealed that feedback was also important to receive on a consistent basis. Often times outdoor professionals find themselves in isolation surrounded by other departments and programs that know very little about the outdoor profession. It is important that outdoor professionals make the effort to network outside of their work place, spend time in the field and refrain from working in a vacuum so that feedback and mentoring are more accessible to them.

Conclusion

Leadership is an ongoing process that continually needs developing throughout various stages of ones' life and career. Mentoring and receiving positive feedback are indicated as valuable factors that enhance one's self-efficacy. Networking, attending conferences, and staying current provide us with the support and feedback that is essential in enhancing one's self-efficacy. Furthermore, it is one's self-efficacy that provides us the motivation and desire to continue in the field. If we believe we are making a difference and growing (often times based on the feedback we receive from our colleagues and mentors), then developed leaders will continue to develop their leadership and make contributions to the field.

References

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.

Brody, E., Hatfield, B., & Spalding, T. (1988). Generalizations of self-efficacy to a continuum of stressors upon mastery of a high-risk sport skill. Journal of Sport Psychology, 10, 32-44.

Caprara, G.V., Barbaranelli, C., Pastorelli, C., Bandura, A., & Zimbardo, P.G. (2000). Prosocial foundations of children's academic achievement. Psychological Science 11(4), 302-306.

Hackett, P., & Betz, N.E. (1981). A self-efficacy approach to the career development of women. Journal of Vocational Behavior, 18, 326-339.

Koesler, R. (1994). Factors that have an impact on leadership development in wilderness education. Dissertation abstracts.

Koesler, R. (1995). Forging a new understanding of leadership development in wilderness education. Parks and Recreation, 30 (7), 12-15.

Moritz, S. E., Feltz, D.L., Fahrbach, K.R., & Mack, D.E. (2000). The relation of self-efficacy measures to sport performance: A meta-analytic review. Research Quarterly for Exercise and Sport, 71, 280-294.

Propst, D., &. Koesler, R. (1998). Bandura goes outdoors: Role of self-efficacy in the outdoor leadership development process. Journal of Leisure Sciences 20 (4).

Stajkovic, A.D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. Psychological Bulletin 124, 240-261.

What in the World is Hyponatremia?

Justin S. Padgett, MS, WEMT-I

Abstract

Heat illness for many is lumped into three categories: dehydration, heat exhaustion, and heat stroke. In recent times, the media has alerted wilderness medical providers to a new potential problem to identify and prevent. This paper focuses on the causes, signs and symptoms, and prevention of hyponatremia. Additionally, the signs and symptoms of other heat related illnesses are compared and contrasted.

Hyponatremia and the Trip Leader

Over the years, there has been more and more talk about "hyponatremia" and its relationship to heat illness. Hyponatremia has also been referred to as "water intoxication". Hyponatremia is defined as a low concentration of sodium in the blood. Isotonic solutions of saline for humans is 0.9%. Basically, the human body is at homeostatsis with 0.9% sodium fluids. In hyponatremic patients we see blood levels dropping below 130mmol/L (11). This intracellular, hypotonic fluid ultimately moves extracellularly into interstitial spaces, or the spaces that surround our internal soft tissues, causing cerebral swelling. To definitively know the sodium make up of a patient we need some detailed lab work that will identify serum sodium concentrations. For lay persons and backcountry trip leaders, we will have to take a look at patient history, vital signs, and physical finding differences between hyponatremia and heat Illness.

How big a concern is hyponatremia for us in the Eastern United States? We don't know. One article written in Arizona stated, "One in 10 persons who collapse in a hot environment may have exercise-induced hyponatremia" (11). There is little data available referencing this malady in the East. Most of the current research on exercise-induced hyponatremia has been created in areas where the daily heat conditions are above 100° F. Many of the case studies reviewed were from the Grand Canyon National Park, and from studies conducted with long distance marathon runners.

One study of marathon runners in California stated that "hyponatremic patients were more likely to be female, using non-steroidal anti-inflammatory drugs who had slower finish times" (4). However, the majority of evidence reveals that men and women are equally susceptible. The very young and the very old are high-risk groups for hyponatremia, but they are unlikely to achieve hyponatremic sodium levels from exertion. The condition in these groups is attributed to loss of sodium through diarrhea due to gastroenteritis, and then not replacing this lost sodium (3).

Signs and Symptoms

EXERTIONAL HYPONATREMIA

HX: Heavy exercise in a hot environment/low humidity and significant sweat loss. Consumption of large quantities of sodium free water estimated at >1L/hr. Low caloric or low sodium food intake. Recent clear and copious urine output.

LOC:	Subtle mental changes: irritable, depressed or confused
HR:	Within normal limits (WNL)
RR:	Within normal limits (WNL)
SCTM:	Wet, afebrile <40° C/104° F core temperature
BP:	Within normal limits / No orthostatic changes
Pupils:	Changes in neurological status: seizure activity to status epilepticus to coma

Nausea, vomiting, headache, slurred speech dizziness, fatigue, mild anorexia, and moist mucous membranes are also common signs and symptoms.

EXERTIONAL HEAT ILLNESS

HX: Heavy exercise in a hot environment/high humidity and significant sweat loss. Limited consumption of water. Infrequent dark and odiferous urine output.

LOC:	Subtle mental changes: irritable and confused.
HR:	Increasing and thready or elevated
RR:	Increased respirations/non-labored
SCTM:	Wet or dry and flushed, febrile >40° C/104° F core temperature
BP:	Falling/positive orthostatic changes.
Pupils:	Changes in neurological status: lethargy, syncope, and coma

Nausea, vomiting, headache, dizziness, fatigue, and dry mucous membranes are also common signs and symptoms.

Key differential field assessment focuses on 1) core temperature (rectal), 2) history of hydration and specific hydration fluids, 3) orthostatic blood pressure changes, and condition of mucus membranes. Again, serum sodium levels obtained at a hospital laboratory, will be the definitive assessment. As a final note, it would be prudent to rule out hypoglycemia through the assessment of blood sugar levels, when appropriate equipment is available. Cerebrovascular accident (CVA) is also a possibility here. Do a thorough nervous system exam (pupils, reflexes in extremities).

Treatment

Our biggest concern with hyponatremia is the development of cerebral edema leading to grand mal seizures and status epilepticus (motor seizures that continue without reprieve). The lay person in the field would be stumped with no tools to manage the airway.

First things first: secure and maintain a patent airway. Place all patients with an altered level of consciousness without mechanism of injury (MOI) for spine in the recovery position. Monitor

vital signs, restrict fluid consumption, and if conscious, consider administration of full strength sports drink (Gatorade), and salty foods slowly. Without saying, high-flow oxygen is appropriate for these patients, however with extended transports… impractical. Review the patient's medical history and history of events. Evacuating all persons who have lost consciousness in the backcountry is a prudent affair. Oriented patients may be able to evacuate with assistance, while those with a decreased mental status will need to be carried. Be aware that these patients will need to urinate, regardless of their mental status. Provide a mechanism for patients being littered out to urinate by improvising a diaper and be prepared to change it. Continue to give supportive care and airway management during evacuation.

Prevention

It may be that the hypersensitivity to concerns about excessive sodium intake in Americans that has led to the rise in sodium-free fluid consumption. This possibility may have given way to the interest in the topic of hyponatremia. I urge you to keep all of this hydration information in balance. Identify sweat loss whenever possible. The average healthy person loses about half a liter of sweat per hour, during exertion in the heat. Replace fluid during time of heat loss with 50% diluted sports drinks and rest often. Avoid salt tablets. Instead rely on salty snacks. Plan to increase your sodium intake before, during, and after exertion in hot environments. Consider that your sweat contains about 2.25-3.4 grams of salt per liter, with a ½ liter of sweat loss per hour (9). Avoid exercise during the peak heat hours of the day. Monitor your urine output, so that you are averaging a need to urinate about every 2 hours, and it is light in color when you urinate. Avoid NSAIDs (ASA, Ibuprofen, etc) and acetaminophen (Tylenol) during exposure to heat and exertion. These drugs tend to reduce kidney function, causing further retention of fluid (4). Identify and keep tabs on the "normal" attitudes and mental status of your group members. Remember, change in mental status is the number one assessment tool in wilderness medicine.

When assessing for heat-related illness remember the cardinal rule of medical care: provide appropriate assessment before treating. It is assessment that leads us down the road to proper treatment and patient care. Treating without assessment could potentially lead you into fatal patient care, with regard to exercise-induced hyponatremia.

References

Backer HD, Shopes E, Collins S.L. (1999). Exertional heat illness and hyponatremia hikers. American Journal of Emergency Medicine Oct; 17(6); 532-9 [Medline].

Brown R.G. (1993). Disorders of water and sodium balance. Postgrad Med Mar; 93(4); 227-8, 231-4, 239-40 passim [Medline].

Craig, S (2001). Hyponatremia. eMedicine Journal,Oct: 2; 1-17.

Davis, DP(1999). Exercise- associated hyponatremia in marathon runners: A two year experience. Journal of Emergency Medicine, Oct; 17(6); 532-539.

Garigan T.P., Ristedt D.E.(1999). Death from hyponatremia as a result of acute water intoxication in an Army trainee. Mil Med164 (3): 234-238.

Knochel, J..P.(1999). Hypoxia is the cause of brain damage in hyponatremia. Journal of American Medical Association, June: 281; 2242-2243.

Montain S.J., Latzka W.A., Sawka M.N.(1999); Fluid replacement recommendations for training in hot weather.Mil Med;164 (7): 502-508.

Murray B. (1996). Fluid Replacement; The American College of Sports Medicine position stand. Sports Science Exchange . 9(4); 1-5.

Noakes, T.D. (2000): Hyponatremia in distance athletes. The Physician and Sports Medicine vol 28, no. 9, Sept.

Salt and the Athlete (1997). SportsMed Web,.

Shopes, E (1997). Drowning in the desert: Exercise induced hyponatremia at the Grand Canyon. Journal of Emergency Nursing. 23 (6); 586-590.

Biographical Sketch

Justin Satterfield Padgett is Co-director of Landmark Learning, LLC, a Western North Carolina based training service for outdoor educators, as well as the Southeastern Coordinator for the SOLO Wilderness Medicine School. Justin holds a graduate degree in Training and Human Resource Development from Western Carolina University. As an EMT-I he is a member of Westcare EMS, serving Jackson County, NC. Involved with camping all of his life, Justin has over 13 years of trip leading experiences in the areas of mountaineering, rock climbing, rope course facilitation, rafting, whitewater kayaking, and caving. Justin is well known for his presentation style, humor and anecdotes. www.landmarklearning.org

Ranking Collegiate Outdoor Programs on Campus: What Did Freshmen Participants Think at Eight Universities?

By

Wayne Taylor, Ph.D.
Cumberland University

Jim Gilbert, Ed.D.
University of Mississippi

Tammie Kaufman, Ph.D.
University of Mississippi

Tom Coates, D.A.
East Tennessee State University

Abstract

The purpose of this manuscript is to report the results of a survey of 76 former freshmen student participants at eight universities' outdoor programs. The study includes data on participant satisfaction of 6 program options, perceived benefits of participation, and the value of outdoor pursuits versus seven other factors influencing student retention for the sophomore year. The samples are as follows: University of Alabama, Georgia Southern University, Middle Tennessee State University, Southwest Texas State University, Texas A & M University, Texas Tech University; Vanderbilt University, and Virginia Commonwealth University.

Introduction

In 1983, the National Intramural Recreational Sports Association (NIRSA) Outdoor Committee found 165 programs. This survey had 86 surveys returned indicating programs which included trips, clinics, and/or equipment rental (Martini, 1984). Webb (1996) also found 180 collegiate outdoor programs with 80 originating in the 1970's, 67 in the 1980's, and 25 in the 1990's. A regional study noted that academic and non-academic programs in the South had expanded to over 40 opportunities for students to engage in outdoor recreation and outdoor education off-campus trips (Gilbert & Taylor, 1989).

The fact that students chose to involve themselves in outdoor recreation/education programs and classes should be of little surprise. In non-credit collegiate programs, many Campus Recreation Directors have added outdoor programs to provide something for everyone.

Procedure

Six pre-approved criteria were established for inclusion in the study. These were: (1) NIRSA Region II/Region IV institutions, (2) a division of student affairs, (3) an established outdoor program, (4) a designated student recreation center, (5) a professional outdoor professional, (6) a program that offered a minimum two of the participation criteria (off-campus outings, skills workshops, challenge course sessions, and conservation outings). The study was limited to freshmen participants in outdoor pursuits activities during the 1999-2000 academic year.

The Sample

Eight of seventeen universities contacted granted permission to administer the survey instrument. A total of 289 freshmen students met the criteria for the 1999-2000 academic year. Of this number, 229 returned for the sophomore year.

Table 1
Summary of University Sophomore Retention and Outdoor Pursuits Retention

University N=8	**Outdoor Pursuits Freshmen Participants**	**Outdoor Pursuits Sophomore Retention**	***Overall Sophomore Retention**	Outdoor Pursuits **Retention %**
U. of Alabama	1	1	83%	100%
Georgia So. U.	62	44	70%	71%
Middle TN St. U.	81	55	75%	68%
Southwest TX St. U.	28	24	69%	86%
Texas A&M U.	49	44	88%	90%
Texas Tech U.	15	12	78%	80%
Vanderbilt U.	44	41	91%	93%
Virginia Com. U.	9	8	74%	89%
Cumulative	289	229	78.5%**	79.2%***

**Source: TIME – THE PRINCETON REVIEW (2000)*

***Overall retention derived by percentages/number of universities*

****O.P. retention derived by O.P. Sophomore Retention/O.P. Freshmen Participants*

The retention rate for the sophomore year of 2000 was 79% for the composite outdoor pursuits' participants and 78.5% for the eight institutions' freshmen population. This was 4.1% higher than the 1998 data released by the American College Testing in the Chronicle of Higher Education (75.1%).(Reisburg, 2000).

Analysis of Data

Criteria for inclusion in the study required freshmen to participate in an organized program for a minimum four hours of continuous activity. Results of the 46 question QIRS survey were tabulated and summarized using descriptive statistics.

Activity Satisfaction

The instrument offered the respondent the opportunity to comment on ten aspects of an outdoor program. The first three aforementioned activities and three additional components were included in the program satisfaction data.

In addition to the original criteria, these factors (staff, climbing wall, and equipment rental) were included due to an integral relationship with the other programs. These options were considered critical for programming and customer satisfaction.

Table 2
Summary of Program Satisfaction Levels

Q. 6-11	**Activity**	**Dissatisfied And Very Dissatisfied**	**Neither**	**Somewhat Satisfied and Very Satisfied**		**Rank**	**Combined Satisfaction % N = 76**
***6.**	**Outdoor Trips**	3	11	62		Third	82%
***8.**	**Outdoor Skill Clinics**	2	26	48		Fifth	63%
***11.**	**Challenge Courses**	4	32	40		Sixth	53%
7.	**Outdoor Staff**	3	2	71		First	93%
9.	**Climbing Wall**	4	14	58		Fourth	76%
10.	**Equipment Rental**	6	4	66		Second	87%
*	Established	program	criteria				

The question asked: “In general, how satisfied are you with each of the following activities at the University?” Responses indicated that outdoor staff received the highest rating, outdoor equipment rental was second, and outdoor trips and climbing wall participation third and fourth in satisfaction levels. Given the concept of outdoor adventure and personal growth, these positive perceptions were considered essential in successful outdoor pursuits programming.

Participation Benefits

A second category dealt with student benefits derived from participation in outdoor pursuits activities. The survey respondents were asked to rate their perceptions of potential benefits from outdoor pursuits participation. While research noted that extracurricular participation increased retention, the underlying assumption remained that there was a benefit for this participation. If there was no perceived benefit by the students, it was assumed that the participation would cease.

There were twenty factors to be rated on the survey instrument (Ewert, 1989). Each respondent was asked: "How much do you think you benefit in each of the following areas from participation in outdoor recreation?" A Likert-type scale was used with five components ranging from "No Benefit" to "Very Beneficial". The top four factors received a 96% or higher beneficial composite rating of the 20 benefit options listed. First was "a sense of accomplishment" followed by a "sense of adventure" receiving 99 percent and 97 percent positive rating respectively. Stress reduction and a sense of well being both received 96 percent.

These are deemed essential in many outdoor programs. They were top five choices in every NIRSA Region (I-IV) in the 1994 NIRSA COLLEGIATE ROPES/CHALLENGE COURSE SURVEY of 118 outdoor programs (Taylor, Romero, Young, & Hawkins, 1995).

Perception of Outdoor Program Importance

The last category dealt with a final question on the survey instrument. Each respondent was asked: "Please rank the following in relation to perceived importance of the effects influencing your return to the university for the sophomore year. (Please place a number in the blank, i.e., 1 for most influence and 8 for least influence)." This final question was directly related to past research on student retention. Each of seven factors was a product of extensive work on this subject by Astin (1975, 1977). An eighth factor, outdoor pursuits programs, was added for the purpose of this study.

It was found that each school indicated a ranking different from the final outcome. The only unanimous choice by the eight samples was first place, Academic Major. A composite of the sample's responses was reported on Table 3. In ranking 2nd through 5th place, there was a close ranking differential as follows: Outdoor Pursuits, Residence Halls, Sports, and Academic Advisor. Student Government and Student Unions were close in point totals but well behind the top five. An overwhelming last place was Greek Affiliation.

Table 3
Ranking of Effects Perceived to Influence Sophomore Retention

Q. 46	**University Sponsored Program**	**Cumulative Points**		**N = 76**	**Composite Rank**
A.	**Residence Hall**	343		Third	3rd
B.	**Greek Affiliation**	639		Eighth	8th
C.	**Academic Advisor**	400		Fifth	5th
D.	**Outdoor Pursuits Programs**	**334**		**Second**	**2nd**
E.	**Sports Programs**	397		Fourth	4th
F.	**Student Government**	475		Sixth	6th
G.	**Academic Major**	**138**		**First**	**1st**
H.	**Student Union**	481		Seventh	7th
	Ranking Scale:	1=most important			
		8=least important			

**University of Alabama, Georgia Southern University, Middle Tennessee State University, Southwest Texas State University, Texas A & M University, Texas Tech University., Vanderbilt University, Virginia Commonwealth University

This data provided a positive look at the freshmen participants perceptions to influence a return for the sophomore year. Since no research study has included outdoor pursuits with these commonly noted positive retention factors, the outcome was higher than expected and a very strong indicator of the value of outdoor pursuits programs.

Summary

In conclusion, this survey sample supported trends and commonly held beliefs concerning benefits of outdoor pursuits that personal satisfaction and positive benefits would result from participation.

The benefits of collegiate outdoor recreation from this sample noted that participation was highly regarded and promoted growth of the individual. It also illustrated the benefits of participation. These should be particularly noteworthy to administrators as this participation was a positive indicator among recognized retention factors in returning to the university.

References

Astin, A. (1975). Preventing students from dropping out. San Francisco: Josey-Bass.

Astin, A. (1977). Four critical years. San Francisco: Jossey-Bass.

Ewert, A. (1989). Outdoor adventure pursuits: Foundations, models, and theories. Columbus, OH: Publishing horizons, Inc.

Gilbert, J. & Taylor, W. (1989). Outdoor programming in the southern United States. In J. Gilbert & E. Bruner (Eds.) Life beyond walls: Proceedings of the 1988 national conference on outdoor recreation. 71-86. University of Mississippi: Oxford, MS.

Martini, S. (1984). A survey of selected outdoor recreation programs. In B. Vendl, D. Dutler, W. Holsberry, T. Jones, & M. Ross (Eds.) Interpretive aspects of intramural-recreational sports, 169-187, Corvallis, OR: NIRSA.

Reisberg, L. (2000). Freshmen – dropout rate fall, as does student graduation rate, ACT reports. Chronicle of Higher Education, 40, (8) 26.

Taylor, W., Romero, R., Young, T., & Hawkins, G. (1995). NIRSA collegiate ropes/challenge course survey results. In K. Scheele, J. Campbell, S. Campbell, C. Fisher, & H. Varner (Eds.) Valuing the vision of recreational sports, 90-109. Corvallis, OR: NIRSA.

Webb, D. J. (1996). Outdoor recreation program directory & data/resource guide. Second Edition. Boulder, CO: Outdoor Network.

Biographical Sketches:

Wayne Taylor has worked in collegiate outdoor recreation at Middle Tennessee State University , Texas Tech University and the University of Texas at El Paso. He has recently completed a Ph.D. in Leisure Management at the University of Mississippi and teaches Recreation at Cumberland University (TN).

Jim Gilbert is a Professor for Leisure Management and Interim Chair of the Exercise Science and Leisure Management Department at the University of Mississippi and received his Ed.D. from the University of Northern Colorado.

Tammie Kaufmann is an Assistant Professor for Leisure Management at the University of Mississippi and received her Ph.D. from Virginia Tech University.

Tom Coates is the interim Chair for the Department of Physical Education, Exercise & Sports Sciences at East Tennessee State University and received his D.A. at Middle Tennessee State University.

