Wilderness Education Association

2002 National Conference Proceedings

February 7-9, 2002

Bradford Woods, IN

"Wilderness Preservation Through Education"

Wilderness Education Association

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A Brief History

The Wilderness Education Association helps people enjoy and protect our nation's most precious resource: our wilderness areas. The WEA has been training and certifying outdoor leaders around the world for nearly 25 years, teaching students safely and effectively lead groups in the outdoors without harming the environment.

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

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

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

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

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

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

Format for Submitting 2003 Conference Papers

A. Title page (center all information on title page)

15 spaces down from top of page:

Title of paper (title in “bold print,” font:12)

15 spaces down from “Title of paper”:

Author’s name, degree (name, degree in “bold print,” font:12)

3 spaces down from “degree”

Author’s institution

Institution address

B. Body of Paper (Maximum of 10 pages in length, excluding title page and bibliography, APA style)

Font: “Times “ or “Times Roman”
Font size: 12
Margin: (left)1.25”, (right) 1.25”, (top) 1.00”, (bottom) 1.00”

C. Bibliography (APA style)

Note: Authors may use any part or all of their papers for publication. WEA relinquishes ownership of any submitted paper after presentation at the annual conference

Effective Teaching in the Outdoors

Maurice L. Phipps
Western Carolina University

Introduction

There are many organizations teaching outdoor activities. Some use similar teaching methods and some have their own distinct pedagogy. The literature in outdoor education has focused largely on the development of instructional theory. Comparatively few researchers have investigated teaching through data-based research in the wild outdoors. The intent of this session was for the workshop participants to look at different instructional techniques being used in the outdoor education industry via posters that had been prepared in advance and hung around the room and to then use this information to dialogue about the foundations, concepts and strategies used in the WEA.

The Posters

Information on the posters was gained from instructional handbooks from the various organizations. The information was condensed as the workshop format allowed for further explanation of any unclear points. Information on research was gained from journals, dissertations, and conference proceedings. The organizations used were:

The Nantahala Outdoor Center
The American Canoe Association
The National Outdoor Leadership School
The Professional Ski Instructors of America
The Colorado Outward Bound School

The organization posters included the following information (See Tables 1-5):

Nantahala Outdoor Center

(Nantahala Outdoor Center Instruction Guide, 1999)

Attributes of a good teacher

Be genuine (be yourself)
Have concern for students and progress toward goals
Build trust and confidence
Realize limitations
Use “Boy Scout” virtues (honesty/integrity/ friendliness/humility/good cheer.
No sloppy appearance or foul language etc
Keep your frustrations under control and don’t belittle
Keep in touch with newest techniques in paddling and teaching
People watch you on the job and off the job so set a good example all the time.

Creating the Role

Show authority/be heard as well as listen to/trust and confidence/good organization and advance preparation/relaxed manner/deal with distractions without getting frustrated.
Ability
Highly skilled and experienced paddlers have the edge.
Knowledge of the subject - need a reservoir of information but be prepared to say “I don’t know

Conducting an effective class

Remove the pressures of learning and have a fun day though.
Advance preparation/organization/motivation/definition of terms/ description/ demonstration/ participation/ repetition/ positive reinforcement/ evaluation.

Safety

Vehicle/white water/lake

Learning Styles

Hear 10%/See 20% / Do 70%
Use 3 basic levels of knowledge
1. Do what were told but don’t know why
2. More conceptual eg., when boat turns, lean into the turn.
3. Instinctive eg., get to #3 by "doing” a lot so create suitable environments (tension v boredom)

Kayaking from the inside out

kinesthetic progression
“The supreme misfortune is when the theory outstrips performance” Leonardo Da Vinci

Don’t talk too much – use assorted techniques with feeling – using reflexes rather than a barrage of stroke techniques.

Table 1. Nantahala Outdoor Center

American Canoe Association
(From NOC's ACA Instructor Manual)
Learning Styles

Concrete Experience
"Doer"

Active Experimentation
"Feeler"

Reflective Observation
"watcher"

Abstract Conceptualization
"Thinker"

How to teach a skill

Preparation, motivation or "selling it" – create in your students a receptive attitude and desire to learn the skill
Presentation, demonstration or "show it"
Application, practice or "do it"
Adaptation, follow up or "use it"
Functional tension concepts
Fear/alertness/comfort/boredom

From: Introduction to Paddling: "Foundations" Progressions and Outlines for the Master Instructor
- Keep it simple
- Teach solutions not problems
- Use past experience and knowledge (PEAK) to develop present or future skills

Use quadrant learning theory (teach to the different quadrants) of the boat

Get to know one another/ everyone into safety/ equipment awareness /outfitting /pacing /visual aids / barriers to learning / progressions &transitions – comfort zones /strokes /maneuvers/ assessment and correction

C.A.P Model for Children
Cognitive
Affective
Psycho-motor

The Effective Instructor
Students Bill of Rights (student wants and needs)
Learning styles (see above)

Characteristics of an Effective Instructor

Knowledge / correct demos / environment conducive to learning / enthusiasm/ organization / leadership & judgement/ confidence.