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Environmental Interpretation:
A Formaldehyde Free Approach to Preservation

By

Whitney Ward
Georgia College & State University
Milledgeville, Georgia

Abstract

What is environmental interpretation and why is it important? Many people have asked these questions over time. The answer can be summarized in two words – Creating Meaning. As our nation faces a loss and degradation of important environments, and people are becoming more and more removed from the land, it is imperative that they begin to establish a connection. It is essential that they ask, "why is this place unique?" and "what does this place mean to me?". Environmental interpretation is a process of creating meaning within an individual, regardless of whether it is in the backyard or on a far away mountain peak. When meaning is created, that place will become "theirs" and steps will be taken to preserve and protect it.

Introduction

A few summers ago, my wife and I decided to spend couple days in Yellowstone. After a long, hard day of seeing the vast wonders that Yellowstone has to offer, we went to the campground to unwind and spend the night. The camping that we experienced was one that I was not used to with the "designated" paved tent spot and "neighbors" within 100 feet. As I looked at all the signs, pavement, fences, boardwalks, and barriers, I thought about the original concept of national parks. "Such regulations shall provide for the preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural conditions" (United States Congress, 1872). What I witnessed in Yellowstone was a far cry from its "natural condition". I understand that "development" and "hardening" of certain areas is necessary, however, I was reminded of high school biology with all the various specimens stored in formaldehyde. The specimens were essentially "preserved" but they were definitely not in their natural condition. The same could be said of Yellowstone today. Yellowstone is just one example, however there are many more. The question then is, how do outdoor educators help individuals, who are becoming more and more removed from the land, have a desire to prevent the loss and degradation of natural areas? The answer can be summarized in two words – Creating Meaning. This paper will briefly address the key theories and philosophies of presenting environmental interpretation in a holistic, novel, enjoyable, and relevant means to aid in helping an individual create meaning.

Environmental Interpretation: What?

Interpretation Canada (as quoted in Veverka, p. 19, 1994) defines interpretation as "a communication process designed to reveal meanings and relationships of cultural and natural heritage through first hand experiences with objects, artifacts, landscapes, or sites." Environmental Interpretation can range from the formal and structured such as a campfire presentation, to the very informal and unstructured such as pointing out a flower along a trail. It is merely a process of helping an individual create meaning by answering the questions of why a particular place is unique and what it means to them.

Environmental Interpretation: Why?

There are several benefits of environmental interpretation. A study conducted by Bradley, Waliczek, and Zajicek (1999) addressed the direct correlation between environmental knowledge and attitudes. They found that the greater the knowledge about the environment the participant possessed, the more the participant had a "more favorable attitude" toward the environment (Bradley, Waliczek, & Zajicek,, 1999). Baker (1999) further showed that environmental interpretation was an effective means of increasing participants' knowledge in adventure education settings. A change in knowledge and attitudes encouraged participants to take a more active role in preservation (Baker, 1999). In doing so they gained an attachment to the land.

Environmental Interpretation: How?

There are a couple key theories and philosophies of environmental interpretation that aid an individual in creating meaning and understanding why a place is important. Environmental interpretation must be holistic, novel, enjoyable, and relevant. More importantly, the outdoor educator must possess the "priceless ingredient" of passion for the outdoors (Tilden). When these variables are combined, a participant will know why a place is unique and what it means to them. In short, they will be able to create meaning.

Environmental interpretation must have a holistic approach. Veverka states "to understand the parts, we must first see the whole" (p. 7, 1994). Tilden further explains "Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase" (p. 48, 1957). This correlates with Roberts' (2002) research on brain based learning where the search for meaning is instinctive. Presenting the facets of a "complete" story aids the participant in creating meaning.

The interpretation must be novel and clairvoyant. Clairvoyance is often associated with negative meaning, however an "extrasensory" perception is necessary in presenting information in a manner that participants will be able to create meaning. "Information, as such, is not interpretation. However, all interpretation includes information"(Tilden p. 18, 1957). The key is to present the information a novel way. Tilden (1957) goes as far to say that it should be provocative. Novel, clairvoyant interpretation that is presented in exciting non-traditional ways will aid a participant to create meaning more fully with the presented information.

Additionally, it is important that environmental interpretation is enjoyable (Ham, 1992). If an individual has an enjoyable experience they will be more likely to learn. The converse to that is

also true. It is difficult for an individual to benefit if they are having a negative experience. One way to make learning enjoyable is through discovery (Veverka 1994).

Environmental interpretation that relates to an individual will be more likely to create meaning (Ham, 1992; Tilden, 1957). A participant that cannot relate to an experience or object will lose interest and fail to create meaning. Thus the interpretive opportunity will be lost.

Finally, outdoor educators who have a sense of passion for the out-of-doors instilled within them are an integral factor to the success of environmental interpretation. The passion and love that is exhibited for the surroundings and environment will naturally permeate to those around them (Tilden, 1957). Passion can be the key factor that determines the effectiveness of the environmental interpretation and the participant's ability to create meaning.

Even though there were a lot of people in Yellowstone that summer, I saw the theories and philosophies of environmental interpretation at work. The interpretation in Yellowstone was enjoyable and therefore conducive in helping me creating my personal meaning. The setting was very holistic and relevant to me, as I had just finished a semester studying the importance of ecosystem management. Visiting some new geysers that I had never seen before was an added novelty to the learning process as things were presented in new ways. Foremost, the passion of a professor that I had taken classes from years earlier was the thing that aided me the most to create my meaning. Even though he was not with me on this trip, his passion still helped me realize why Yellowstone with its millions of visitors each year and accompanying problems was unique and important to me. Deep down inside I feel that a part of Yellowstone is now "mine" and I have a desire to make sure it is "preserved".

Conclusion

This paper briefly presented theories for interpretive success. An individual who is able to allow the passion of the outdoor educator to influence them and the information to change their attitude will create meaning and be able to answer the questions of "Why is this place unique?" and "What does this mean to me?". Regardless of whether they are far away on a mountain peak, or just in the back yard, they will be able to make that place "theirs" and take the steps necessary to preserve it.

References

Baker, M (1999). Cultural history interpretation in adventure education: Promoting landfull experiences. (ERIC document reproduction services #ED454022).

Bradley, J.C., Waliczek, T.M., & Zajicek. (1999). Relationship between environmental knowledge and environmental attitude of high school students. *The Journal of Environmental Education*; Vol. 30, No. 3 pp. 17-21.

Ham, S. (1992). *Environmental interpretation: A practical guide for people with big ideas and small budgets*. Golden, Colorado; Fulcrum Publishing.

Roberts, J. W. (Fall 2002). Beyond learning by doing: The brain compatible approach. *The Journal of Experiential Education*; Vol. 25, No. 2 pp. 281-285.

Tilden, F. (1957). *Interpreting our heritage*. Chapel Hill, North Carolina; University of North Carolina Press.

United States Congress. (1872). "Yellowstone Act". Retrieved January, 15, 2003, from http://www.yellowstone-natl-park.com/history.html.

Veverka, J. (1994). *Interpretive master planning*. Tustin California; Acorn Naturalists.

Biographical Sketch

Whitney Ward is finishing up a Master's degree in outdoor education administration at Georgia College & State University. He presently splits his time between the program coordinator position for GC&SU's Outdoor Education Center, school, and family.
Email: pachistima@yahoo.com.

The Varieties of Contemporary Environmental Thought: An Overview for Outdoor Recreators and Educators

By

David Matthew Zuefle, Ph.D.
School of Recreation and Sport Sciences
Ohio University

Abstract

An incredible diversity of opinion exists on the topic of the environment and human society's relationship to it. These diverse opinions exist not only within the general population, but within the environmental community and within professions which work to promote and care for the natural world. Differing perspectives sometimes lead to conflicts of interests that take place not only in philosophical discussion, but in everyday situations that involve outdoor recreators and educators. Outdoor recreators and educators often come face-to-face with these controversies when addressing issues or implementing decisions in areas such as ecosystem management, use of animals in programs, and human impacts of recreation and natural resource use. Even the promotion of a widely-respected ethical system, such as *Leave No Trace* ethics, has not been without controversy. Understanding the basis for how and why opinions differ on these subjects is paramount in understanding the controversies that sometimes ensue. Therefore it is important for outdoor recreation professionals and educators to become familiar with the complex issues that constitute contemporary environmentalism. A greater understanding of the dimensions of this subject is useful not only in the development of curricula, policies, and programs that are sensitive to and inclusive of the interests of our diverse clientele, but also in informing public relations and information efforts of agencies that provide outdoor recreation and education services.

Introduction to the Subject

Persons working as outdoor recreators and educators are among the most environmentally concerned persons one can encounter. Many of these professionals are knowledgeable about natural history and ecology and have great practical experience working in natural environments. Further, many of these professionals and the agencies they work for uphold ethical values as a core part of the programs they deliver. What may surprise some within the field, however, is the nature and depth of disagreement over what constitutes virtuous and ethical environmental values.

If one thing is clear, there is no single agreed-upon "environmental ethic." In fact, in the literature of environmental philosophy the term "environmental ethics" is used in at least two

discrete senses. First, it is used generically to refer to the application of any ethical theory to humans' treatment of the natural environment. Second, it is used more specifically to refer to a particular approach to evaluating human impacts on nature, specifically *ethical holism*. Holism is usually thought of as a moral position that advocates the extension of moral standing to nonhuman collectivities, such as ecosystems (VanDeVeer & Pierce, 1994, p. 33).

One of the best examples of holist ethical thinking is found in Aldo Leopold's land ethic: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold, 1966, p. 262). Holism is often contrasted with anthropocentrism, or human-centered moral positions. Both senses of the term "environmental ethics" are sometimes employed by environmental thinkers and writers (Zuefle, 1994a, p. 22).

Common Varieties of Contemporary Environmentalism

Historically, the main schism in the field can be traced back to the early American environmental movement of the late nineteenth and early twentieth centuries. This is the divide between preservation and conservation.

Norton (1991, pp.6-8), notes that this divide can be historically traced in the American environmental movement to the division between those called "conservationists" and those called "preservationists." Conservationists tend to see natural ecosystems from the anthropocentric (human-centered) perspective as resources to be managed wisely. Preservationists, as the name implies, are concerned with saving large natural areas from human use or development (ibid). Preservationists are usually thought to be more holist in orientation, and often see natural areas as having intrinsic value.

The classic historical confrontation between these factions surrounded the development of the Hetch Hetchy canyon area in Yosemite National Park. Conservationists, led by Gifford Pinchot favored the damming of the canyon to provide power and water to nearby San Francisco, while preservationists protested. The preservationists of that era rallied around author and naturalist John Muir, the first president of the Sierra Club.

Although the terms "preservationist" and "conservationist" are widely used, and have a rich historical background, some feel that the usefulness of these terms in understanding the modern environmental debate is limited for at least two reasons. First, it has been observed (but not empirically established) that the use of these terms has metamorphosed from philosophical labels to pejoratives. Preservationist may be used as a term for one who is thought to be obstructionist or anti-development, while the term conservationist could be used to identify one who is economically motivated or an easy compromiser. The second reason is that these two terms are probably too simplistic to capture the entire scope of modern environmentalism (Norton, 1991, pp.8-9).

So what other types of environmental thought are outdoor recreators and educators likely to encounter? The answer is: the number of varieties is hard to count.

One of the most widely cited influences on environmental ethics is the aforementioned Aldo Leopold and his seminal book *A Sand County Almanac* (1949). This later-life work of Leopold is a call for a deeper and more tangible kind of ethic that is both very personal and not completely economic. From the influence of writers like Leopold, a newly emerging kind of ethic came into

being, one which advocated biocentric holism and made dramatic breaks with traditional Western thought. It is often called *deep ecology*.

Deep ecology is a term for a biocentric philosophy coined in 1972 by Arne Naess, a Norwegian philosopher and mountaineer (Nash, p.146). Deep ecology argues that Western culture's anthropocentric, dualistic, and utilitarian attitude toward nature is eradicating natural things and could perhaps cripple the ecosphere's capacity to sustain complex life forms (Zimmerman, 1993, p.197). Naess contrasts deep ecology, with its concern for holism, biospherical egalitarianism, and local solutions to environmental problems, with "shallow ecology" and its anthropocentric desires to control pollution and conserve resources (Naess, 1973, p.95). Naess proposed that scientists and philosophers join together in the discussion and creation of a new inter-discipline called *ecosophy* (Nash, p.146).

Another emergent school of thought is that associated with the various forms of e*cofeminism*. Ecofeminism (*ecofeminisme*) is a term introduced in the early 1970s to point out the potential power women could wield in bringing about an ecological revolution. Ecofeminism is an alternative feminist perspective and environmental ethic which holds many of the same values as deep ecology, but faults deep ecologists with not understanding that the problems of human/environment relations are not attributable to the predomination of anthropocentrism, but because of the predominance of androcentrism (male-centeredness) and false dualism in Western society. Ecofeminism values diversity and seeks to deconstruct patriarchal thought systems and hierarchies. Well-known ecofeminist thinkers include Marti Kheel, Ariel Salleh, and Karen Warren.

While some thinkers have recognized the shared elements of the perspectives of deep ecology and ecofeminism and their potential complementary nature, others have decried deep ecology as failing to address the real cause of environmental and social problems.

Another tradition found in the literature is *social ecology*. Social ecology, a perspective advanced by Murray Bookchin, is one which unifies principles of ecological wholeness with proposed local autonomy over extended ecosystems or *bioregions*. Social ecology is at once an environmental, social, and political philosophy.

Biophilia, is not so much a philosophy as a sentiment or attitude. It is defined by E.O. Wilson as "the urge to affiliate with other forms of life" (Orr, 1994, p.8). Typically juxtaposed to "biophobia", or the aversion to nature and natural things, biophilia is looked toward as a necessary progressive step for human survival by many of its advocates (Orr, 1994, pp.13-15). The advocates of the inculcation of biophilic values are often natural scientists and science educators. This kind of linking of science with philosophy to promote real-life societal change has been recommended within the more mainstream literature of environmental ethics (Sayre, 1991, pp.195-213).

A Curious Conflict of Interests

Two areas which are often conflated with environmentalism are animal welfare and animal rights. Often encountered in, or alongside, the literature of environmental ethics these philosophical positions have been variously described as being at odds with (see Callicott, 1980; Callicott, 1992; Hargrove, 1992), or complementary to, (Varner, 1994) various forms of environmental ethics.

The reason for the very real schism that can exist between animal welfare/rights and (holist) environmentalism is what philosophers call the "basic unit of moral consideration." Many times, in theory and practice, the concern for the individual animal can be in conflict with concerns for the herd, ecosystem, or planet. Not only has this curious conflict been the subject of much philosophical discussion, it has spilled over into contentious debate between environmental advocacy groups and has even resulted in the picketing of outdoor education programs by animal rights groups.

Other Forms and Directions of Environmental Thought

Many other strands of environmental thought are at play in the real world. Pragmatic environmental thought is characterized by its desire to abandon the strict definitions and metaphysical parameters of some of the other brands of environmental philosophy and instead focus on the possibility of unity and compromise between disparate groups to attain shared goals. Free market environmentalism (FME) is an attempt to use the private marketplace and attach economic value to aspects of the natural world in order to set up systems where natural things or systems are protected partially because of their economic value.

Also to be found in the spectrum of environmental thought are the extreme variants. On one end of the continuum are various calls for a hypertraditional anthropocentric approach in which human needs always prevail over concerns for nonhuman nature. On the other end are a number of traditions which negate the value of consideration for humans at all. Indeed, some of these belief systems are wildly radical (or reactionary) in political orientation and antihumanist in practice (Lewis, pp. 27-42).

Even with the variety of forms of environmental thought discussed herein, it must be noted that so many others exist that it is difficult to discuss them exhaustively or completely in the context of a professional overview.

Environmental Ethics, Religion, and Spirituality

It is worthy of special note that many forms of environmental thought are tied to various types of spiritual values and religious ethics. While great debate has gone on for some years about the negative effects of various religious traditions, especially the Abrahamic traditions, there is persuasive empirical evidence and philosophical argument that suggests that positive effects are possible from most of the dominant faith traditions (Zuefle, 1994a; 2000). Arguments about the importance for outdoor and experiential educators to understand the major faith traditions and their possible influences on persons' worldviews and behavior are also found in the literature (Henderson, 2000).

Environmentalism and religion can become complexly intertwined. Nature spirituality is a growing tradition and is an increasingly common topic in both popular and academic literature. Roderick Nash, in his book chapter "The Greening of Religion", recognized the pivotal, yet changing, role of religious values in influencing secular ethics when he observed that "the church has always been the chief custodian of ethics" (p.88). "Ecotheology" is a term that has been coined to refer to the intellectual discussion of an underpinning for environmentally responsible religious thought (ibid). And while nature spirituality has been cited as one of the strongest trends of the modern age (Fisher and Luyster, 1993), it is not accurately seen a monolithic belief

system. Instead, like environmentalism it has its source in a diversity of perspectives and takes a variety of forms.

How Did These Differences Develop and Can They Be Reconciled?

The verdict is still out on the possibilities for reconciliation among all of these different positions. The different traditions in environmental thought can be thought of as simultaneously evolving from experience (practice) and philosophical thinking (theories). The diversity of human experience and the cultural backgrounds of people in the real world go a long way in making these different positions "make sense" in a more or less compelling way to different ethical agents (people). Among the most important formal ethical traditions that have contributed to contemporary thinking about environmental ethics are utilitarianism, rights theories, Kantian ethics, Divine command theory, egoistic theories, and natural law theory (VanDeVeer and Pierce, 1994). As stated previously, religion and spirituality also play a roll---as do highly affective and individual reactions to nature.

It has been said that all philosophers are either "lumpers" or "splitters." This seems to be true for environmental ethicists, professional and amateur alike. Some thinkers treat environmental ethics like an open debate; others see it as a single perspective. Some look for consensus among different groups; others insist that the debate be seen through the lens of their particular theory. Still other thinkers are undecided or evolutionary in their philosophies. Together, they occupy practically every imaginable spot on the map that represents environmental thought. The same can be said of non-philosophers who address these issues in their own ways in their everyday lives---including writing letters to editors, attending experiential programs, and teaching outdoor skills.

How this Affects Outdoor Recreators and Educators, and the Profession.

Outdoor recreators and educators can easily find themselves caught up in these seemingly rarified philosophical debates. One example of how is seen in the seemingly endless campfire arguments over *Leave No Trace* (LNT) ethics. In one of the classic disagreements, one side holds that in order to "really" leave no trace one must completely eschew campfires, while fire-philes quickly respond by pointing out that there are learning outcomes and even safety issues associated with proper fire building.

Seen through the eyes of a formal environmental ethicist, this is really a two dimensional debate. One dimension is the purist/pragmatist continuum, while the other is along the anthropocentric versus ecocentric scale (i.e., some human needs, such as safety and warmth, should trump some needs of nature). Of course the possible advantage of exploring the two viewpoints more formally is to practice getting to the root of why people feel the way they do---and getting past entrenched personal convictions that can lead to misunderstanding and even anger.

Other areas where outdoor professionals can find themselves in the midst of real-world environmental ethics and animal rights controversies include: the debate over whether or not to use pack animals or captive program animals; the tension over recreation access to wilderness and other sensitive areas; any and all decisions about curriculum content as it relates to ethical issues; requests from private clients to alter program content; and even the choice of equipment vis-à-vis

its impact on the environment (e.g., clothing colors, the use of permanent anchors, the use of trekking poles).

But perhaps the most profound questions are those that challenge some of the profession's core assumptions. Do humans have the right to use the natural world, especially wilderness areas, as a place to discover their true potential? Fundamentally, is it a good for the environment to introduce new masses of human recreationists to already stressed and crowded natural areas? These are tough questions indeed, but questions that must be addressed by this young profession.

In addition to questions that are internal to the profession, there are questions and pressures from the outside. Public support is essential to the continued growth of the outdoor recreation and education profession. So is a good relationship with participants and potential participants. One of the best steps professionals can take in striving toward achieving good public relations is to understand the public and its constituent groups. In the outdoor recreation and education field, this includes an understanding of how and why people place value on the natural world. And sometimes, when we honestly attempt to do this we can come away surprised at what we find out (Zuefle, 2001).

But doing this can be a challenge. A brief overview of the varieties of contemporary environmentalism reveals a deep, multifaceted, and ongoing public debate over the proper relationship between humans and the rest of nature. It also reveals a debate in which those with similar interests and goals sometimes disagree on values and methods of approach. For those who work as outdoor recreators and educators, this debate will almost certainly become a part of their personal and professional lives---whether they would prefer it did or didn't.

Given this reality, and the fact that for outdoor leaders "environmental skills" are one of the key hard skills, and "professional ethics" are one of the key metaskills (Priest & Gass, 1997), the need to understand and address the fascinating and complicated area of contemporary environmental ethics is imperative.

References and Suggested Readings

Cafaro, P. (2001). Thoreau, Leopold, and Carson: Toward an environmental virtue ethics. *Environmental Ethics, 22,* 3-17.

Callicott, J. B. (1980). Animal liberation: A triangular affair. *Environmental Ethics, 2,* 311-339.

Callicott, J. B. (1992). Animal liberation and environmental ethics: Back together again. In E. C. Hargrove (Ed.), *The animal rights/environmental ethics debate: The environmental perspective*. (pp. 249-261). Albany, NY: SUNY Press.

Dunlop, N. (2000). Teaching and learning with the seventh generation: The "inward bound" experience. *The Journal of Experiential Education,* 23, 150-156.

Fisher, M. P., & Luyster R. (1990). *Living Religions*. New York: I.B. Tauris & Co., Ltd.

Hargrove, E. C. (1992). *The Animal Rights/Environmental Ethics Debate: The Environmental Perspective*. Albany, NY: SUNY Press.

Hart, R. E. (1992). *Ethics and the environment*. New York: University Press of America.

Howard, W. E. (1990). *Animal rights versus nature*. Davis, CA: University of California at Davis.

Henderson, K. (2000). World religions, spirituality, and experiential education. *The Journal of Experiential Education*, 23, 128-134.

Leopold, A. (1966). *A Sand County Almanac*. New York: Ballantine.

Lewis, M. W. (1992). *Green delusions: An environmentalist critique of radical environmentalism*. Durham, NC: Duke University Press.

Lutherer, L. O. & Simon, J. M. (1992). *Targeted: The anatomy of an animal rights attack*. Norman, OK: University of Oklahoma Press.

Magel, C. R. (1989). *Keyguide to information sources in animal rights*. Jefferson, NC: McFarland & Company, Inc.

McDonald, H. P. (2001). Toward a deontological environmental ethic. *Environmental Ethics, 23,* 411-430.

Minteer, B. A. (2001). Intrinsic value for pragmatists? *Environmental Ethics, 22*, 57-75.

Nash, R. F. (1989). *The rights of nature*. Madison, WI: The University of Wisconsin Press.

Norton, B. G. (1991). *Toward unity among environmentalists*. New York: Oxford University Press.

Oelschlaeger, M. (Ed.). (1992). *After earth day: Continuing the conservation effort*. Denton, TX: The University of North Texas Press.

Orr, D. (1994, Winter). Love it or lose it: the coming biophilia revolution. *Orion*, 8-15.

Plant, J. (Ed.). (1989). *Healing the wounds: The promise of ecofeminism*. Philadelphia, PA: New Society Publishers.

Priest, S. & Gass, M. A. (1997). *Effective leadership in adventure programming*. Champaign, IL: Human Kinetics.

Regan, T. (1983). *The case for animal rights*. Berkeley, CA: university of California Press.

Rolston, H. (Ed.).. (1988). *Environmental ethics: Duties to and values in the natural world*. Philadelphia: Temple University Press.

Russow, L. M. (1981). Why do species matter? *Environmental Ethics, 3*, 101-110.

Sayre, K. M. (1991). An alternate view of environmental ethics. *Environmental Ethics, 13*, 195-213.

Sharma, S., Rikhari, H. C., & Palni, L. M. S. (1999). Conservation of natural resources through religion : A case study from central Himalaya. *Society & Natural Resources, 12*, 599-622.

Soulé, M. E., & Lease, G. (Eds.). (1995). *Reinventing nature? Responses to postmodern deconstruction*. Washington, D.C.: Island Press.

VanDeVeer, D., & Pierce, C. (Eds.). (1994). *The environmental ethics and policy book: Philosophy, ecology, economics*. Belmont, CA: Wadsworth Publishing Company.

Varner, G. E. (1994). Can animal rights activists be environmentalists? In C. Pierce & D. VanDeVeer (Eds.), *People, penguins and plastic trees* (pp. 254-272). Belmont, CA: Wadsworth Publishing Company.

Varner, G. E. & Monroe, M. C. (1991). Ethical perspectives on captive breeding: Is it for the birds? *Endangered Species Update, 8*, (9), 4-6.

Vesilind, P. A., & Gunn, A. S. (1999). Spiritual dimensions of environmental ethic for engineers.
Journal of Professional Issues in Engineering Education and Practice, 83-87.

Zimmerman, M. E. (1993). Rethinking the Heidegger-deep ecology relationship. *Environmental Ethics, 15*, 195-208.

Zimmerman, M. E., Callicott, J. B., Sessions, G., Warren, K. J., & Clark, J. (Eds.). (1998). *Environmental philosophy: From animal rights to radical ecology*. Upper Saddle River, NJ: Prentice Hall.

Zuefle, D. M. (1994a). *The interface of religious beliefs and environmental values within the interpretive profession: A multimethodological exploratory study*. (Doctoral dissertation, Texas A&M University, 1994).

Zuefle, D. M. (1994b). Animal rights versus environmental ethics: What interpreters should know about the surprising controversy. In G. Vander Stoep & H. Cho (Eds.), *The proceedings of the 1994 national interpreters' workshop*. (pp. 243-244). East Lansing, MI: Michigan State University.

Zuefle, D. M. (1996). Animal rights versus environmental ethics: Interpreting the controversy. *Legacy: The Journal of the National Association for Interpretation*. 7, 2, pp. 31-35.

Zuefle, D. M. & Floyd, M. (1999, February) *The revised New Ecological Paradigm scale: A deconstruction of its conceptual framework.* Paper presented at the 1999 Southeastern Recreation Research Conference. Gatlinburg, Tennessee.

Zuefle, D. M., & Absher, J. D. (2000). *An examination of the interface of religious beliefs and environmental attitudes among environmental educators*. Technical Report to the USDA Forest Service, PSW Research Station, Project #USDA/PSW-96-0013CA.

Zuefle, D. M. (2001). *Southern Ohio Residents' Attitudes Toward Timber Rattlesnakes and Their Management: A Focus Group Study*. Technical report to the Ohio Division of Wildlife; Columbus, Ohio. P.O. #P12284.

Biographical Sketch

David Matthew Zuefle, Ph.D.
School of Recreation and Sport Sciences
E180 Grover Center
Ohio University
Athens, Ohio 45701
USA
740.593.4648
zuefle@ohio.edu

Substance Use and Abuse: An Emerging Topic for Outdoor and Adventure Professionals

By

David Matthew Zuefle, Ph.D.

John Pugh

Jessica Robinson

Ohio University
Athens, Ohio
USA

Abstact

Substance use and abuse is an important and timely topical area and the ways in which it is related to the interests of outdoor recreation and education are manifold. Substance abuse, broadly defined as the illegal use of controlled substances or the immoderate use of legal substances, can effect job performance, perceptions of professionalism, the safety of clients, and the liability exposure of the agency or company. Substance use, which is tolerated and sometimes even promoted within some elements of the outdoor recreation and education field, is itself not without controversy. In fact, preliminary research has shown that substance use among academic recreation majors is proportionally higher than that of college majors in general. Further, delineating substance use from abuse can prove problematic, and ethical issues arise when alcohol or other substances become part of the planned or unplanned delivery of programs. Definitions of use and abuse, examples from contemporary professional settings, legal issues, and recent research are discussed in order to provide a framework for discussion and policy development.

Introduction

Substance use and abuse is an important and timely subject, which receives extensive coverage in the popular and professional literature, but has not been addressed thoroughly in the context of outdoor and adventure recreation and education. Given the clear dangers associated with substance use and abuse in outdoor settings, and the need for all professions to establish standards for dealing with use and abuse, increased attention to this important topic is essential to the continued growth and development of the outdoor and adventure field.

To begin to understand the subject of substance use and abuse, one must first consult the literature to see how the terms are commonly used. Substance use has been defined as Athe ingestion of alcohol and/or other drugs (AOD) without negative consequences (Kunstler, 2001) or variously as the moderate use of legal substances that can affect performance (Zuefle, Pugh, & Robinson, 2002). Misuse is said to occur when Aan individual experiences negative consequences from AOD (Kunstler, 2001). Substance abuse is then defined according to Kunstler as the Acontinued use of a drug despite its negative consequences or as the illegal use of controlled substances or the immoderate use of legal substances that can affect performance (Bannon, 1999).

This affected performance could include an employee or volunteer's ability to drive a van, guide a raft, supervise a climbing clinic, or even show up for work. Professional judgment can also be affected, rendering the person unable to make crucial decisions in the field or appropriate choices back in camp. And if left unchecked, grave consequences for participants, leaders, and the organization can result.

Further, use, misuse and abuse can lead to increased tolerance, dependence and addiction. These conditions can affect or diminish the overall health of individuals and can sabotage and shorten their professional careers.

And while it is easy to think of the common types of abused substances as illegal drugs, such as marijuana, LSD, heroin, methamphetamine, and cocaine, this is highly inaccurate. Along with illegal drugs, the substances in question here include many other compounds that affect physical, cognitive, and affective performance. These may include legal drugs, alcohol, tobacco, herbal supplements, and other compounds. Compounding the problem of the diversity of abusable substances is the fact that most of these are widely available.

Substance Use and Abuse in the Outdoors

The availability of these substances, along with their potential for misuse and abuse, clearly poses a problem for all fieldsCbut perhaps especially for the field of outdoor and adventure recreation and education. The outdoor and adventure recreation and education field is one where persons of varying backgrounds spend extensive time together, where inherent and potential risks are assumed regularly, and where a high degree of ability to perform technical skills and execute impeccable judgment is essential.

The evidence for the dangers of substance abuse in the outdoors is manifold. Alcohol is a depressant which is related to many outdoor and backcountry accidents. It is widely known to impair judgment and its misuse can lead to acute poisoning and overdose. And along with its career-threatening potential to cause chronic health problems it is known to contribute to acute problems in the field, such as hypothermia, AMS, HACE, and HAPE.

Other legal and illegal drugs can cause a multitude of health concerns and lead to impaired judgment, accidents, overdose, and a host of substance-specific acute and chronic illnesses. Even tobacco, which is, despite changing social norms, one of the more ubiquitous of the performance-altering substances seen in the field, can lead to big problems in the outdoors. Along with its well known connections to chronic health problems, it is a vasoconstrictor that can speed up the onset of hypothermia and exacerbate existing cardiovascular problems.

There is evidence from the professional that illustrates the reality of these dangers. One article from the *Annals of Emergency Medicine* (Goodman, Iserson, & Strich, 2001) notes that in cases of wilderness mortalities where ethanol tests were performed, 63% yielded positive results. Alcohol was very probable or probable as a causative factor in 40% of the unintentional trauma deaths and in 8.3% of the medically-related deaths investigated. Additionally, 12 out of 69 cases revealed the presence of drugs such as cocaine, cannabis, benzodiazepines, and narcotics. Of the six with cocaine in their systems, all suffered unintentional traumas and all were also found to be drinking.

Some of the best available evidence has to do with mortality and morbidity figures involving watercraft and substance use. In the *Canadian Medical Association Journal* article Alcohol on board, man overboard: Boating fatalities in Canada, it is reported that in Canada and other locations at higher latitudes there is a higher boater fatality rate than in the continental United States, and that this fatality rate is highly correlated to both alcohol use and failure to use a PFD (which, of course, may be related variables). In this study, over 67% of boating-related drowning victims tested positive for alcohol (Chochinov, 1998).

The California Department of Boating and Waterways (2002) reports that about 20% of investigated fatalities were alcohol-impaired. A related previous report cited by the Department showed that 59% of all accidents involving motorized boats were alcohol related. A recent study published in the *Journal of the American Medical Association* also showed that even at low blood alcohol concentrations (BAC) the relative risk (RR) of dying while boating increases greatly (Smith, et al., 2001).

A Special Concern for Outdoor and Adventure Professionals?

One additional thing makes this especially relevant for outdoor and adventure recreation and education professionals. Limited research and extensive anecdotal evidence suggest that substance use is widely tolerated, and sometimes even promoted, within recreation and related fields. Put more simply: a partying ethic can be seen among some individuals and organizations in the outdoor and adventure industry.

While this may strike some as a bold claim, it is worth considering some of the personal experiences and research, which may substantiate it. It is common knowledge that within some aspects of the outdoor and adventure recreation and education community there are contemporary programs that have evolved from earlier times when substance use was a commonplace part of field experiences. In off-the-record conversations, more than one professor or practitioner in the field has spoken of a past environment where alcohol (and other substance) use was celebrated as a part of the campsite experience.

If this is an outdated tradition within public and private non-profit outdoor and adventure recreation and education agencies, it certainly remains a part of the experience within many commercial agencies. In the commercial environment, it is often the operating philosophy that recreational experiences for paying adults can sometimes appropriately include alcohol and other substances.

One company representative of a firm specializing in whitewater paddling and other outdoor recreation opportunities in West Virginia recently shared the opinion that Aall major outfitters and companies feel the need to secure a liquor license to stay competitive in the outdoor marketplace and suggested that the availability and use of alcohol was widespread, sometimes even in restricted areas.

In a recent survey of web sites associated with commercial whitewater rafting companies throughout the United States, 12 out of 26, or about 46%, specifically mentioned the availability or permissibility of alcohol use during the recreation experience. While most of these 12 companies establish that the alcohol is to be consumed at camp, or off-river, one company advertised a drink cooler accessible all day and another promised cold beer and soda floating in the water as you pull to shore.

Small canoe liveries on Class I-II streams are also places where widespread alcohol use can be viewed in a commercial recreation setting. In fact, liberal drinking while paddling canoes in these venues is sometimes half-jokingly referred to as cabrewing.

Also adding to the reasons for concern in a field that works with large numbers of young people are the limited research studies that suggest that substance use among college students is commonly rated as a from of personal leisure (Parry & Shinew, 2002) and that the rate of self-reported substance use among academic recreation majors is proportionally higher than that of college majors in general (James, Lord, & Siegenthaler, 2001).

This is not to suggest that outdoor and adventure recreation and education is a compromised or unprofessional field, or that its situation is completely different from other professions. It does suggest that because of the youth of the field, its continuing evolution, the known dangers associated with substance use in outdoor settings, and the dearth of comprehensive research and professional policy on substance use and abuse in the field, that this professional issue must be moved to the forefront.

Suggestions for Policy Development and Design

There are many considerations (and challenges) for formulating good workplace strategies and policy within Outdoor and adventure recreation and education settings, and there are many possibilities for relevant research. Many of these considerations and possibilities are related to three basic professional issues for persons working in outdoor and adventure recreation and education: 1) Issues related to safety, legal responsibility, and liability/risk management; 2) Issues related to environmental ethics and human impacts; and 3) Issues related to professional judgment and demeanor.

No policy, no matter how carefully crafted, can hope to eliminate substance abuse from the workplace. But a carefully thought out policy on substance use and abuse will address these questions:

* Does my agency already have an explicitly stated substance use and abuse policy?

* What policies will afford my staff and participants the highest quality work and recreation environment?

* Does my agency understand the legal ramifications for compliance and non-compliance?

* Where does my agency stand on drug testing and impairment testing?

* Do the elements of my agency=s substance abuse policy comport to its greater mission?

Many new questions will surface when these basic questions are seriously addressed. For instance, do you understand how substance abuse policy can relate to other legal obligations, such as duty-to-report laws (apply to many agencies receiving grant money), the ADA (addiction can be covered), and HIPAA (the Health Insurance Portability and Accountability Act of 1996, with its new mandates to protect the privacy of medical records). And if some form of testing is adopted, to whom would it apply? Will only key instructor positions and vehicle drivers be subject to screenings, or will everyone, including the cooks?

And imagine the differences that may exist between norms and acceptable policy in a college campus recreation environment (where decreasing alcohol use among students is sometimes a stated goal) and a commercial rafting environment (where the guides might help distribute alcohol back at camp). How do you effectively communicate and deal with seasonal or part-time workers who might also work in another environment where substance use is treated in a radically different way? These issues must be addressed, too.

And one of the most interesting and controversial areas that will come up in any serious discussion is the possibility of employee testing. In addition to the traditional blood and urine tests, which have their supporters and detractors, there is the emerging technology of impairment or so-called fitness-for-duty (FFD) testing which measures an employee's hand-eye coordination, reflexes, or even pupil shape and behavior against baseline measurements (Sullum, 2002b). These tests are championed by some who note that this removes employers from the position of having specific knowledge about imbibed substances (such as one would have with a positive urine test) and instead simply giving them the ability to say you can't work today. This release from work duty can be done whether the employees' lack of fitness is due to alcohol, drugs, or sleep deprivation.

These tests have been tried within the outdoor and adventure recreation and education field with some success. A version that is similar to a video game is used by some western United States ski resorts for instructors and rafting guides. Nicknamed bong pong by some who have to use it, it generally has been well-tolerated. And while it is thought to be effective by many who have used it, FFD testing, like all systems, is not infallible.

Conclusions

Many of the most interesting questions about substance use and abuse as it relates to outdoor and adventure recreation and education have not been satisfactorily addressed, and the need for research to inform policy is great.

Within the outdoor and adventure recreation and education field one can find many successful professionals and organizations. And within their diversity of professional experience there are varying opinions, different policies, and disagreements about the appropriateness of substance useCsometimes disagreements that vary down to the individual substance in question. There are organizations with extensive articulated policies and others with only verbal understandings. There is probably no one correct policy that can fit all applicationsCand much of the information that is needed for optimum policy development is lacking, anecdotal or speculative. But the evolving field of outdoor and adventure recreation and education has clearly amassed enough information and has grown to the point where the serious discussion of substance use and abuse has come.

References

Bannon, J. (1999). *911 Management*. Champaign, IL: Sagamore Publishing, Inc.

California Department of Boating and Waterways. (2002). *Boating Accident Program Statistics.* http://dbw.ca.gov/Ar/98/sec2.htm

Carruthers, C. P. (1993). Leisure and alcohol expectancies. *Journal of Leisure Research*. *25*, 3, pp. 229-244.

Chochinov, A. (1998). Alcohol on board, man overboard: Boating fatalities in Canada. *Canadian Medical Association Journal*. *159*, 3.

Colorado Mountain College Outdoor Recreation Leadership Program. *Colorado Mountain College Outdoor Recreation Leadership Program Policies*. Retrieved September 24, 2002 from http://faculty.coloradomtn.edu/orl/orl_policies.htm

Goodman, Iserson, & Strich. (2001). Wilderness mortalities: A 13-year experience. *Annals of Emergency Medicine. 37*, 3, pp. 279-283.

Grant, S. (2002, June 5). Most state parks no longer dry: Lawmakers lift ban on alcohol at beaches, campgrounds, forests. *The Hartford Courant,* p. A1.

Hamilton, J. O. (1991, June 3). A video game that tells if employees are fit for work. *Business Week, 3216*, p. 36.

Isaac, J. (1998). *The Outward Bound wilderness first aid book*. New York: The Lyons Press.

James, G., Lord, M. A., & Siegenthaler, K. (2001, March). *A comparison of health risk behaviors of recreation majors enrolled in two four-year universities.* Poster presented at the AAHPERD National Conference in Cincinnati, Ohio.

Kunstler, R. (2001). Substance abuse. In D. R. Austin & M. E. Crawford (Eds.), *Therapeutic recreation: An introduction* (pp. 94-112). Needham Heights, MA: Allyn & Bacon.

Mehay, S. L., & Pacula, R. L. (1999, October). The effectiveness of workplace drug prevention policies: Does zero tolerance work? NBER Working Paper #7383.

Parry, D. C., & Shinew, K. J. (2002, October). *The leisure choices of college students: A closer look at leisure's darker side.* Paper presented at the NRPA Leisure Research Symposium in Tampa, Florida.

PMI Incorporated. (2003). *FIT 2000: Fitness-for-duty impairment screener.* www.pmifit.com

Smith, G. S., Keyl, P. M., Hadley, J. A., Bartley, C. L., Foss, R. D., Tolbert, W. G., & McKnight, J. (2001). Drinking and recreational boating fatalities: A population-based case-control study. *Journal of the American Medical Association, 286*(23), 2974-2980.

Sullum, J. (2002a, November). Urine or you're out. *Reason, 34,* p. 36.

Sullum, J. (2002b, November). Testing limits: Alternatives to drug screening. *Reason, 34,* p. 39.

Sussman, S., Ames, S. L., Dent, C. W., & Stacy, A. W. (2001). Self-reported high-risk locations of drug use among drug offenders. *American Journal of Drug and Alcohol Abuse. 27*(2), 281-299.

Van Etten, M. L., Higgins, S. T., Budney, A. J., & Badger, G. J. (1998). Comparison of the frequency and enjoyability of pleasant events in cocaine abusers vs. non-abusers using a standardized behavioral inventory. *Addiction*. *93*(11), 1669-1680.

Widmer, M. A., Ellis, G. D., and Trunnel, E. P. (1996). Measurement of ethical behavior in leisure among high and low-risk adolescents. *Adolescence*. *31*, 122.

Wise, K. (2002, June 6). Shawnee bar could regain lease: Park also trying to upgrade security after shootings. *Charleston Daily Mail,* p. P1A.

Zuefle, D. M., Pugh, J., & Robinson, J. (2002, October). *An examination of the professional issues related to substance use and abuse within outdoor recreation and education.* Paper presented at the 2002 International Conference on Outdoor Recreation and Education. Charleston, South Carolina.

Biographical Sketch:

Dr. David Matthew Zuefle is an assistant professor of adventure recreation and outdoor education, an associate of the Environmental Studies program, and trip leader for a number of experiential opportunities at Ohio University. His scholarly interests include human dimensions of natural resource management, tourism, and outdoor recreation and education. Dr. Zuefle also writes for the popular press, has a column in the *Athens* (Ohio) *NEWS*, and works as a consultant. He can be reached at zuefle@ohio.edu.

Editor's note: The electronic version of the paper submitted contained extra symbols (A, @, =), which can occur sometimes from transferring files between operating systems and/or software programs. The editor choose to delete those symbols, which may have been quotation marks or apostrophes in some instances. Please contact the author with any questions regarding this issue.

40 K, 40 Hrs./wk.; 40 ways to find the best job for YOU!

By

Tina Carter
Southwest Texas State University

Define your MISSION STATEMENT- Pretty Basic- What is it you want to do?