Teaching Styles
Guided discovery and problem solving/ demo and explanation/ demo happy medium vs. extremes / working with technical parts / drills and practices.

Lesson Sequence
Name the skill and its purpose (sell it) / demonstration (whole, parts, whole) / student experience / review components (demo again with more attention to detail) / student practice

D J's teaching Tips
Keep it simple / the least rule / concentric circles / the absolute rule of organization / the rule of repetition / the rule of progression / specific rule / specific practice drills / the rule of exaggeration / the rule of success

Table 2. American Canoe Association

The National Outdoor Leadership School

(From The Wilderness Educators' Notebook) Background

Experiential education – depends on first hand experience in the field.
Expectations
Fun and enjoyment – but primary focus is on learning to be " safe, competent and responsible wilderness travelers and leaders.
Challenge
Students must succeed. Calculate "enough" challenge.
Balance
Don't let your enthusiasm and educational agenda overshadow student's needs for developing habits and reflecting and emotional needs.

Fundamentals of Teaching at NOLS
Preparation. Teach what you have done wherever possible. Be up to date.
Setting Safety /physical comfort/weather/loud noises/intense sun/wind
Progression Use good progressions – what do students need to know next – don't overwhelm too early on.
Themes Use themes such as NOLS priorities eg., safety of individual/safety of environment / care of equipment in the basic stove class and the warm and dry discussion
Or combine first aid and emergency procedures in a simulated accident.
Brevity Be short and to the point. Teach what they need to know
Feedback Most effective when immediate, specific, growth orientated, tactful and shows a cause and effect relationship
Learning styles Seeing/hearing/doing. Mix visual aids, lectures and discussions.
Assessment
Goal is for student to learn the curriculum so assess through quizzes and wilderness jeopardy. Ultimately observation of students ' habits – reality based assessment.

NOLS Teaching Techniques
Demonstrations KISS, demonstrate and do.Activities The "do". Most effective when they are pertinent. Symbolic activities like ropes courses and new games not common. Mostly goals achieved through normal wilderness activities.
Modeling You are NOLS. The students see the message through you.. Present all sides to issues.
Formal classes For concentrated information
Inquiry For applying knowledge to new situations. Socratic method takes time – more effective later. Explaining reasoning helps develop judgment.
Teachable moments Allow time when planning travel Choose the right moment
Briefings Sharing information is sharing power. Minimize stress. Do prior to hikes or activities.
De-briefing
- identify and reinforce lessons gleaned

A. diffuse tension/raise issues/reflect on experiences
B. - don't overuse.

Visual Aids On sand bars, body, sleeping pad
Story telling
C. Be aware of sensibilities of students
D. Beware of discussing past students
E. Readings – follow up with discussion

Games Can be the lesson or follow up or conclusion or just for fun.
Guest Speakers Like backcountry rangers
Journals For recording

Table 3. The National Outdoor Leadership School

Professional Ski Instructors of America (PSIA)
(From The Cataloochee Ski School Instructor Information Packet 1995-96)

Instructor Characteristics
Interest in the job / willing to help people /(equipment, pointers, answer questions) / patience/ sell lessons/ people skills / interest in improvement / on time / factotum / can analyze movements / knows progression, teaching styles, teaching model, safety and risk awareness.

PSIA Teaching System
ATS is a framework that includes a skiing model and a teaching model. It is student centered, outcomes based, experiential and a learning partnership as it is guest service driven. There must be safety, fun, and learning. It emphasizes progressive development of skills.

PSIA Teaching Model

- Introducing the lesson
- Determining goals
  - Planning the lesson –objectives/activities
  - Presenting information (telling how and why)
  - Demonstrating
  - Practicing
  - Checking for understanding
  - Summarizing the lesson
  - Teaching for Transfer
  - Extended thinking, learning and performance (Bloom's six levels, sport psychology, modeling, and Maslow's needs).
- Student Behavior
- Individual characteristics and backgrounds
  - Learning preference
  - Motivation
  - Attitudes and values
  - Learning Styles
  - Kolb's doer, watcher, thinker, feeler
  - Domains (psychomotor, cognitive, affective)
- Styles of Teaching
  - Command, task, reciprocal, guided discovery, problem solving from Mosston, M. *Teaching Physical Education: From Command to Discovery*.

Types of feedback
- Intrinsic/extrinsic including knowledge of performance and knowledge of results
- How it can be supplied (individual, group, positive, negative, concurrent, terminal, immediate, delayed.
- Descriptive feedback / prescriptive

Table 4. Professional Ski Instructors of America

Colorado Outward Bound School

(From The 2000 Colorado Outward Bound School Instructor's Manual)

The Art of Instructing

Experiential Learning
Lewin/Kolbs Experiential Learning Cycle

Role of the Instructor
Enthusiasm/use your strengths and the strengths of the Outward Bound Experience.
Skills trainer (technical and interpersonal)/program designer/thinking, creating and adapting teacher/counselor/friend

Curriculum
Learner- centered
Assessment
Informal - careful listening and observing/Formal – instructor initiated activities
Motivation
Intrinsic motives – curiosity/competence/identification/reciprocity
Learning Objectives
Create learning objectives yourself
Skills Training
Should be learner oriented/relevant/planned/organized with simplicity/ action oriented/consistent with personal role-modeling/positively reinforcing/challenging/fun
Teaching
The Learner
Different learners learn through audio / visual / kinesthetic / individual /collective/ abstract /concrete /random /sequential ways.
The Teacher
As the teacher: Know the subject / have an awareness and respect for the students / use your personality and charisma / use your physical tools (voice, gesture etc.,)/ role-model consciously/ be a learner and role-model/have enthusiasm.

The Interaction
AT OB the medium is the message – information (rock climbing, strokes etc) or honesty, confidence, respect etc.

Framing and debriefing
Approaches to framing vary – heavy or light
Debriefing- What/? So what? Now what?
Debriefing hints list

Table 5. Colorado Outward Bound School

Posters were also constructed to give information on the research that has been done in the outdoor field. This included work by Phipps (1986), Cashel (1993), Irwin and Phipps (1994), Attarian (1996), Padgett (2001), and Grube Phipps and Grube (2002). These posters can be seen below (See Figures 6 & 7).

Phipps (1986)
Systematic Approach to Teaching Leadership in Expedition Settings
- Compared 6 groups, two using a systematic approach, two using a semi-systematic approach, and two using an unsystematic approach. Results showed the systematic approach to me most effective, the semi-systematic approach to be the next most effective.
Leadership was defined as use of leader styles linked to group and interpersonal communication (group dynamics).

Cashel (1993)
Augmented feedback in outdoor skills instruction
Pierra 1979 suggests provide more feedback/balance feedback (group and individual)/ provide more positive cues
Augmented feedback differs from other feedback because it is dependent on a motor response and is related to the performance of a motor skill (Fishman's definition (1971). Can be auditory, auditory tactile, auditory visual, and tactile.
Intent of the feedback is evaluative, descriptive, comparative, explicative, prescriptive and affective.
Study results were that for the two instructors videotaped for six different instructional sessions, the rates of feedback were greater than reported in other PE studies. Both instructors utilized predominately auditory forms of feedback; directed the feedback toward individual students (98,5%); and offered feedback most often after skill attempts (77%). More variation in the substantive intent of feedback was exhibited than in previous studies. A more equal emphasis was placed upon evaluative, prescriptive, prescriptive and motivational aspects. There were also more specific referents, with a heavy emphasis on spatial consideration with great frequency than noted in previous research. The instructors used positive feedback far more frequently than negative feedback contradicting other studies.

Phipps and Claxton (1997)
An Investigation into Instructor Effectiveness
Investigated NOC Instructors
Developed the Instructor Effectiveness Questionnaire which included sub-sections of structure, communication, perception, motivation, arousal levels, feedback, group processing, action-practice, leadership, safety, and people skills.
The instrument discriminated between instructors.
Showed high levels of effectiveness for instructors at NOC
Female instructors were perceived as being more effective in all the components (statistically significant in all but action - practice)
Qualitative themes – Participant and instructor feedback/ arousal levels/ physical endurance of students/group size/ use of mental imagery/ verbal instructions / debriefing, and developing judgment judgement and decision-making, group norms, and group building / safety.
Suggested using the Instructor Effectiveness Check Sheet (IEQ with 1st person terminology) to be remind instructors to take care of all aspects of instruction.
Suggested using the IEC along with the IEQ as a perception check.

Figure 6. Poster of Applied Research in Outdoor Education

Irwin and Phipps (1994)
The great outdoors and beyond: Common threads in leadership training on land in the air and in space
Studied the systematic approach using a single case design over time with a researcher from the NASA-Ames Research Center, Moffat Field, CA. The study used descriptive statistics and charts to illustrate the application of leader and group models used. It was found to be similar to NASA programs teaching "human factors" The importance of effective communication through effective teaching was stressed from a safety point of view (the reason human factors are studied at NASA).