Consider items such as the following:

How much time to do you want to spend in the field?
How much time to do you want to spend administratively?
Do you want to be involved in decision making for the organizations/company?
Will you have creative freedom within your area?

EVALUATION THE JOB: Are you prepared for this position? You want an organization/company to make a commitment to you- but can you make a commitment to that company. Make sure to understand the expectations and evaluate if you are suited to do them. Getting into a position you are not trained for can lead to great job satisfaction, difficulty in transferring to a position you are better suited for, or worse… dismissal.

YOUR BOSS- this is an essential in choosing a career job. Will this person mentor you? What style of communication does this person have? How and when are evaluations done? How often will you be in contact with this person (i.e., weekly phone calls/meetings, email, monthly staff meetings, etc.) What is this person's expectation for this role? Are you comfortable with this person, asking for opinions, ideas, feedback, etc.

Work Conditions: Will you have the resources you are expecting? Remember each organization is different. If you are used to things one way…. Get ready for them to change. Understand the system you are getting into- whether that is fiscal management, computers, marketing, or time off.

SUPPORT- what kind of support is there for continued professional development? Is the money for continued training? Will you get leave time or do you have to take vacation?

FINAL CHECKLIST:
Choosing the Best Offer for YOU!

- USE OF SKILLS: Will your skills, interests, course work, work experience be utilized to their greatest extent?
- COMMUTE: Is the trip to and from work within satisfactory limits?
- TRAINING: Is there sufficient jog training to meet your needs?
- ADVANCEMENT: Is there an opportunity for upward mobility and advancement with the organization?
- STATUS: Does the position carry the prestige you require?
- JOB SECURITY: Does the position carry long-term employment stability?
- BENEFITS: Is the benefits package satisfactory?
- SALARY: Is the salary offered satisfactory?
- HOURS: Do the hours of work agree with you?
- ENVIROMENT: Does the physical environment appeal to you?

- LOCATION: Is the community, where the job is located, conducive to your life style?
- DRESS REGULATION: Are you comfortable with the dress regulation?
- CO-WORKERS: Will you enjoy being with the people with whom you will be working?
- WORK: Are you motivated and satisfied by the position with whom you will be working?
- COMPANY: Are you comfortable with the values of the company?

(Information compiled/adapted from the Career Center Job Search Guide, 2002-2003)

Biographical Sketches

Bridget Weikel:

She completed her B.S. in Education at the University of Maryland while working with their Outdoor Recreation Center for four years. She served as a trip leader, program assistant, and wilderness orientation coordinator assisting in the establishment of this first time program. She is currently working on her Masters in Recreation Administration at Southwest Texas State University, where she is the Graduate Assistant for Outdoor Recreation, and is expected to graduate in May 2003.

Erin Rausch:

Robert Taylor:

At the present time I am a Graduate Student at Clemson University pursing a Masters Degree in Student Affairs. I am currently the Program Coordinator for the Clemson Outdoor Recreation and Education program. I have experience in a variety of different areas including Facility Management, Summer Camps, At-Risk-Youth programs, Community Recreation Programs, and Outdoor Recreation. I also teach Canoeing and Whitewater Kayaking for the ACA as well as courses for the American Red Cross. I served as the Student Representative on the BOD for AORE in 2001 and am presently a member of the Student Development Committee.

Lynn:

Lynn Zwaagstra has been in the field of outdoor recreation for 14 years. This includes areas such as military recreation, university recreation, the National Outdoor Leadership School and the Wilderness Medicine Institute. She has recently been promoted to Associate Director of Campus Recreation at Weber State University. Lynn lives happily at the foot of the Wasatch mountains where she can enjoy a plethora of outdoor adventures.

The Ultimate Goal in Crisis Response

By

Deb Ajango
Alaska Outdoor & Experiential Education department
University of Alaska Anchorage

Abstract

A quality response plan is necessary for any crisis to be well managed. A crucial link that is often missing or overlooked during the plan's development, however, is the relationship between the plan and the organization's core values. A program's long-term response will ultimately reflect an institution's (and its leaders') ideology, and problems can arise when fundamental questions are not addressed early on. Although differences of opinions can (and often do) exist among decision makers, with careful planning, a win-win situation (for victims, media, attorneys, and constituents) is often possible.

Introduction

All organizations, including colleges and universities, are vulnerable to experiencing a crisis at some point, whether it is financial in nature or the result of a devastating accident. Most campus leaders recognize that a disabling injury or death of a student or employee can profoundly affect everyone who is associated with the victim, accident, or institution. Not surprisingly, this type of crisis can be challenging to overcome; if mismanaged, however, the experience can eventually feel overwhelming.

According to Rene A. Henry, risk-management and communication specialist, the most catastrophic corporate crisis occurs when someone dies after using a company's product.[1] At the University of Alaska Anchorage (UAA), that "product" involved an activity arranged and sponsored by the school. A tragic accident occurred in 1997 – two students died during a mountaineering outing. It was a terrible, worst-case-scenario. And over time, things progressed from bad to worse.

The pain and suffering of the families and community was eventually replaced with frustration and anger – much of which was aimed directly at the institution. University employees – filled with grief, but divided on the best plan of action – struggled as well. And while university administrators worked to help the survivors through a very difficult time, the situation deteriorated around them.

In hindsight, UAA's strategy seemed solid on paper, but in reality, the institution's actions fell short on most counts. Like many businesses, the university had a response plan in place and on hand. Administrators had read the books and knew what to do. But the plan failed in the long run. Why? Because it lacked a unified philosophy, and no one could agree upon an ultimate goal.

The basic components of crisis response

Many executives recognize the importance of having a crisis response plan; they might even be able to identify a number of its components. Immediate and thoughtful care of the injured is often recognized as fundamental, for instance, as is having a good media spokesperson. But there are myriad steps involved in a good plan, and as Ian Mitroff notes in his book, *The Essential Guide to Managing Corporate Crises*, "Effective [crisis management] is not a function of how well an organization does on one part … in isolation of the others." Instead, an organization's ability to handle all aspects of a crisis – starting with administering first aid and ending long after the media has lost interest – will determine whether or not the response is judged appropriate and effective. "In a crisis," Mitroff adds, "poor performance in one area is not compensated by exceptional performance in another."[2]

A well-thought-out response plan should include a written administrative Emergency Action Plan (EAP) that is to be used immediately following (and up to 48 hours after) an emergency or accident. Guidelines should assist in supporting any injured party, and the plan should include steps for notifying and working with the family of the victim (as well as non-injured staff and students). The EAP should include a media response strategy as well as a plan (names, telephone numbers, etc.) for communicating with employees, insurance agents, attorneys, regents, and relevant community members as soon as possible.

An organization should also have post-accident procedures that provide guidance in the days and weeks following an incident. This "second-phase" plan does not need to identify exact steps that will be taken in every situation, but it should include a checklist of important considerations. For example, the document might identify critical incident stress management or counseling resources that are available in the area. It might also address expectations for continued interaction with the victim and family. Further, it should identify which types of incidents will require an investigation.

Administrators, risk management personnel, attorneys, and even insurance carriers should periodically review the document(s) and have the opportunity to provide input about both the short- and long-term strategies. Importantly, if a department or program has its own response strategy, assurances should be made that its plan is in alignment with the college's or university's overall plan. And finally, each time the crisis response plan is used, an assessment should be completed to evaluate its overall effectiveness.

Identifying core values

An increasing number of colleges and universities have a basic plan in place, and many leaders feel confident they are prepared for a crisis. But the long-term strategy each campus should embrace is not always obvious, nor are actions and decisions typically unanimous among key employees and decision-makers. Is the goal to protect the organization from financial harm? Is care of injured parties placed first, regardless of cost? Is the institution willing to investigate the

accident and share what it learns? The answers to these questions are not always black and white, and different voices will often give conflicting advice.

A link that is often missing or overlooked in the development of a response plan – one that may be key when grappling with some of these questions – lies in the relationship between the plan and the organization's core values. According to several experts, the institutional culture of an organization and its management will dictate its crisis-response policy. That is, whether your campus wants to set (and present) a post-accident tone of open communication and compassion or one of tight-lipped toughness, the long-term strategy will be a reflection of the institution's values. And although a campus's "culture" typically reflects a top-down approach (i.e., senior management usually sets the tone), if employees at all levels are not in agreement with – or at the very least aware of – the philosophy behind the crisis-response plan, there is a good chance the plan will not progress smoothly once it's put to the test. Campus leaders would be wise to recognize the ramifications associated with having a plan that isn't supported, and beware: one of the worst things that can happen is for an unexpected lack of agreement on core philosophies to surface, in which case the situation can escalate into a "second crisis."

This latter scenario is precisely what occurred following the University of Alaska Anchorage's (UAA's) accident in 1997. Initially the accident was handled appropriately. Administrators visited surviving students and their families at the hospital, and the university stated, "Our first priority is the welfare of our students and staff." The community was told that answers were not immediately available but would be coming. A "complete review" would be undertaken, the university promised, and people were asked to be patient.[3]

At the time, however, the organization's decision-makers could not agree on long-term goals, and what was meant by a "complete review" was debated by a number of audiences. Campus leaders appeared unsure of themselves, and the community became suspicious of the institution's actions and intent. Eventually, the university's values and priorities were called into question.

In a widely circulated Anchorage Daily News editorial released months after the accident, a writer called on the university's Board of Regents to rethink its priorities. In the editorial, the author asked, "Are the regents satisfied with the campus leaders' apparent emphasis on spin control and a general unwillingness among UAA officials to face the disaster's aftermath head-on? They shouldn't be." The column continued, "Granted, it is the job of regents, the president, chancellors, and their minions to recognize the financial dangers posed by potential lawsuits. But when those costs are measured against getting to the bottom of a disaster and restoring public confidence, the university must err on the side of finding answers the public can trust."[4]

Key to success

To avoid this type of dilemma, an organization should prioritize its intent and goals regarding its response plan. There should be a stated purpose behind the plan, specifically as it relates to the institution's mission and philosophy. Furthermore, key leaders should decide how they would like to be perceived following a critical event.

Long before an accident occurs, decision-makers should openly discuss how a post-accident investigation will be handled – including whether or not any findings will be shared with the family and/or media. Various opinions (from regents, deans, directors, attorneys, insurance carriers, and perhaps even the community or family members) should be presented and

considered. The decision-makers should weigh how different publics will view potential actions, and they should make sure their action plan fits well with their philosophy.

In other words, an institution's leaders should – early on – address some of the following basic, but essential, questions: Are the needs of the patient and family priority, or does serving constituents or shareholders come first? Will legal considerations drive the plan, or is public reputation more valuable? What would the employees want, or are their opinions secondary? Once a list of varying concerns is identified, the question becomes: Is there any way to meet the needs of all parties, or are the approaches mutually exclusive? And finally, before a strategy is accepted, the question to ask is: Does the game plan align with the college's or university's core values? An organization that waits until after an accident to grapple with these critical issues shouldn't be surprised to find dissension and infighting within the ranks, which will only intensify the crisis.

If the decision-makers are unclear about their priorities, they should start by reviewing the company's mission. Until a business can clearly articulate its philosophy and identify its overall crisis-response goal, it will not be able to create a solid plan that will lead to desired results. Had UAA – prior to its accident – thoroughly discussed these issues and identified its philosophy and goals, the second crisis would likely have been minimized, if not averted.

Show you care

One of the most critical steps in crisis response is to show you care. While this might sound basic, it's often easier said than done. An organization that is perceived to lack compassion or to place legal considerations above ethical and human concerns can quickly earn the "villain" label, which will likely result in long-term damage to the organization's reputation.

The 1989 Exxon Valdez oil spill and Exxon's response to it provide a good example of how mis-assessing public reaction can lead to trouble. After the company's tanker spilled 11 million gallons of oil into Prince William Sound, the company chairman responded by saying, "We're sorry. We're doing all we can."[5] Unfortunately, he also verbally minimized the damage caused by the spill and ridiculed people who declared the area devastated. The public was outraged. Despite the fact that Exxon ultimately spent more than two billion dollars on cleanup costs, many people considered the company's response callous and appalling.[6]

According to author and public relation specialist Rene A. Henry, "In a crisis, perception is stronger than reality, and emotion stronger than fact." He adds, "As much as 50 percent of an institution's or organization's credibility can be lost by displaying a lack of caring."[7] In Exxon's case, the public perception – that Exxon was not doing enough, and that it didn't care enough – damaged the company's reputation for years.

In his book, Mitroff states, "We cannot emphasize enough that an organization's concern should not be merely the establishment of the numbers and extent of injuries but a prompt, effective, and humane response."[8] Or, as Will Rogers said, "People want to know that you care before they care about what you know."[9]

Crisis management involves doing the right thing. There is nothing illegal about expressing compassion and sympathy to victims and their families when people are injured or killed in an accident. Being sensitive does not equate to being a pushover and accepting responsibility for

everything; rather, it shows that your concern for students, their families, and employees is valued over immediate, short-term profits.

Fortunately, we can learn through example and others' mistakes, and ongoing studies tend to support specific "dos and don'ts" in crisis management. The following list, for instance, summarizes advice given by public relations specialist James Lukaszewski of The Lukaszewski Group Inc. When attempting to maintain (or regain) public credibility, he believes it is important to keep these points in mind:

- Use candor, acknowledge the problem exists, or even apologize and say that something will be done to remedy the situation.
- Commit to regularly reporting additional information until all is out.
- Verbalize regret, empathy, sympathy, and even embarrassment. Take responsibility for the situation.
- Directly involve and ask for the participation of those most affected to help develop more permanent solutions and more acceptable behaviors in order to help prevent similar problems from occurring.
- Go beyond community and victim expectations to remedy the situation.
- Talk about what you learned and how it will influence future behavior.[10]

Admittedly, not all of these steps will be appropriate in all cases. But the bottom line is to be straightforward, fair, and honest. Don't assume someone who's been injured is receiving appropriate medical and personal treatment; check for yourself. Go to the hospital. Consider flying the family to the area and/or the accident site. Don't withhold information. When you do have facts, share them. Let people know you care.

What if mistakes were made?

The above advice is easiest to follow when an incident is seen as "an act of God," or it's clear that the institution was not at fault. Sometimes, however, an organization – or employee of that organization – makes a mistake that results in an injury or fatality. When this happens, the institution will be faced with a difficult dilemma. How can the program appear to care when its own actions contributed to the crisis? And how can a college or university apologize in the face of possible litigation?

The temptation in such a case can be to offer "no comment" and hope the early criticism will diminish over time. Not surprisingly, this response often invokes anger and animosity. And though some businesses are willing to tough out negative media attention, the long-term consequence of inaction and "no comment" can sometimes lead to prolonged problems with an organization's public relations and credibility.

Going back to the UAA case study, the institution, by all accounts, was faced with a truly difficult situation: a tragic accident occurred, two students died, and it appeared that mistakes had been made by the university's trip leaders. The organization had to weigh all sides and decide on a "right" plan of action – that is, it wanted to balance the fiduciary responsibility of the institution with the needs (compassion, medical, and a desire for answers) of the affected participants (students, families, staff, and community members); however, it was not clear if choosing one route prohibited or diminished meeting the needs of the other. The university finally decided to

conduct an external investigation, but only after five months of unanswered questions had passed. And consequently, the prolonged struggle to find the "right" thing to do did not go unnoticed.

Six months after the initial incident, people were no longer talking about the accident itself, but the university was still in the news. Many people in the community were unhappy with the university's response, and a number of people believed the university had refused to accept responsibility for its actions.

"The university's behavior since the accident has been deplorable," one editorialist wrote in an Anchorage newspaper a half-year after the first crisis.[11] A few days later, a second writer commented, "Accident prevention isn't about covering up mistakes; it's about understanding them so they don't get repeated. More than that though, common, human decency dictates that you deal honestly with people in a situation like this."[12]

If these comments are any indication of the opinions of the public-at-large, the local community seemed to allow that mistakes had been made during the outing. Accidents happen in mountaineering, the media openly acknowledged. But people were not nearly as forgiving when it came to judging the university's long-term response.

Understand why people get angry

As noted, there are a number of missteps an organization can take after an accident that can actually make an already difficult situation worse. Behaving in a way that fuels public distrust, for instance, will likely escalate the challenges. To avoid provoking bad feelings, it might be helpful to first consider common beliefs and assumptions that the public holds, and then try to understand why people get angry.

Lawrence Susskind, a professor at MIT and Harvard Law School and co-author of *Dealing with an Angry Public*, says there are three basic reasons people get angry following an accident or crisis:

- Because they have been adversely affected by something a company, organization, or institution has done;
- Because they fear being adversely affected by something you are proposing to do; and/or
- Because they disagree in principle with something you stand for.[13]

Further, many people believe an organization has a responsibility to help the injured, to figure out what went wrong, and to make sure it doesn't happen again. There are several cases where the public has expressed anger at a company when – according to public perception – the appropriate steps weren't taken.

According to a Porter/Nevelli public opinion poll, for example, people get angry

- 75 percent of the time when an organization refuses to accept responsibility;
- 72 percent of the time when they believe a crisis could have been prevented;
- 71 percent of the time when they perceive incomplete or inaccurate information has been provided by the organization; and
- 70 percent of the time when the organization seems to place profit/money ahead of public interest.

The same poll indicated that 95 percent of people are more offended about a company lying about a crisis than about the crisis itself.[14]

In other words, a program will be affected not only by an accident or initial crisis, but its reputation can be strengthened or damaged by its response to the challenge.

Public relations vs. legal advice – a potential conflict

Up until now, much of the advice has advocated for quick action, a show of compassion, perhaps even an apology. The risk of this strategy, some feel, is the potential for quick mistakes, if not an implication of guilt. Many attorneys actually recommend against this approach. Not only do they tend to shy away from apologizing, "Lawyers are used to working very slowly," says Harold Suckenick, a lawyer who is active in public relations. "They believe that the longer things take, the better – people forget things, move, die, give up, etc." Unfortunately, he adds, today's "media travels at blinding speeds."[15] So while the campus's public relations representative is rushing to prepare a statement, the lawyers may have a significantly different point of view. Consequently, advice regarding what is said and when it is said may polarize employees and decision-makers.

It is common for both a lawyer and a PR representative to provide post-accident input, and each position serves a useful role. PR will generally focus on maintaining or enhancing the image, reputation, credibility, and trustworthiness of the institution. The attorney is there to provide advice regarding the legal ramifications of potential decisions and actions; she or he is responsible for protecting the organization's legal position.

A problem can arise if either of these professionals attempts to become involved in the other's discipline. Lawyers should not become involved in public relations or crisis communication just as a PR person should not practice law; rarely is one person thoroughly educated in both specialty areas. This lack of cross-training can be especially problematic during a crisis situation if the lawyer wants to stonewall the media and minimize the release of information, while at the same time, the PR rep is recommending full and immediate disclosure. It is important to listen to both views and recognize the dilemma this can pose. A CEO, chancellor, or president will ultimately need to decide: Is it better to risk potential financial damages in the court of law or long-term reputation and credibility damages in the court of public opinion?

Public relations specialist James Lukaszewski believes, "When it comes to separating legal advice from other kinds of business advice, attorneys need to be more careful than they have in the past. In the legal arena, attorneys are held accountable for their legal advice. [Other professionals] have to help attorneys understand where the line is between legal advice and business advice … [They need to] remind the attorneys that when they cross that line, there are potential liabilities for them and their organization.

"No comment, or no comment because it's in litigation, doesn't serve the organization's reputation, credibility, or market share very well, and rarely does it protect against future litigation or reduce settlement costs."[16] In fact, Lukaszewski adds, "In high-profile cases, saying nothing may be the costliest single mistake made."[17]

James Cox, executive vice president of Edelman Public Relations Worldwide and head of its litigation unit, goes so far as to say companies are foolhardy to follow legal advice in order to

dodge the media. “Public relations,” he believes, “should be used early in a lawsuit to win the hearts and minds of prospective judges and jurors.”[18] Although somewhat blunt, Cox’s opinion seems to mirror the saying, “If you lose in the court of public opinion, it doesn’t matter what happens in the court of law.”

The hope is that an organization can find a win-win situation for all involved. That is, by meeting the needs of the injured, their families, the community, and the employees, an organization might also be able to minimize legal expenses in the long run.

Charles “Reb” Gregg, an attorney who specializes in risk management issues, believes that when dealing with media and potential adversaries, it is often best to work in an atmosphere of cooperation and openness. In fact, he notes, there is ample evidence that antagonism caused by post-event mismanagement – including refusal to share information – can enlarge the plaintiff's demands. Gregg, who has represented a number of cases involving outdoor accidents (including fatalities), adds, “The greatest need of the injured party (and family) is to understand what happened and why; that is, to attempt to make sense of the loss. Deprived of satisfaction in that regard, the plaintiff seeks vengeance, not just compensation.”[219]

To summarize, it is important to realize that though the approaches offered by PR representatives and legal counsel may differ, they do not have to be mutually exclusive. If conflicting advice is indeed offered, assess the relationship between the various strategies and your mission. Review the consequences of each option, and consider whether or not there is a solution acceptable to all. Ultimately, the final decision should be left to the organization’s executive officer, and it should reflect the organization’s core values.

Be willing to change course

It is worthwhile to keep an open mind in the aftermath of a crisis, and remember that changing strategy is not the same as being wishy-washy or indecisive. It is not uncommon for an institution to find that – despite its best efforts – people are critical of its response. Every manager recognizes that she or he won’t be able to please everyone; however, if the swell of public opinion suggests that the organization is starting to be seen as a villain, the company would be wise to re-evaluate its actions.

Let’s return for a final look at the UAA case study. The university’s on-site response was appropriate and seemed sincere. But after the initial crisis stabilized, the public grew angry that the university’s efforts and plan had seemingly stalled.

UAA’s leaders were forced to rethink their strategy. The institution had not hoped for nor anticipated such fierce animosity and negative public reaction, so it took steps to change course. It worked to counter the criticism and learn from its mistakes. It reached out to the injured students and their loved ones. It sought external input on its revised risk management plan. It asked for help from some of its worst critics. Ultimately, the organization not only acknowledged its mistakes, it presented them publicly so that others could learn from them.

Although the change in direction was not easy, the long-term effect – in enhanced reputation and image, as well as toward overall healing – was significant. Professionals from around the country supported the university’s willingness to share its learning; the media began reporting on the

improvements that had been made; and, importantly, the victims voiced relief and appreciation for the efforts.

Final thoughts

A blueprint for crisis response can be found in any number of books or articles. Advice regarding emergency action planning, the use of properly trained spokespeople, and communicating with the survivors is readily available. But in order for any plan to work, an organization must first tackle the fundamental questions presented here: If an emergency occurs, who and what is most important? Is your main priority your students or clients? Your employees? Your shareholders? Or your board of directors? What philosophy will be used to guide your actions?

An organization that is not willing to ask the tough questions now might end up publicly struggling for answers later. Once you start the dialogue, however, you will have taken a big step toward identifying your ultimate goal. Until that happens, you may learn that your best-laid plans are missing the key to success.

References

1. Rene A. Henry, *You'd Better Have a Hose if You Want to Put Out the Fire.* Windsor, California: Gollywobbler Productions, 2000. p 2.

2. Ian I. Mitroff, Christine M. Pearson, and L. Katharine Harrington, *The Essential Guide to Managing Corporate Crisis: A Step-by-Step Handbook for Surviving Major Catastrophes.* New York: Oxford University Press, 1996. p 20.

3. "Information Update on Mountaineering Accident," *University Bulletin,* University of Alaska Anchorage University Relations, July 1, 1997.

4. "Climbing Deaths; The Facts Revealed," *Anchorage Daily News*, December 14, 1997.

5. Ian I. Mitroff, Christine M. Pearson, and L. Katharine Harrington, *The Essential Guide to Managing Corporate Crisis: A Step-by-Step Handbook for Surviving Major Catastrophes.* New York: Oxford University Press, 1996. p 20; and, Quoted in Richard Behar, "Exxon Strikes Back," *Time*, March 26, 1990, p. 63.

6. Exxon Valdez Oil Spill Trustee Council data. Retrieved July 19, 2002, from http://www.oilspill.state.ak.us/facts/qanda.html.

7. Rene A. Henry, p x.

8. Ian I Mitroff, Christine M. Pearson, and L. Katharine Harrington, p 15.

9. Rene A. Henry, p x.

10. Ibid., p 7-8.

11. “It’s Time to Get Rid of the Wilderness Studies Program at UAA,” *Anchorage Daily News*, December 19,1997.

12. “Truth Months Too Late: Report Puts Blame Where it Belongs, *Anchorage Daily News*, December 10, 1997.

13. Rene A. Henry., p 8; and, Lawrence Susskind and Patrick Field, *Dealing With an Angry Public*, The Free Press, a division of Simon & Schuster Inc., New York, N.Y., 1996.

14. Ibid., p 9; and *Public Relations Journal*, September 1993.

15. Ibid., p 55; and *Jack O’Dwyer’s Newsletter*, June 18, 1997.

16. Ibid., p 58.

17. Ibid., p 50; and James E. Lukaszewski with Douglas A. Cooper, “You’re Courting Disaster … Without a Litigation Communications Strategy,” *Executive Action*, The Lukaszewski Group, White Plaines, New York, April/May/June 1992.

18. Ibid., p 51.

19. Charles R. Gregg, Attorney & Counselor, Houston, Texas, personal interview July 23, 2002.

Biographical Sketch

DEB AJANGO was hired as the coordinator of the University of Alaska Anchorage’s academic outdoor program weeks before the June 1997 Ptarmigan Peak tragedy. She is a member of the Association for Experiential Education’s Accreditation Council, is on the board of the Alaska Wilderness Recreation & Tourism Association, and has provided risk management consultation and education throughout Alaska and the Lower 48. Ms. Ajango is also editor and co-author of *Lessons Learned: A Guide to Accident Prevention and Crisis Response*. Deb can be reached at HC83-2440, Eagle River, AK 99577.

Conducting Internal Incident Reviews: A process for developing wilderness incident case studies

By

Kurt A. Merrill
National Director of Risk Management
National Director, Conservation Crews
The Student Conservation Association, Inc.

Kris Wright
Operations Director, Conservation Crews
The Student Conservation Association, Inc.

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Abstract

In an industry that prides itself in the ability to proactively manage risk, it is essential for us to utilize multiple approaches to gather, analyze, and incorporate risk management information into our programs. Upon the close of a significant incident and, if necessary, after a Critical Incident Stress Debriefing (CISD) of staff and participants, a thorough and thoughtful examination of the events surrounding an incident will benefit your organization regardless of the size or scope of programming conducted by your organization. Along with a meticulous statistical analysis of your organization's incident data, thoroughly developing and examining incident case studies is another critical step in enhancing your organization's risk management program.

The ultimate goal in conducting an incident review is to gather information that in turn may reduce the potential for future incidents and enhance the quality of the overall program. Johnson (1980), Hale (1983), Meyer and Williamson (1998), and Haddock (1999) provide our industry with valuable assessment tools intended to help analyze incident information and identify contributory and root causes. In our industry, however, there is little documentation or guidance on how to conduct incident investigations and gather quality information. How can we gather information to layer against the industry's assessment tools? In this paper, we will focus on how to conduct an internal review and provide a structure for the overall review process

Launching an Internal Incident Review

Who should launch a review?

Any size program or organization can perform an internal incident review. The following strategy and format is applicable to any organization, from a college outdoor education program to a large organization that conducts national or international programming. Allocation of staff resources and time constraints are challenges regardless of the size of your organization. Most organizations do not budget time or resources to conduct incident reviews so if you determine that a review is necessary, it becomes a matter of juggling priorities and creating the time to conduct the review. In reality, conducting thorough incident reviews should be one of your organization's highest priorities.

How to determine if a review is necessary

Defining the seriousness level of incidents can help determine when to launch an internal or external review. With these in place, when an incident reaches a predetermined seriousness level or threshold, it prompts specific actions and support from staff. Williamson (2000) and Satz (1999a, 1999b) include a suggested list of events or thresholds that would trigger an external review. These events include a fatality, a permanent disabling injury, or any life-threatening situation of a staff member or participant. Any incident at a level that triggers an external review also warrants an internal review. Leemon's (2000) case study provides a good example of the interaction between an internal and an external incident review. The following is a list of events that may trigger an internal review regardless of your decision to conduct an external review.

- Abuse or harassment (sexual/physical) of a Participant or Staff Member
- A situation involving law enforcement
- A vehicle accident resulting in injury
- Property Damage
- The dismissal or departure of a Participant or Staff Member
- Environmental conditions threatening program safety/success
- Conditions threatening the life of a Participant or Staff Member
- An injury/illness potentially resulting in permanent disability of a Participant or Staff Member
- A missing person (over 24 hours)
- A significant near miss
- A fatality

This is not a complete list and should not limit the scope of your organization's internal reviews. Every organization has unique risk management issues and should mold the use of internal reviews and case study analysis to strengthen organizational knowledge and practices. Therefore, rely not only on your internal thresholds, but also on the expertise of your organizational risk management professionals when deciding whether or not to launch a review.

The Internal Review Process

The internal review process consists of six distinct stages (Table 1) which include assembling the review team, identifying information sources, conducting investigative actions, developing written summaries, analyzing the information to craft a final written report, and disseminating

and integrating the incident information. In order to gather as much accurate information as possible, it is important to assume a deliberate and structured investigative approach to conducting your review.

Stage 1: Assembling the Review Team

Review team members should be selected based upon their ability to be both objective and preserve a high level of confidentiality. Any review team member performing interviews of witnesses should also be trained in basic interview and facilitation skills and be an attentive, well-skilled listener. All members of the team must be able to document their findings in written form. The Internal Review Team Leader should be a member of your organization's Risk Management Team or someone responsible for risk management in your program; other members may include additional Risk Management Team members or other field staff. If possible, select team members who are disconnected from the "in-the-field" or administrative management of the original incident. This helps bring added perspective to the review. It is also important to be sure that at least one member of the review team has a level of expertise in the specific activity undertaken at the time of illness or injury (e.g. rock climbing, trail construction). To ensure the review process remains timely, member selection should begin within ten days after the close of an incident.

Stage 2: Identify Information Sources

The second stage of an internal review is to identify sources of information connected to the incident. This includes the site(s) where the incident took place, any written documentation, and people who participated or were witnesses to the incident. The incident site is usually easy to identify. Visiting the incident site can provide valuable information and a better context for your investigative team. Consider that in some instances, several different locations may provide valuable information. For example, you may find information at the area where a student was injured, on the trail where he was carried on a litter, at a helicopter-landing site, and even at the treating medical facility. Be sure to think broadly when assessing what locations may prove useful in your investigation.

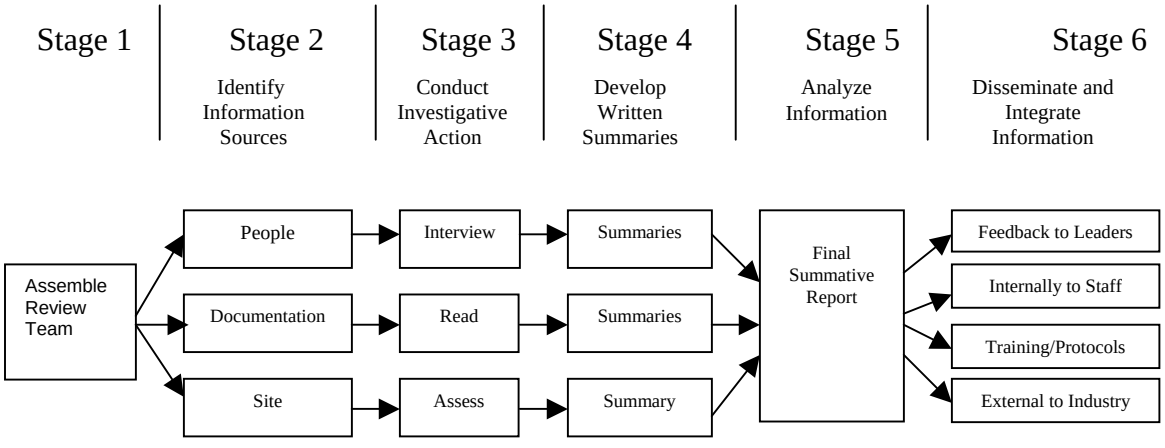

Table 1: The Internal Incident Review Process

In most incidents, the investigative team will locate the written documentation that was utilized to track vital information and communication during and immediately after the incident. It is important to utilize these resources, which may include field SOAP notes, your organization's Wilderness Risk Manager's Incident Report form, transcripts/notes from phone conversations, and other staff notes. Some less obvious paperwork resources may include documentation from rescue and ambulance personnel, cooperating organizations, and land management agencies. These documents may prove especially useful in reconstructing the chronology of events. Think broadly about the incident to uncover all the written resources for your investigation.

Although the assessment of written documentation and site information is essential, the vast majority of information will most likely be gathered from the people involved directly with, or in the management of, the incident. These people include the group leaders, group participants, staff incident managers, and search and rescue personnel. Less obvious resources may be bystanders, land management staff, and medical staff. Again, think broadly about identifying the people who may provide you with insight about the incident.

Stage 3 and 4: Conduct Investigative Actions and Develop Written Summaries

Once the review team has identified the information sources, stages three and four of the internal review process are to begin a hands-on investigation and develop written summaries. Managing the various investigative processes can be a large undertaking and may potentially absorb an immense amount of staff time. Remember that it is not necessary for all members to do the site visit, read every piece of documentation, and be present at each interview. When devising your investigative plan, think about the strengths of the members of your review team and divide the tasks accordingly.

You will most likely find that the most fruitful and potentially time-consuming information gathering process is conducting personal interviews. Extracting useful, accurate information from leaders, participants, bystanders, and others is more difficult than it may initially appear. Emotion, fear of blame, "gaps" in memory and a confounding psychological process called scripting, are just a few of the pitfalls that may challenge you. Although beyond the scope of this paper, it is important to recognize investigative interviewing is a significant skill that requires knowledge, training, and practice. Interviewing is a difficult task and there are many factors that collude to hinder both the interviewee and interviewer in the memory reclamation process.

There has been significant research on different strategies for conducting effective interviews in other related fields. One of the most effective techniques, utilized by law enforcement personnel and accident investigators, was developed by cognitive psychologists Fischer and Geiselman (1992). This technique is called the Enhanced Cognitive Interview (ECI)[1].

The ECI style of interviewing is particularly well adapted for use in our facilitation style based industry. This technique allows for the free flow of information and minimizes the challenges associated with memory retrieval. Gathering information from people during an internal review is not unlike interviewing a witness to a crime or other serious incident. They are under the influences of similar stresses and have the same challenges with memory and event reconstruction. The ECI, when adapted to our industry's particular brand of incident analysis, is an effective tool in gathering high quality, accurate information.

It is expected that upon completion of stage three, each member of the team (the individual site examiners, document readers, and participant/witness interviewers) will summarize their findings

in reports to the team. It is important that these are written as accurately and as completely as possible. Ultimately, the review team leader will assume the lead on compiling the information and draft the final summative report.

Stage 5: Final Written Report

After the completion of your team's investigative actions, the review team leader should assume responsibility for compiling all the information and begin to draft the final written report. The risk management industry has focused substantial work on this stage of the review process. There are several tools available to help analyze your incident information including Johnson's (1980) *Fault Tree Analysis*, Hale's (1983) *Dynamics of Accidents* model the Meyer and Williamson (1998) *Potential Causes of Accidents* matrix, and Haddock's (1999) *Causal Pathway* analysis. It is important in the final written report to provide a thorough analysis as well as the teams conclusions and specific recommendations. The final incident report should also include:

- A header with the name of the Review Team Leader, the names of all Review Team Members, the date, and an incident reference number.
- A brief factual narrative of the incident including a chronology of events
- An analysis of the incident
- Conclusions and specific recommendations

Stage 6: Dissemination and Integration of Information

The final stage of the incident review process is dispersing and integrating the information, conclusions and recommendations of your Internal Review Team. There are many groups of individuals who could benefit from your work, both internal and external of your organization. Internally, audiences may include the leaders, students, staff, and Board of Directors of your organization. One of team's first presentations should be to your organization's Risk Management Team. Provide them with your Incident Review Report and a verbal review of the process and your findings. Clarify and answer any questions for the Risk Management Team members, remembering to utilize their insight and expertise in this first review. Their questions may help clarify your findings.

Building our organization's institutional risk management knowledge is a real challenge in our industry. In an industry with high staff turnover, it is a continual challenge to pass-on the wisdom that is gained from incident reviews. And [1] A synopsis of the ECI strategy may be found in Milne & Bull (2000)

although your team's recommendations will be integrated into your organization by adjusting policies/procedures, rewriting handbooks and manuals, and incorporating information into staff training curriculums, the organizational knowledge regarding the specifics of incidents are often lost with time. The creation of annual risk management reports (Schimelpfenig, 1993, May; Leemon & Schimelpfenig, 1996, March; Leemon, 1999, May), whether published internally or externally, can help build institutional risk management knowledge. These reports can be used to train new staff in your organization's risk management history.

One of the decisions that your organization will also need to make is whether or not to share incident information with external audiences. Gregg (2000) provides an overview of the issues surrounding the external dissemination of incident review information and there are several publications that examine incident data and incident summaries (Liddle & Storck, 1995; Leemon, Schimelpfenig, Gray, Tarter, & Williamson, 1998). But as noted by Leemon (2000), it is rare that

organizations share in-depth knowledge from conducting either internal or external incident reviews. The pedagogy of risk management and the advancement the procedures for conducting wilderness incident investigations hinge on our industry's ability to strategically develop and share high quality case studies.

Summary

Unfortunately, accidents can and do happen in the outdoor recreation and education industry. As professional risk managers, it is essential that we continue to utilize multiple approaches to gather, analyze, and incorporate risk management information back into our programs. Along with statistical analysis and a thorough understanding of your organization's incident data, conducting internal incident reviews and examining incident case studies are critical steps in enhancing your organizations risk management program. By utilizing the incident review process presented in this paper, your organization will be able to systematically approach collecting high quality information. In the end, case study analysis will ultimately increase the breadth of our industry's risk management knowledge, help to reduce the occurrence of specific incidents, and serve to increase the overall quality of our programs.

References

Fischer, R. P., & Geiselman, R. E. (1992*). Memory-enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL: Charles Thomas.

Gregg, C. R. (2000). The problem with no comment. In D. Ajango (Ed.), *Lessons Learned: A guide to accident prevention and crisis response* (pp. 135-137). Anchorage AK: University of Alaska Anchorage.

Haddock, C. (1999). High potential incidents – Determining their significance: Tools for our trade and a tale or two. In J. Gookin (Ed.), *Proceedings of the 1999 Wilderness Risk Managers Conference* (pp. 33-46). Lander, WY: The National Outdoor Leadership School.

Hale, A. (1983). Safety management for outdoor program leaders. Unpublished manuscript.

Johnson, W. G. (1980). *MORT safety assurance systems*. Chicago, IL: National Safety Council.

Leemon, D. (Ed.). (1999, May). Special edition highlighting risk management [special issue]. *NOLS Newsletter*.

Leemon, D. (2000). In the aftermath of a critical incident. *The Outdoor Network Newsletter, 10,* 8-9, 28-29.

Leemon, D., and Erickson, S. (2000). How accidents happen. In Ajango, D. (Ed.), *Lessons Learned: A guide to accident prevention and crisis response* (pp. 5-32). Anchorage AK: University of Alaska Anchorage.

Leemon, D., & Schimelpfenig, T. (Eds.). (1996, March). Special edition highlighting risk management [special issue]. *NOLS Newsletter*.

Leemon, D., Schimelpfenig, T., Gray, S., Tarter, S., and Williamson, J. E. (1998). *Adventure Program Risk Management Report: 1998 Edition*. Boulder, CO: The Association for Experiential Education.

Liddle, J. & Storck, S. (1995). *Adventure Program Risk Management Report: 1995 Edition*. Boulder, CO: The Association for Experiential Education.

Meyer, D., & Williamson, J. E. (1998). Potential causes of accidents in outdoor pursuits. In J. Gookin (Ed.), *Proceedings of the 1998 Wilderness Risk Managers Conference* (p. 53). Lander, WY: The National Outdoor Leadership School.

Milne, R., and Bull, R. (2000). *Investigative Interviewing: Psychology and Practice*. West Sussex, England: John Wiley and Sons, Ltd.

Satz, J. A. (1999). *SCA Duty Officer Handbook*: *Standards and protocols for SCA staff managing crisis in the field*. Charlestown, NH: The Student Conservation Association, Inc.

Satz, J. A. (1999). Emergency response systems for outdoor programming. In J. Gookin (Ed.), *Proceedings of the 1999 Wilderness Risk Managers Conference* (pp. 59-62). Lander, WY: The National Outdoor Leadership School.

Schimelpfenig, T. (Ed.). (1993, May). Special edition highlighting risk management [special issue]. *NOLS Newsletter*.

Williamson, J. (2000). Serious incident (accident) review process. In D. Derbish (Ed.), *Proceedings of the 2000 Wilderness Risk Managers Conference* (pp. 81-82). Lander, WY: The National Outdoor Leadership School.

Biographical Sketches:

Kurt A. Merrill

Kurt is the National Director of Risk Management and the National Director of Conservation Crews at the Student Conservation Association, Inc. (SCA) in Charlestown, NH. He has been an outdoor educator and administrator for over fourteen years and holds a B.S. in Recreation and Parks Management and a M.S. in Leisure Studies from The Pennsylvania State University. Kurt currently serves as the chairman for the National Wilderness Risk Managers Committee and may be reached at kmerrill@thesca.org.

Kris Wright

Kris is the Operations Director of SCA's Conservation Crew Program and is a member of SCA's Risk Management Team. She has been involved in leadership, outdoor adventure, and education work for over thirteen years and holds a B.A. from the University of Puget Sound. Kris served as a Peace Corps Volunteer in Turkmenistan, CIS, is currently a trained NOVA Community Crisis Responder, and is a Re-Evaluation Counselor in Seattle, WA. Kris may be reached at kwright@thesca.org.

Case Study: An Outbreak of Valley Fever

Kris Wright
Operations Director
Student Conservation Association

Sarna Lapine
Risk Management Program Assistant
Student Conservation Association

Kurt A. Merrill
National Director of Conservation Crews and Risk Management
Student Conservation Association

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Abstract

In July of 2001, a crew of six Student Conservation Association (SCA) students, along with two SCA crew leaders, serving in Dinosaur National Monument (Northern Utah) came down with unexplained flu-like symptoms. These symptoms progressed and within 36 hours, seven of the eight were admitted to the regional medical center for what eventually would be diagnosed as Coccidioidomycosis, more commonly known as Valley Fever. This incident was incredibly intense and stressful for the crewmembers, the members' parents, and SCA staff. Our hope in providing this article to the industry at-large is to increase recognition of the seriousness of Valley Fever and acknowledge its existence outside of its previously defined boundaries. Our other intent is to highlight how SCA's Emergency Response System functioned during this incident. SCA takes risk management seriously and believes that sharing information is the best way to prevent incidents from recurring within the outdoor industry.

Overview of SCA's Emergency Response System

An emergency response system can help an organization respond effectively and efficiently to a critical incident. SCA employs a clearly defined Emergency Response System (ERS) and trains its staff annually in how to utilize the system effectively. In the event of an incident, field leaders are instructed to activate the ERS by calling an 800 number, which is then connected by pager to an on-call staff member (i.e., duty officer). Duty officers rely on the training they receive and clearly defined protocols for how to respond to an incident. One of the protocols defines when to contact other levels of SCA management, from program staff to the CEO and Board of Directors, based on incident severity. Incident severity is categorized into four tiers or "thresholds", Threshold 1 being a minor incident not requiring further communication, to Threshold 4

necessitating the involvement of SCA's senior level management. Throughout the incident previewed in this case study, SCA crew leaders and staff consistently utilized SCA's ERS to manage communication.

Onset of the Illness

On June 19, 2001, a Student Conservation Association crew began their work project at Dinosaur National Monument, 30 minutes east of Vernal, Utah on Highway 40. The first stage of the crew's project was to help archeologists sift through dirt at the worksite to remove archeological objects. The soil disruption caused a great deal of dust to circulate in the air. The crew wore no protective breathing device their first day of sifting, but returned the second day with handkerchiefs to wear over their mouths and noses to mitigate what they perceived to be simple dust inhalation. They exhibited no symptoms on June 19th or 20th, the days they performed the soil sifting.

By Friday, June 29th, all members of the crew were unusually fatigued and noticed shortness of breath. A few members complained of nausea, hives, and chest tightness. Confronted with these symptoms and in light of environmental conditions (100+ degree weather), SCA's crew leaders thought the crew might be suffering from heat exhaustion or that a few crewmembers' allergies might be agitated. The crew leaders treated the crew for heat exhaustion, specific crewmembers for allergies, and monitored the situation for any changes.

Sunday July 1, 2001

By morning, several of the crewmembers' symptoms had increased in severity. SCA Crew Leader No. One activated the Emergency Response System (ERS) by contacting the on-call duty officer, Kris Wright, SCA's Western Crew Operations Director. The Crew Leader reported that she was taking two students into the Ashley Valley Medical Center. At this time, the incident was defined as a Threshold 1 incident, requiring SCA's Western Operations Director to keep detailed paperwork, manage internal communication, and provide logistical and emotional support. The Crew Leader contacted the Western Crew Operations Director again when the doctor had diagnosed one student with heat exhaustion and pneumonia, and the other student with heat exhaustion and muscle spasms in her chest. The Western Crew Operations Director provided the Crew Leader with moral and organizational support, discussing options including relocating the crew for the night to an air-conditioned hotel. The incident remained at Threshold 1 at this time.

When Crew Leader No. One and the two ill students returned to their base camp they found Crew Leader No. Two and another student exhibiting similar symptoms. The entire crew then relocated to a hotel in Vernal while Crew Leader No. Two and the ill student went to the hospital. During the second round of visits a pattern seemed to emerge. In the past few days the National Park Service's lead archeologist, who had been working with the crew, was admitted to the hospital and his assistant, an SCA intern, had visited the emergency room as well. All ten people exhibited similar symptoms. The hospital thought the cases might be linked through exposure to an unknown environmental agent present at the work site. Due to the nature of the symptoms, they could not rule out Hanta Virus, Coccidioidomycosis, Bubonic Plague, or Tularemia. The hospital began to collect blood samples and chest x-rays for all SCA crewmembers and park personnel that night.

Due to the growing gravity of the situation, SCA Crew Leader No. One was very upset when she contacted SCA's Western Operations Director that evening. Relying on her training and ERS protocols, the Western Operations Director gave emotional support to the crew leader and explained how they would proceed. She gave the crew leader instructions to call her back in ten minutes, giving SCA's Western Crew Operations Director time to activate the ERS and upgrade the incident to a Threshold 3.

SCA's Western Crew Operations Director notified Kurt Merrill, SCA's National Risk Management Director, and Jay Satz, SCA's Vice President of Field Operations, and apprised them of the situation. When they talked ten minutes later, the Western Crew Operations Director explained to the Crew Leader that she [Kris] would remain the primary contact for the crew throughout the night and would keep SCA's National Risk Management Director and Vice President of Field Operations updated as the incident unfolded. The crewmembers called their parents from the hospital and Crew Leaders spoke with most of them at that time.

Monday July 2, 2001

After initial testing at the hospital, all of the crewmembers were diagnosed with pneumonia. Crew Leader No. One called SCA's Western Crew Operations Director at 2 AM to report that the four crew members with fevers were being admitted to the hospital and the other four would go back the hotel for the night and return to the hospital at noon the next day. The hospital called the students' parents in the early hours of the morning to update them on the situation.

In the morning, SCA's National Risk Management Director and Vice President of Field Operations upgraded the incident to Threshold 4, and notified SCA's CEO, Dale Penny, of the situation at-hand. SCA's National Risk Management Director contacted Dr. William Forgey, SCA's medical advisor and Chair of SCA's Board Committee on Risk Management, to elicit his help in assessing the situation. After speaking with the attending physician, Dr. Forgey concurred that the incident was indeed serious and confirmed that the situation was being appropriately managed by the attending medical facility. The National Risk Management Director then contacted the students' parents to discuss the circumstances and provide an overview of the resources that had been mobilized to help manage the situation. One student was from Poland, which made communication with that parent more complicated due to the time difference, long distance phone challenges, and the need for an interpreter.

In Vernal, UT, the medical center involved the TriCounty Health Department and the Utah Department of Health, which subsequently elicited the support of the Center for Disease Control (CDC). Pending an investigation, the National Park Service closed the work site to all visitors and staff, and the TriCounty Health Department alerted the public. The CDC, TriCounty Health Department, and Utah Department of Health began to investigate the risk factors, cause, and extent of the outbreak. The investigators were able to rule out Hanta Virus almost immediately; blood samples were sent to Salt Lake City to try and rule out Bubonic Plague and Tularemia.

Bubonic Plague and Tularemia are highly contagious and transmitted by air, so the hospital took steps to contain potential infection. The admitted crewmembers were secluded and at noon, medical staff met the remainder of the crew outside and escorted them to a secluded room. The crewmembers were asked to wait there for further tests and were required to wear protective face masks if leaving the room. In the meantime, the crew was treated with aggressive antibiotics and antifungals to combat their multitude of symptoms that included difficulty breathing, shortness of breath, cough, headache, skin rash, fever, fatigue, and nausea/vomiting. By mid-day, three additional crewmembers, including Crew Leader No. One, exhibited fevers and were admitted to

the hospital. At this point, seven of the eight members of the crew (including both crew leaders) were admitted to the hospital.

Earlier that morning it was determined that on site support was necessary, so by the afternoon SCA's Western Crew Operations Director was on a plane to Utah. SCA's National Risk Management Director remained in the office to manage communication with the parents, the hospital, Dr. Forgey, and key SCA staff. Many parents, due to the nature of the symptoms and a lack of a definitive diagnosis, also began to make arrangements to travel to Vernal. By mid-afternoon it was clear that another staff member would be needed at the scene and SCA's Vice President of Field Operations made arrangements to fly early the next morning.

Tuesday July 3, 2001

When SCA's Western Crew Operations Director arrived in Vernal her primary concern was to connect with the students, the parents already present at the hospital, and the crew leaders. She maintained phone communication with the National Risk Management Director, who served as the conduit of information for the parents en route to Vernal as well as those parents who were not traveling to Utah. The Western Crew Operations Director's role was also to act as an on-site contact for any media arriving on the scene.

While the SCA's Western Crew Operations Director is a trained outdoor professional and risk manager, she had limited media-management training or experience. Via conference call, SCA's Director of Communications and National Risk Management Director provided a crash course on media relations and helped the Western Crew Operations Director prepare for the arrival of media personnel from Salt Lake City. Together they outlined a communication plan and developed answers to anticipated questions. The Western Crew Operations Director then sought out a parent who was willing to speak on behalf of the parents. The hospital's Public Relations/Risk Manager set up a welcoming yet secluded media site where interviews could be conducted away from the patients. The hospital's Public Relations/Risk Manager, a parent spokesperson, her son (the lone SCA crewmember not admitted), and SCA's Western Operations Director gave two television and one radio interview.

Following the interviews, the hospital discharged the students to their parents and SCA, and everyone returned to the hotel. SCA's Vice President of Field Operations arrived that evening and joined SCA's Western Crew Operations Director, the sick crewmembers, and numerous parents for three days of recovery at the hotel. During this time SCA's Vice President of Field Operations and Western Crew Operations Director stepped in to provide leadership for the recovering crew leaders and students as they rested, ate, took their medications, and prepared to travel home.

SCA's Vice President of Field Operations and Western Crew Operations Director also met with local Park Service officials and visiting health professionals during this time. They had numerous meetings with Park staff to stay abreast of current information and coordinate the program's closure. On Thursday July 5th, they participated in a debrief meeting co-facilitated by the CDC and Utah Department of Health personnel. In this meeting the CDC and Ashley Valley Medical Center committed to provide information and documentation for the crewmembers' families and personal physicians. SCA agreed to assume the role of parent/student advocate and information conduit moving forward through the next phase of the investigation. On Friday, July 6th, SCA's Vice President of Field Operations and Western Crew Operations Director conducted an information debrief with the crew leaders. Saturday, July 7th, the students left for home and the on-site management of the incident was closed.

The Case Study

In the preliminary report on July 5th, the CDC identified Coccidioidomycosis as the most likely cause of illness, and on November 16th, the CDC published its final report supporting its preliminary diagnosis.

Up until this series of illnesses, Coccidioidomycosis was not identified as endemic to Northern Utah, found no closer than 200 miles south of Dinosaur National Monument. As Doctors Kirkland and Fierer explain in *Coccidioidomycosis: A Reemerging Infectious Disease* (see references at the end of this article), Coccidioidomycosis is caused by *Coccidioidesimmitis (C. immitis)*, a dimorphic fungus that grows as a mold primarily in desert soil. The fungus is present in high numbers in California's San Joaquin Valley, southern Arizona, southern New Mexico, west Texas, and the desert areas of Northern Mexico. It is also found scattered in coastal southern California, southern Nevada, and [southern] Utah. *C. immitis* infects humans and animals almost exclusively via the respiratory system.

Kirkland and Fierer explain that in symptomatic patients, the illness ranges from a flu-like illness to pneumonia. Symptoms may appear as blood-tinged sputum, loss of appetite, weight loss, wheezing, excessive sweating, altered mental state, light sensitivity, and edema in the legs, joints, and feet (for additional symptoms see OCnow.com). Kirkland and Fierer also note that the number of reported cases is proportional to the different seasons, being highest in late summer and early fall when the soil is dry and dust levels are high. Exposure to dust is a critical risk factor, and therefore reducing dust exposure is a primary step in reducing the risk of illness, according to Kirkland and Fierer.

The CDC determined that the outbreak at Dinosaur National Monument was linked to the workers' exposure to large amounts of contaminated dust while sifting dirt (see reference at the end of this article for more information on CDC's findings). The work crew should not have been sifting soil without proper respiratory protection.

Conclusions

There were many factors that played a part in successfully managing this complex incident. The crew leaders' medical training and leadership skill prompted them to respond quickly and appropriately to the situation. The crew was located in the front country and close to vehicles, phones, and medical assistance. The crew leaders and staff were adequately trained and successful in utilizing SCA's ERS. The technology reliably connected the crew leaders to the duty officer. The ERS protocols and thresholds were clear and prompted correct action even in the most stressful stages of the incident. SCA knew its staff members' strengths and mobilized appropriate members to compose the on-site support team.

Externally, SCA was allied with competent and helpful partners. The Ashley Valley Medical Center professionals were knowledgeable, compassionate and treated SCA's members with a high standard of care. The CDC, TriCounty Health Department, and Utah Department of Health were swift and effective in their investigation. Dinosaur National Monument's Park Service staff continued to demonstrate their support of the crewmembers and their longstanding partnership with SCA. The TriCounty Health Department was helpful in proactively managing the media. And the town of Vernal welcomed SCA participants and parents as they weathered the illness in its community.

It is important that the outdoor community shares information about environmental agents like *C. immitis* to help prevent a similar situation in the future. It is easy to see how seemingly innocuous "flu-like" symptoms can rapidly progress into a serious illness, and how an incident could increase in complexity if moved further into the backcountry. When incidents like this occur, training and a solid emergency response system can provide the foundation from which your staff can respond effectively, appropriately, and consistently to a critical incident.

References

Satz, J. A. (1999). *SCA Duty Officer Handbook: Standards and protocols for SCA staff managing crisis in the field*. Charlestown, NH: The Student Conservation Association, Inc.

Center for Disease Control and Prevention (CDC) (2001, November). Coccidioidomycosis in Workers at an Archologic Site - Dinosaur National Monument, Utah, June - July 2001. *Morbidity and Mortality Weekly Report, 50* (45):10005-8. Retrieved November 28, 2001, from www.cdc.gov/mmwr/preview/mmwrhtml/mm5045a1.htm

Kirkland T., & Fierer J. (1996). *Coccidioidomycosis: A Reemerging Infectious Disease. Emerging Infectious Diseases, 3*, (2), July-September 1996. Retrieved November 28, 2001, from www.cdc.gov/ncidod/EID/vol2no3/kirkland.htm

OCnow.com (n.d.). *Illustrated Health Encyclopedia: Coccidioidomycosis*. Retrieved November 28, 2001, from www.ocnow.com/shared/health/adam/ency/article/001322sym.html

Biographical Sketches:

Kris Wright is the Operations Director of SCA's Conservation Crew Program, and is a member of SCA's Risk Management Team. She has been involved in leadership, outdoor adventure, and education work for over 13 years and holds a B.A. from the University of Puget Sound. Kris served as a Peace Corps Volunteer in Turkmenistan, CIS, is currently a trained NOVA Community Crisis Responder, and is a Re-Evaluation Counselor in Seattle, Washington. Kris may be reached by e-mail at kwright@thesca.org.

Sarna Lapine is completing her internship as SCA's Risk Management Program Assistant in Seattle, Washington. She has been a climbing instructor and mentor to adolescent girls since 1998 and an Assistant Instructor for the Pacific Crest Outward Bound School. She holds a B.A. from the University of Washington and has worked as a teacher, research assistant, and business administrator.

Kurt Merrill is the SCA's National Director of Risk Management and the National Director of Conservation Crews. He has been an outdoor educator and administrator for over 14 years and holds a B.S. in Recreation and Parks Management and a M.S. in Leisure Studies from The Pennsylvania State University. Kurt chairs SCA's Risk Management Team, and serves as the chairman of the National Wilderness Risk Managers Committee. He may be reached by e-mail at kmerrill@thesca.org.

The Wilderness Incident Investigative Interview: Mitigating Memory Challenges Utilizing the Enhanced Cognitive Interview (ECI) Technique

By
Kris Wright
Operations Director, Conservation Crews
The Student Conservation Association, Inc.

Kurt A. Merrill
National Director of Risk Management
National Director, Conservation Crews
The Student Conservation Association, Inc.

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Abstract

Interviewing participants and witnesses is the most critical component to the Wilderness Incident Review Process (Merrill & Wright, 2001). When successful, interviews provide the highest quality and quantity of information to developing case studies. Memory retrieval is not an easy task; there are many factors that collude to hinder the process. For years the outdoor and adventure industry has approached interviews with its best thinking, based in respect for the interviewee and modeled after field facilitation and good listening practices. This intelligent yet while informal interview approach has yielded helpful results in the past. But recent research in the criminal investigation field has shown that using specific interview strategies can produce better results than questioning and good listening alone. The outdoor and adventure industry would greatly benefit from employing the ECI technique during the information gathering stage, or stage three, of the internal incident review process (Merrill & Wright, 2001).

Milne and Bull's (2000) *Investigative Interviewing: Psychology and Practice* describes several interview strategies that have been proven to produce more accurate and greater quantities of information from witnesses. The Enhanced Cognitive Interview (ECI) technique, one strategy explained in Milne and Bull, particularly compliments our industry's approach to managing human dynamics. This strategy empowers the interviewee while the investigator facilitates maximum memory retrieval. With only slight adaptation, the ECI technique can be tailored to fit the outdoor and adventure industry's particular investigative needs.

To better understand the ECI's usefulness, this paper will discuss the challenges to memory. It will then explain how to employ the ECI technique as well as discuss various questioning styles.

The writers will examine each section in relation to a case study, citing specific examples from an incident that occurred on an SCA Conservation Crew in the summer of 2000.

Propane Ignition Incident: A Case Study

A Student Conservation Association (SCA) group of two leaders and six students were camped at the White River Campground at Mount Rainier National Park for their two week trail building project. It was Tuesday evening and the SCA work crew was preparing dessert on one of two Coleman two-burner propane stoves (stove #1). The stoves, each with a five-gallon propane tank connected by an extension hose, were about five feet from each other under a dining tarp. At some point in the evening Michael and Amy, the crew leaders, instructed a participant to turn off the tank of stove #2. Later Amy approached stove #2 to clean and dismantle it, first making sure the knob on the tank would not turn any further in the off direction. Then as she started to unscrew the hose from the tank, it began to hiss and discharge propane at a rapid rate. She tried to screw the hose back on but was unsuccessful. Michael stepped in and his attempts to turn off the valve and screw the hose back on also failed. During his attempt the hose came completely off the tank began discharging at its highest rate. As noted by Michael, "It was loud, stinky, very cold, and you could see the vapor shooting out of the tank [making the air] thick and hazy." One of the participants saw this and yelled, "Get out of here," at which point everyone ran away from the dining area, including Michael and Amy.

At that moment the disguised flame still cooking dessert on stove #1 ignited the gas. The ensuing fireball engulfed Michael, burning his hand, face and singeing his hair. The ignition melted a large hole through the crotch of his fleece pants. The blast also melted the back of Amy's fleece and singed her hair. The explosion tipped the tank and caused a 20 foot flame to shoot upward, incinerating the dining tarp and starting a small duff fire. A neighboring camper used his fire extinguisher to put out the duff fire and knock the flame off the tank.

After the explosion, Michael and Amy gathered their participants in a nearby campsite. They radioed the Park Service and activated SCA's Emergency Response System. Michael was transported to a medical facility and diagnosed with first and second-degree burns to his right hand, ear, cheek, and nose. He was treated and released. Amy and the participants suffered no physical injuries requiring professional medical care.

Within 24 hours, SCA staff traveled to Mount Rainier National Park to provide support and gather initial information from the crew leaders and bystanders. During this initial interview process, it became clear to staff that even within 24 hours of the incident, witnesses were challenged to recall accurate information. The Enhanced Cognitive Interview (ECI) technique can be used to help over come these challenges.

The Challenges in Memory Encoding, Storage, and Retrieval

Researchers define three stages of memory creation: encoding, storage and retrieval (see Table 1). Stage one, the encoding, happens as an incident is occurring. The brain filters through the multitude of information presented to the witness and self-selects the important pieces. These bits of information are then encoded and stored in the brain. When drawn upon, these pieces of information can be retrieved (Milne & Bull, 2000). In essence, encoding is like taking photographs, which are then stored and retrieved to construct a memory of an event. To illustrate with our propane incident, small pieces or snapshots of what witnesses saw, smelled, tasted and

felt were encoded and subsequently stored in their brains. Then as the witness "remembers" the incident her brain attempts to retrieve these photos to recreate the event.

Challenges during Encoding

It is critical to understand that there are challenges at all three stages of memory creation. An investigator must be acutely aware of these challenges to successfully guide the interviewee's memory reclamation process. The primary challenge during the encoding stage is capturing all the pertinent information during the initial intake. As stated above, memories are encoded as photos and therefore information between shots is missed (Milne & Bull, 2000). Because each person determines which snapshots to take, each individual's encoded information can be different for same incident. This complexity is only exacerbated by the fact that some people are more sensitive to their surroundings (Aron, 1998), and therefore can perceive and encode varying levels of information. So not only does each individual take different snapshots of the same event, but they also take a different overall number of snapshots.

While capturing pertinent information is challenging in everyday memory encoding, incident specific factors also negatively influence the brain's ability to encode information. These factors include setting challenges such as lighting, the distance the witness stood from the event, and environmental or human distractions. The witness' state of mind during the event also plays a large part in what information is encoded. Traumatic incidents and the witness' stress level impact information encoding. The witness' involvement in the situation can also impact the encoding process. Leaders in the outdoor and adventure industry fall prey to this during traumatic events that occur during their watch. For example, a leader's memory encoding may be impacted by the traumatic incident that occurred, her own stress, and her feelings of guilt or perception of responsibility for the incident. All of these factors negatively impact one's ability to encode information at the time of the incident.

Challenges during Storage

Sometimes witnesses have difficulty finding encoded information. Information is stored in the brain not unlike how files are stored on a computer hard-drive. If memories are stored in folders, you must know the correct file folder to retrieve them. Occasionally when a person searches her brain for an encoded memory, the brain has stored the snapshot in a different location (Milne & Bull, 2000). A classic example of this phenomenon is when you can't remember someone's name and it feels like it's on the tip of your tongue. Well-asked questions can help witnesses find the correct file where memories are stored, as explained in further detail below.

Challenges during Retrieval: The Interviewee

The problems surrounding memory retrieval are two-fold because both the interviewee and the investigator are challenged in the retrieval process. The interviewee's memory recall can be stunted by various distractions, including the usage of a process called scripting, as well as other interfering emotional factors.

All humans have scripted memories; scripts tell us how things are supposed to happen and thereby allow us to accomplish basic thought processes more quickly. For example, all of us have a script that tells us how to eat using a fork; we do not think about how to do this every time we take a bite. Most Americans, however, do not have a script for how to use chopsticks but

rather have to actively recall memories about how to hold, maneuver, and eat with them. Scripts are useful in that they enable us to function well in the world around us. But scripts can also be disruptive to the memory reclamation process. Because the brain encodes memories like a camera and not a camcorder, there are many gaps in information when a person recalls a memory. To make the event run more like a movie than a photo album, our brain uses scripts to fill in gaps in encoded memory.

An SCA investigator encountered the following script while interviewing a bystander about the propane incident. The bystander stated that "Amy tried to turn the stove off . . . and then Michael stepped in and tried to turn off the stove." He made a gesture that simulated turning the stove knob off. Realizing that the bystander's gesture was different from what other witnesses described (the turning of a stove knob versus turning a tank valve), the investigator halted the interview. After placing the witness back in time and asking him to again report the incident smells, taste, etc, it was discovered that the witness was over a quarter mile away at the time of the incident. Instead of remembering, he was recounting third-hand information and playing a script of what he thought Amy would look like turning the stove off, actually mimicking the accompanying hand motion.

Emotions can also be barriers to retrieving memories by interrupting an interviewee's ability to think clearly and therefore recall memories (Jackins, 1982). A Critical Incident Stress Debriefing (CISD) can help relieve a witness of her feelings, which would in turn allow for more memory recall. However, a CISD should not be done at the same time as the informational interview this paper is addressing, but rather as part of the initial assessment and support of a participant/witness. Once this debriefing occurs, she will be able to think more clearly and be able to access and retrieve her stored memories.

Challenges during Retrieval: The Investigator

Investigators are challenged by similar factors. The investigator combats any assumptions, hypotheses, or stereotypes she brings into the interview. She is also challenged to leave behind her own scripts and emotions about the incident. These factors can influence the quality and quantity of information the interviewee is able to retrieve by influencing the investigator's behavior. It is important for investigators to be aware of these issues and try to mitigate their influences before stepping into the interview.

Investigators also need to carefully manage the information they are collecting. They encode, store and retrieve information both during and after the interview. Specific research has shown that even if an interview is documented directly after the interview, only two-thirds of the information disseminated by the witness will be present in the written report (Kohnken, Thurer, & Zoberbier, 1994). Interview professionals in other fields have found that tape recording interviews greatly increases the accuracy of documentation.

It must also be recognized that an investigator holds tremendous power over the interview itself. Her decisions about the setting, tone, questioning style, and interview strategy will help determine the overall success of the interview. Research has shown that there are certain questioning styles which aid in memory retrieval, and others that not only hinder memory retrieval, but aid in scripting and false information gathering (Milne & Bull, 2000). These poor styles include leading and misleading questions, forced-choice questions, and multiple questions.

Inappropriate Questioning Styles

Leading and misleading questions can confuse your witness and produce incorrect information. A question has been defined as leading/misleading if information in the question has not been mentioned previously by the witness; it assumes or suggests an answer. For example, "Who turned the stove off?" would be a leading/misleading question if the witness up to this point in the interview had not mentioned turning the stove off. It suggests that the stove was turned off. Asking a misleading question encourages the interviewee to give false information. In a truly investigative situation, an investigator doesn't know if the question she is asking is leading or misleading, so it is best to avoid mentioning any new information and steer clear of this questioning style completely.

Forced choice questions give the interviewee choices instead of an open-ended question. "Which crew leader turned off the stove" is a forced question, the available answers being "Amy" or "Michael". This style of questioning does not allow for a third option, such as seeing a student turn off the tank, which may be the correct option. Leading/misleading questioning and forced choice questioning styles tend to be used when the investigator has a presupposed hypothesis about what occurred; the investigator employs these questions to either prove or disprove her hypothesis. As an investigator, be sure to examine your assumptions before entering an interview and proceed with an open mind.

Asking multiple questions in rapid succession is also an inappropriate questioning technique. An example of this would be "Did she try to turn the knob clockwise or counter clockwise? Was it frozen? Was the valve turned off? Did she turn the valve clockwise or counter clockwise?" Asking a series of questions may confuse or hurry a witness. It confuses her around which question should be answered first and in what order. The witness may struggle to retrieve the encoded and stored information and thus not have enough time to access enough of the stored information. Using this method, one or more questions will most likely be lost and the information incomplete.

The Enhanced Cognitive Interview Strategy

The purpose of conducting an information interview after an incident is to retrieve accurate, complete information. An ideal interview strategy would contradict the challenges to complete retrieval. It would help dissipate memory-blocking emotions and aid in discerning encoded information from scripts. It would assist the brain to search out information stored and not readily accessible. In short, the perfect interview strategy would completely seek out all stored information, thereby retrieving the maximum information possible. This interaction is displayed in Table 1 below, one oval representing the stored information and the other the interview strategy. The shaded area in which they successfully overlap represents the retrieved information. The purpose of any interview strategy is to increase this overlap, thereby retrieving the maximum amount of information.

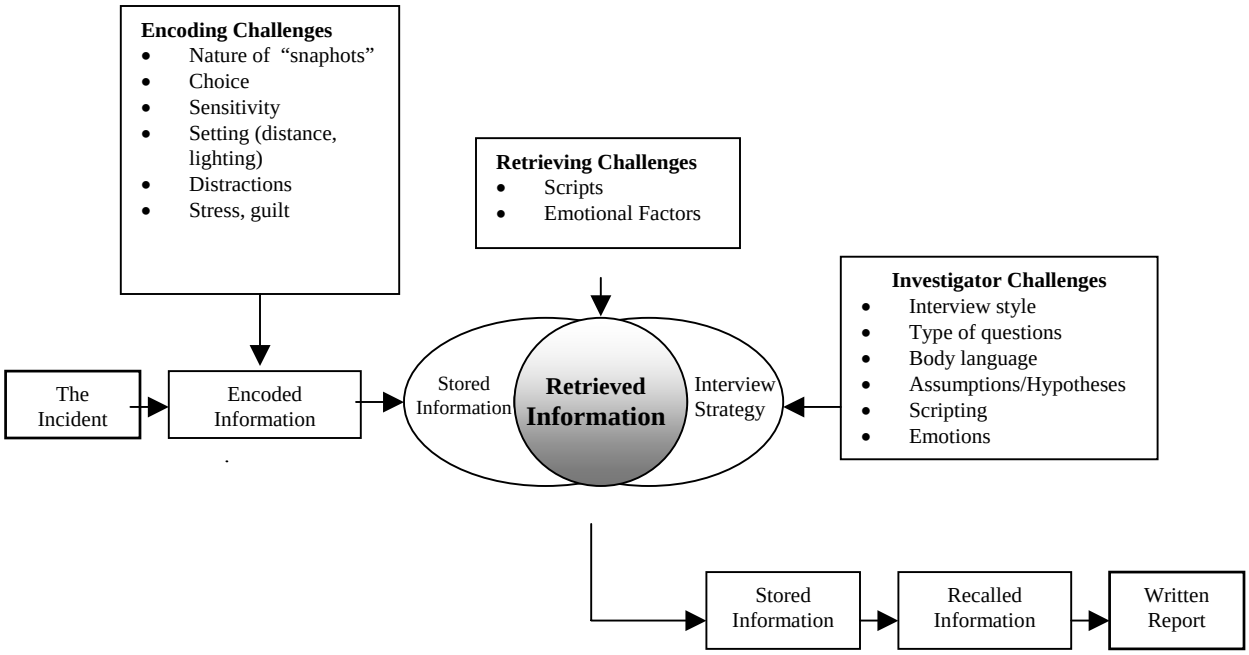


Table 1: Incident Memory and Interview Process (adapted from Milne & Bull, 2000)

The Enhanced Cognitive Interview (ECI), developed by cognitive psychologists Fischer and Geiselman (1992), has proven one of the most effective techniques in retrieving maximum information, as outlined in Milne and Bull's *Investigative Interviewing: Psychology and Practice* (2000). This technique is best applicable with interviewees who are acting in good faith to recall memories. An interviewee-driven process, the ECI method compliments our industry's humanistic approach and leadership practices. In fact, because of the similarity between our facilitation ethics and ECI values, many of our industry's investigators already employ key ECI strategies. However, the complete ECI increases the depth and exploration of an interview, increasing our opportunity to further unravel incidents and develop case studies. There are seven phases to an ECI; below each phase is explained in depth, describing techniques needed to perform each phase successfully.

Phase one: Greet and personalize the interview

To get the best results from an interview, an interviewee must feel at ease, confident, and secure. Being interviewed is a nerve-wracking exercise for even the most composed individual. When a

person is anxious and nervous, they may show their emotional discomfort by laughing, yawning, sweating, shaking, or crying (Jackins, 2000). Feelings will hinder the information retrieval process so allow them to work through their feelings, releasing these physical manifestations, during the greeting phase. Help the interviewee feel more comfortable by connecting with her and establishing a good rapport. Be concerned about her comfort and be sure the interview space is quiet and without distractions. Break the ice by asking some light initial questions, such discussing the past weekend or perhaps a news event. Show that you will be a delighted listener throughout the interview, listening with interest.

Table 2: Structure of the enhanced cognitive interview (Milne & Bull, 2000, p. 40)

Structure of the Enhanced Cognitive Interview

Phase 1 **Greet and personalize the interview. Establish rapport**

Phase 2 **Explain the aims of the interview**

- Report everything
- Transfer control
- No fabrication or guessing

Phase 3 **Initiate a free report**

- Context reinstatement
- Open-ended questions
- Allow for pauses
- Don't interrupt
- Non-verbal behavior

Phase 4 **Questioning**

- Questions from free report
- Concentrate
- Report everything
- No fabrication or guessing
- OK to say "Don't know"
- OK to say "Don't understand"
- Activate and probe an image
- Open and closed questions

Phase 5 **Varied and extensive retrieval**

- Change the temporal order
- Change perspectives
- Focus on all senses

Phase 6 **Summary**

Phase 7 **Closure**

Phase two: Explain the Aims of the Interview

It is important that the interviewee knows what is expected of her during the interview. This will help her to feel more comfortable and confident, which will aid in the information retrieval process. She probably expects that you, the investigator, will control the interview. In an ECI though, the investigator plays the role of facilitator and the interviewee controls the process. As outdoor professionals we are familiar with this mode of communication, but it is important to remind the interviewee of this before the interview starts.

Be sure to frame what you want from the interviewee during the interview. First, explain that memory retrieval takes focused energy and intense concentration. Second, explain that it is not easy task. Third, let her know that you want to know every detail regardless how she views its importance. Studies have shown that unless the investigator explicitly states this, a witness will edit the information according to what she thinks the investigator views as important, omitting potentially useful details (Fisher & Chandler, 1991). Fourth, encourage her to share all the information she remembers, even if she is not confident in its accuracy. Studies have also shown that interviewees tend to edit out the information that they are not confident in (Noon & Hollin, 1987). In addition, research indicates that there is no corollary relationship between the interviewee's confidence in the information and its accuracy (Kebbell, Wagstaff, & Covey, 1996; Perfect, Watson, & Wagstaff, 1993). Be explicit that you want every conceivable detail regardless of the interviewee's confidence level or how she weighs its importance. As mentioned above, tape recording your interview will increase the accuracy of the documented information so explain its use and ask the interviewee's permission to use it during the interview.

Phase Three: Initiate Free Recall of Event

During phase three the interviewee is encouraged to recall the event at her own pace, in her own words. The phase begins with the investigator initiating a context reinstatement, helping the interviewee go back to the place or context where the incident occurred. Some believe that returning to the context in which the information was encoded helps the recall process (Milne & Bull, 2000). During a context reinstatement the investigator should ask a series of open-ended questions. Open-ended questioning is arguably the most fruitful questioning style, empowering the interviewee by allowing her an unrestricted response and giving her control of the flow of information. An example of an open-ended question is "Tell me what happened" or "What did you see/smell/hear?"

To initiate a context reinstatement, the investigator would attempt to take the interviewee back to the scene by slowly asking open-ended questions meant to stimulate her stored memories. A context reinstatement for the propane incident case study may be, "Take yourself back to the incident. Get a picture in your mind. Where were you? What did you see? How did you feel? What did you smell? What did you hear? When you're ready I want to hear the whole story, at your pace, from the beginning. I want to hear all the details, even if they seem unimportant or you're not completely sure. Take your time."

After the context reinstatement, the investigator's task is to be a delighted and active listener, modeling attentive body language and taking brief notes. Each interviewee will have her own pace of recollection and speech, and it is important to allow the recall to proceed at her speed. The investigator should not interrupt or fill in blanks or pauses, even if the investigator thinks of questions or needs clarification. This will only cause the interviewee to feel hurried and to think the investigator questions her ability or the integrity of the information. Save all questions and clarifications for phase four.

Phase Four: Questioning

After the free recall of events, the investigator may have a list of questions concerning missing or unclear information. Phase four consists of asking those questions of clarification. But as with all phases of an ECI, it is important to explain this phase to the interviewee before proceeding. Refocus the interviewee to concentrate on the task at hand. Let her know that you will be asking questions based upon the information she just told you. Again reinforce that all details matter, and let her know that it is ok to say "I don't know" to any question she doesn't know the answer to. Also encourage her to tell you if she doesn't understand the question. Encourage her to share all the information she knows, but not to speculate or guess about anything that is unclear.

As before, it is important to choose appropriate questioning techniques, including both open and closed questions. In this stage you can ask narrower open-ended questions, such as "You stated that you tried to turn the valve off. Can you tell me more about what that was like?" Closed questions, questions that have a limited range of responses, are second best to open-ended questions. They have their value, but only after open-ended questions have failed to provide you with the information you are gearing for. For example, if the interviewee neglects to give you a complete picture after asking the above open-ended question, you can follow with a closed question such as "Did you notice which direction you turned the valve?" The danger of closed questions is the potential for the interviewee to perceive an underlying message. She may think that you only want information pertaining to that one question and thereby cut off valuable insight and elaboration. Closed questioning should therefore be used judiciously.

During the questioning phase it is helpful to utilize mental imagery in conjuring a specific time or place. Employ open and closed questions to probe the incident. Similar to the free recall, you would start with an open-ended question and follow up with closed-ended questions. Again, be sure to evoke all five senses, as smell or taste might trigger recovery of more information. Avoid using leading questions. For example,

"I want you to visualize, in your mind's eye, what was happening five minutes before the propane ignited. What did you see? Smell? Feel? Where was the group in relation to you? What were they doing? When you have a good picture in your mind, tell me everything you can in as much detail as you can."

The investigator's ability to organize and ask their questions in a logical sequence also impacts the quantity and quality of information the interviewee retrieves. As an investigator, it is important to be organized and deliberate in your questioning. Ask all your questions about one subject before moving on to the next item. If the interviewee has to jump back and forth from image to image, valuable information may be lost (Milne & Bull, 2000).

Phase Five: Extensive retrieval

It is important that an interviewee is repetitively encouraged to retrieve more information. Most investigators and interviewees are tempted to stop after phase four, but the ECI technique recommends further strategies to obtain more information. The investigator must clearly explain to the interviewee, though, that the questioning continues because the techniques have been

proven to provide more information, not because the interviewee's testimony is perceived as faulty.

Two techniques proven to provide more information are Switching the Temporal Order and Changing Perspective. Using the temporal order technique, an investigator would instruct the interviewee to recall the incident backwards. This sounds confusing to most interviewees so it is important to take it one step at a time, prompting the interviewee gently with questions. Questioning may take the form of, "What is the last thing you remember? What happened before that? What happened before that?" Changing the order of events helps the interviewee find the actual memory record, delineating encoded information from script (Milne & Bull, 2000).

Changing perspective is another helpful strategy in recovering additional information. This technique encourages the interviewee to view the incident from another person's viewpoint. Be clear that she must report facts that she has witnessed herself. The purpose is not to fabricate or guess, but rather to see the event from the eyes of another. This technique has proven successful in uncovering information not located during the free recall; in essence it may help to locate encoded information stored in a different mental folder.

Phase Six and Seven: Summary and Closure

As with most processes in our industry, summary and closure are important pieces to the ECI. Before closure, the investigator should briefly summarize the information the interviewee has provided. Encourage her to add or question anything that does not sound correct. Then provide closure to the interview, reestablishing your personal connection with the interviewee. Always end the interview on a positive note, so be sure to spend the time helping her mentally relocate to present time. Also be sure to thank her for her time and effort.

Summary

For purposes of closure, readers may be wondering what conclusions were drawn upon the completion of the propane incident investigation. After thorough investigation and multiple interviews of witnesses, SCA staff were able to uncover the series of events that led up to the propane explosion. Staff determined that both stoves were in working order and at the time of the incident a burner on stove one was lit. Second, staff determined that Amy's assessment of the tank valve was incorrect. When she tried to turn the valve in the 'off' direction and it didn't move, she assumed that it was closed. Actually, it was stuck in the 'on' position. The primary mistake, however, was that she began to dismantle the hose from the tank before checking if there was an open flame in the area. Because the tarp above was collecting the vented gas, the conditions were conducive for the flame from stove one to ignite the propane, causing the unfortunate explosion.

In the investigation of this incident the investigators were intrigued by the challenges our staff, crew members and witnesses faced in their memory recollection. They encountered stress-altered encoding and scripting, both of which impacted information gathering. The Enhanced Cognitive Interview (ECI) can be used to mitigate these challenges. This technique, fundamentally similar to our industry's approach to human dynamics, provides a construct though which our industry's professionals can more accurately and completely reconstruct incidents and build our industry's collective risk management knowledge.

References

Aron, E. (1998*). The Highly Sensitive Person.* New York: Broadway Books.

Fisher, R. P., & Chandler, C. C. (1991). Interdependence between recalling interevent relations and specific events. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17,* 722-733.

Kebbell, M. R., Wagstaff, G. F, & Covey, J. A. (1996). The influence of item difficulty on the relationship between eyewitness confidence and accuracy. *British Journal of Psychology, 87,* 653-662.

Fischer, R. P., & Geiselman, R. E. (1992*). Memory-enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL: Charles Thomas.

Jackins, H. (1982). *Fundamentals of Co-Counseling Manual.* Seattle, WA: Rational Island Publishers.

Kohnken, G., Thurer, C., & Zoberbier, D. (1994). The cognitive interview: Are the investigators' memories enhanced too? *Applied Cognitive Psychology, 8,* 13-24.

Merrill, K. A., & Wright, K. (in press). Conducting internal incident reviews: A process for developing wilderness incident case studies. The proceedings of the 2001 Wilderness Risk Management Conference.

Milne, R., and Bull, R. (2000). *Investigative Interviewing: Psychology and Practice*. West Sussex, England: John Wiley and Sons, Ltd.

Noon, E., & Hollin, C. (1987). Lay knowledge of eyewitness behavior: A British survey. *Applied Cognitive Psychology, 1,* 143-153

Perfect, T. J, Watson, E. L., & Wagstaff, G. F. (1993). Accuracy of confidence ratings associated with general knowledge and eyewitness memory. *Journal of Applied Psychology, 78,* 144-147.

Biographical Sketches

Kris Wright
Kris is the Operations Director of SCA's Conservation Crew Program and is a member of SCA's Risk Management Team. She has been involved in leadership, outdoor adventure, and education work for over thirteen years and holds a B.A. from the University of Puget Sound. Kris served as a Peace Corps Volunteer in Turkmenistan, CIS, is currently a trained NOVA Community Crisis Responder, and is a Re-Evaluation Counselor in Seattle, WA. Kris may be reached at kwright@thesca.org.

Kurt A. Merrill
Kurt is the National Director of Risk Management and the National Director of Conservation Crews at the Student Conservation Association, Inc. (SCA) in Charlestown, NH. He has been an outdoor educator and administrator for over fourteen years and holds a B.S. in Recreation and Parks Management and a M.S. in Leisure Studies from The Pennsylvania State University. Kurt currently serves as the chairman for the National Wilderness Risk Managers Committee and may be reached at kmerrill@thesca.org.

WILDERNESS NAVIGATION
AND
ROUTE PLANNING

Student Guide for Learning Advanced Level Map and Compass Skills

Wayne Weidenhamer
Jabe Beal

University of Nebraska at Omaha
Outdoor Venture Center
Fall 2001

Editors Note: This presentation was given in 2001 at the 15th ICORE.

Wilderness Navigation and Route Planning

Background: Few map and compass classes go beyond teaching the student just the basics. Many advance skills must be learned over time, often through trial and error. This class was developed because of the limited opportunities to gain any training in the use of outdoor navigation beyond a basic map and compass class. Also the limited resources to assist new trip leaders in the planning process and actual use of navigation materials and techniques outside of a mentorship relationship or by trial and error.

Purpose: To build upon the skills acquired in the basic Map and Compass class or equivalent experience. This is accomplished by exposing the student to map and compass skills not taught readily anyplace else, and providing an opportunity to apply these skills outside of a classroom setting. The goal of this class is to enhance the student's ability to plan a wilderness trip and to accurately and safely navigate in a backcountry environment.

Class Objectives:

1. To expose the participant to new skills and activities that will improve their abilities to use a map and compass.
2. Give the participant the skills and understanding of the importance of good planning for a wilderness trip.
3. To provide the participant the resources required to improve upon and expand their map and compass skills.

ICORE 2001 Presentation: This presentation is built upon a successful advanced level map and compass course marketed as Wilderness Navigation and Route Planning. The material presented and some of the resources used in Wilderness Navigation and Route Planning have been modified for ICORE 2001 to facilitate the training of outdoor educators and outline the skills needed to build their own advanced level class. This hands-on presentation is formatted to provide the outdoor educators with a class outline, an understanding of the material, development of advanced skills and teaching aids to conduct the class.

Content: The topics to be covered include the use of Universal Transverse Mercator (UTM), also known as the Military Grid Reference System (MGRS); aerial and satellite map interpretation; GPS; altimeters; trip planning; advanced compass work; and how to plan and run a basic orienteering course. This presentation will expand the outdoor educators' knowledge of seldom taught and used outdoor skills and show them innovative ways to teach and create teaching aids that can be utilized in other classes.

I. Types of Maps

A. Planimetric Map
   1.Most Common type of map
      a. Road Maps
      b. Park maps

B. Relief Map or Terrain Map
   1. Looks nice
   2. Impossible to pack

C. Topographical map
   1. Shows elevation in two-dimensional format

D. Photomap
   1. Aerial photo with map data added

E. Satellite Photos
   1. More recent data than maps
   2. Can be down loaded for free

Class will focus on the use of topographical maps and aerial/ satellite photos

Helpful Addresses:

United States Geological Service.
P.O. Box 25286
Denver, CO 80225
1-888-ASK-USGS

Resources:
Hwww.topozone.comH
Hwww.gisdatadepot.comH
Hwww.terraserver.microsoft.comH
Hwww.trailsillustrated.comH
Hwww.http://mapping.usgs.govH.
Hwww.nima.mil/GandG/tm83581/toc.htmH

II. Universal Transverse Mercator (UTM)

A. What is UTM?

1. Earth broken down into grid to eliminate distortion

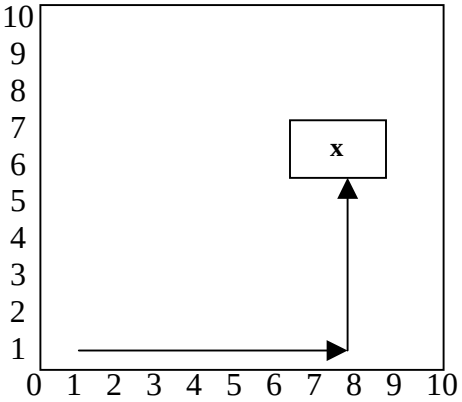
B. Why should you learn to use the UTM grid?

1. Accurate and widely used

C. Reading a UTM /MGRS grid

1. Find intersecting line in lower left corner of Grid Square
   a. Should be represented as a total of four numbers.
      - Should be written as. 12/54
      - The north/south grid line written first
      - If the line has a zero that must be included ie. 01/54
2. Inside of the desired grid square read right than up (see fig 1.)

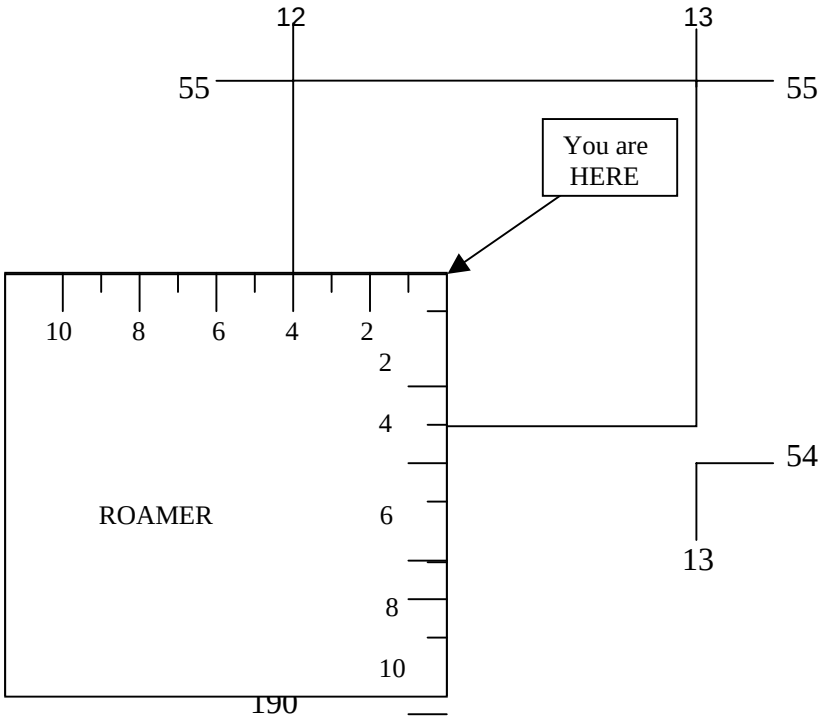
   a. Break grid square into increments of 10
   - Count over (right) until you are under desired point then count up
   - Grid in fig 1. represented as 128/546 (accurate to 100 meters.)



(fig 1.)

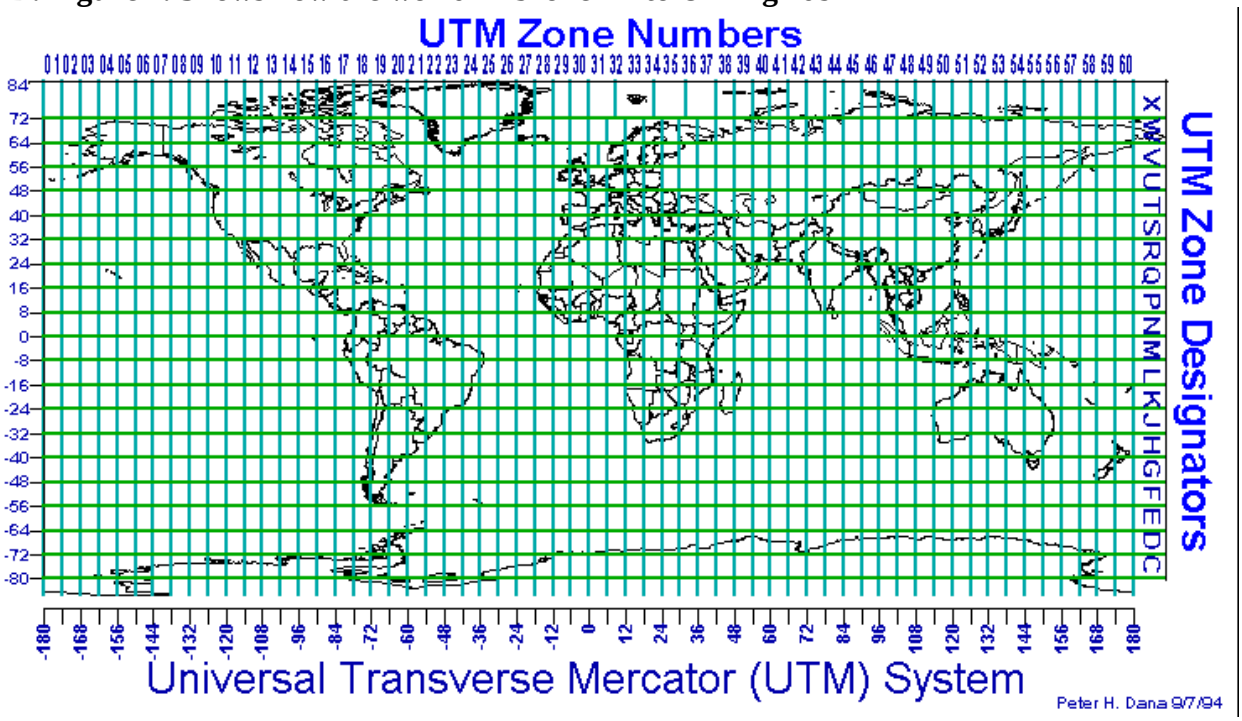
3. Create a "roamer" (fig 2)
   a. Use a 3x5 card
   - Place top right corner of card into top right corner of Grid Square
   - Mark top left corner and bottom right corner of grid on card
   - Starting with zero in the top right corner, make 10 equal marks down left.

A Roamer can be made with a 3 x 5 card.

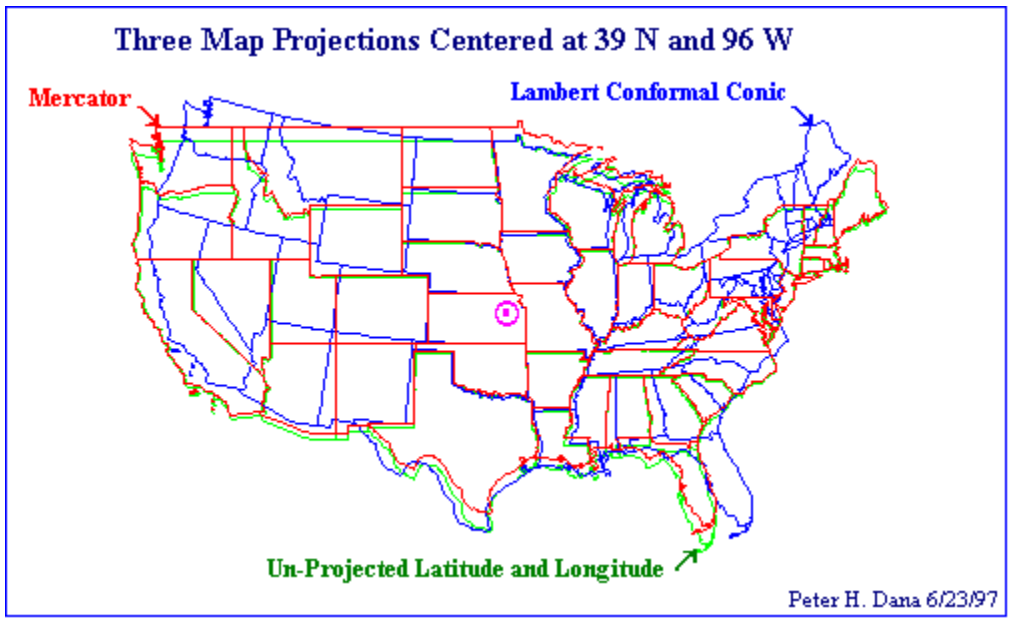


(fig. 2)

D. Figure 1. Shows how the world in broken into UTM grids



E. Figure 2. Demonstrates the distortion that UTM attempts to eliminate.



Resources:

Hhttp://www.colorado.edu/geography/gcraft/notes/gps/gps_f.htmlH
Hwww.trimble.com/gps/H
Hwww.garmin.com/H
Hhttp://tycho.usno.navy.mil/gps.htmlH
Hwww.adtdl.army.mil/cgi-bin/atdl.dll/fm/3-25.26/toc.htmH

III. Aerial / Satellite Photos

A. What Satellite and Aerial photos are used for.
   1. Information
   2. Update Maps
   3. Monitor activities and resources

B. How to read aerial/satellite photos
   1. It's a view were not accustomed to
      a. Looking from above
      b. No color
   2. Help in identifying what you are looking at
      a. Features: Use surrounding features to help you identify objects

      b. Shapes: Straight lines manmade, irregular lines natural

      c. Shadows: Smooth and even, roads and rivers, grainy rough surface

      d. Shades: Give viewer indicators of size and shape

D. Using a satellite picture
   1. Best used with a map
   2. Index satellite photo with map

E. Shortfalls with aerial/satellite photos
   1. Difficult to read
   2. Lacks marginal data

Resources:
Hwww.terraserver.microsoft.comH
HHttp://www.usgs.org/H

IV. GPS (Global Positioning Satellites)

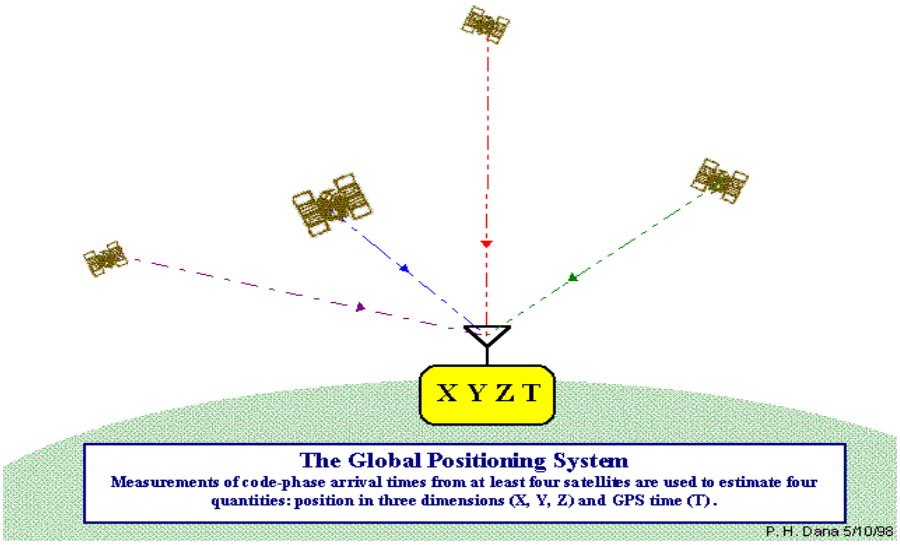
A. How they work (Two Components)

1. Receivers

2. Satellites

3. Satellites Transmits own unique signal

4. Receiver calculates location from satellite signal



B. How to use them

1. Use with a map and compass
2. Use as an aid to navigation

C. Advantage and disadvantages of the GPS

1. Advantages
   a. Accurate
   b. Easy to operate
2. Disadvantages
   a. It can fail
   b. GPS cannot always get a satellite fix

RESOURCES:
Hwww.trimble.com/gpsH
Hwww.garmin.comH

V. Compass

A. Review Compass parts
   1. The base plate
   2. The direction of travel arrow
   3. Compass housing
   4. Magnetic needle
   5. Orienting arrow and median lines

B. Primary function of the compass
   1. Orientate the map
   2. Determine direction of travel

C. Orienting a map, field expedient methods.
   1. Shadow stick
   2. The sun
   3. North-star

D. Shooting a bearing
   1. Holds
      a. Waist hold / Center hold
      b. Sighting / Compass to cheek

   2. Influences on the compass
      a. High-tension power lines 35 ft.
      b. Automobile 6 1/2 ft.
      c. Barbed wire fence or telephone lines 61/2 ft.

   3. How to follow a bearing
      a. Do not walk with compass
      b. Sight on distant point
      c. In dense terrain when accuracy vital, surveying technique
      d. Back Azimuths
      e. Dog legs

E. Declination and the difference between grid bearing and a magnetic bearing
   1. Remember these sayings
      a. East is Least (-), West is Best (+)

VI. Pace Count

A. Why a pace count
   1. Accuracy
   2. Poor visibility

B. Keeping count
   1. Record each time you complete one pace count
   2. Rock switched from one pocket to another
   3. Tie knots on a length of string

C. Influences on your pace count
   1. Pack weight will shorten stride
   2. Uphill stride will shorten downhill stride will lengthen.

VII. Measure Distance

A. Map scale

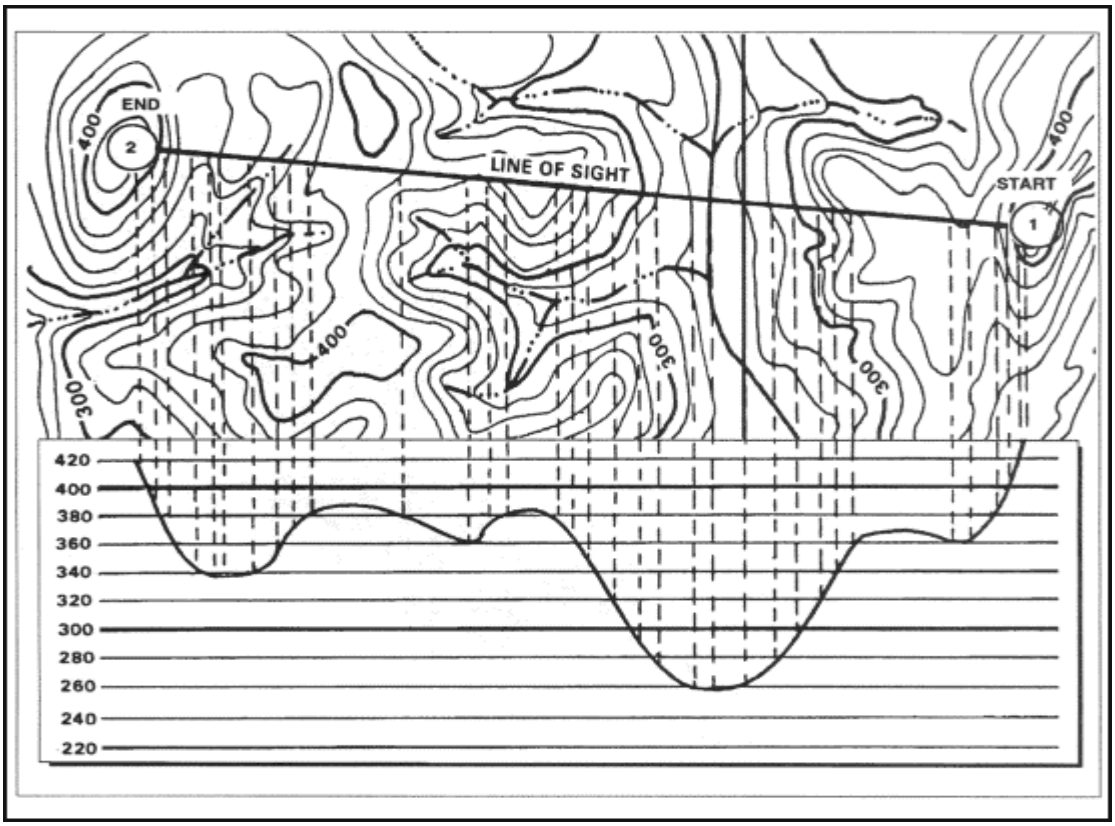
3x5 card	83% Accurate
String	88% Accurate
Electronic Measuring	79% Accurate

B. Measuring devices

VIII. Determine Slope

A. Why determine slope
   1. Better visualization
   2. Aid in trip planning

B. How to determine slope



IX. Altimeters/GPS

A. How do they work
   1. Modified barometer
   2. Satellite signals

B. How to use them in navigation
   1. Determine elevation
   2. Lack of visual references

X. Planning Your Own Trip

A. Decide on what activity you want to do.

B. Decide upon the region

C. Collect your maps and reference material

D. Plot your tentative route

1. First consult Guide Books, maps, and people with knowledge of area

2. Remember cross-country routes take more planning

3. Plot your route

4. Establish route guides

   - Baselines or Handrails

   - Catch Lines

   - Check-points and Critical points

   - Intentional Offset

   - Attack Points

5. Determine any special hazards

6. Establish alternate routes and escape routes

7. Inform other people

Resources:
Hhttp://www.wildernessmind.com/trips.htmH
Hhttp://backpacking.net/planner.htmlH

XI. During Your Trip

A. Always be aware of your surroundings (Situational Awareness)

B. Climb with your eyes first

C. Identify dangers and take actions to reduce the risk.

D. Monitor groups condition and progress.

E. Take note of checkpoints, critical points, and major features.

F. Occasionally look back on the path you just traveled.

G. Determine new routes at the earliest time

H. Take notes about trail and route conditions

I. If you become lost

J. Foul Weather Navigation

XII. After a Trip

1. Review and update notes as soon as possible

2. Update your map, guides, and any other sources.

3. Remember if somebody wants to borrow your material:

XII. Orienteering Course

A. Types of Courses
   1. Orienteering

   2. Terrain Association

   3. GPS Course

B. Location
   1. Appropriate for groups skill level
   2. Define obvious course boundary
   3. Make sure area is safe
      a. No major cliffs or fast water crossings.
      b. Identify bailout/evacuation points
      c. Plot panic bearing incase of participant getting lost
   4. Gain permission from land manager

C. Maps
   1. Appropriate format
   2. Enough maps for all participants

D. Required Materials
   1. Markers
   2. Signup sheets
   3. Master map

E. Setting up the course
   1. Plot tentative locations
   2. Walk routes and place markers
   3. Verify location

F. Managing the course
   1. Sign in teams
   2. Give safety brief
   3. Give participants the points
      a. Note card with point locations
      b. Have them plot points off master map
      c. Give them note card with different ways of locating points.

G. Safety concerns
   1. Course safety
   2. Ability to find lost participants
   3. Weather Concerns

Resources:
Hhttp://home.att.net/~ptoc/H
Hhttp://www.us.orienteering.org/H
Hhttp://www.orienteering.org/H