Attarian (1996)
Importance – performance analysis to evaluate teaching effectiveness
Evaluated teaching effectiveness for a rock climbing course using an Importance-Performance Analysis. The study rated 23 different attributes. Interestingly " A variety of teaching techniques" was rated as a low priority.

Padgett (2001)
Testing the Efficacy of the IEC
This was a Multiple Baseline Case Study using three instructors and ?? guests. To investigate whether the use of the IEC improved instruction. It was conducted at NOC
Mixed results and there was high mortality partially because the instructors disliked the paperwork. One instructor improved slightly but the levels of effectiveness were very high already. Qualitative data both supported and rejected the IEC.
Follow up research with beginning instructors and tie the IEC to perception checks from the IEQ.
Possibly use a short form IEC

Grube, Phipps and Grube (2002)
Outdoor leadership – a case study
Studied a modified version of the systematic approach using a single case design. The study used descriptive statistics and charts to illustrate the application of leader and group models used in conjunction with individual conferencing using field journals.

Figure 7. Poster of Applied Research in Outdoor Education

The "WEA Way"

Groups were then formed and after studying the posters, each discussed the relevant foundations, concepts and strategies currently being used by the Wilderness Education Association (WEA). Information on WEA teaching was gleaned through past instructional experiences and from various association texts (e.g., The New Wilderness Handbook, The Wilderness Educator, and The Back Country Classroom). The facilitator then challenged each group to determine what might be missing in the foundations, concepts and strategies of the WEA as they currently exist in both practice and in the literature.

Diagrams illustrating the "WEA way" were developed on three different posters entitled: "Foundations"," Concepts" and "Strategies." Following a brief discussion, groups added ideas related to instruction that were taken from the other organizations. The results of this exercise are shown in Figures 8, 9, and 10.

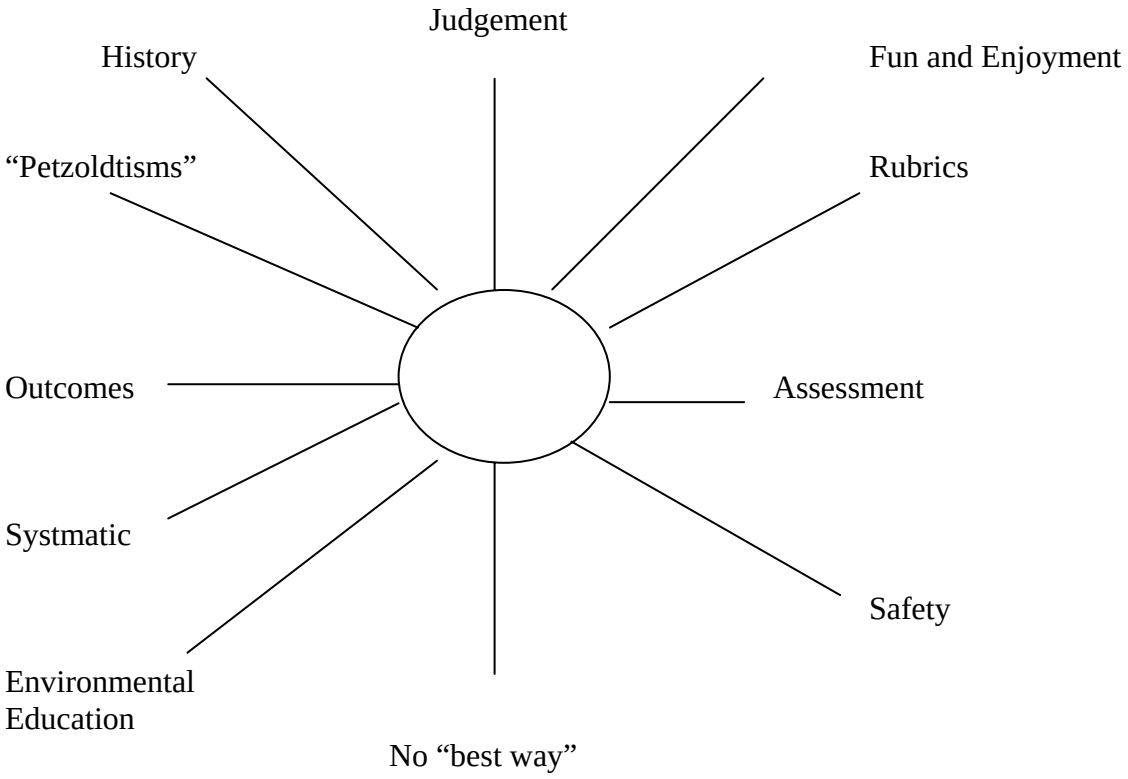

Figure 8. Foundations

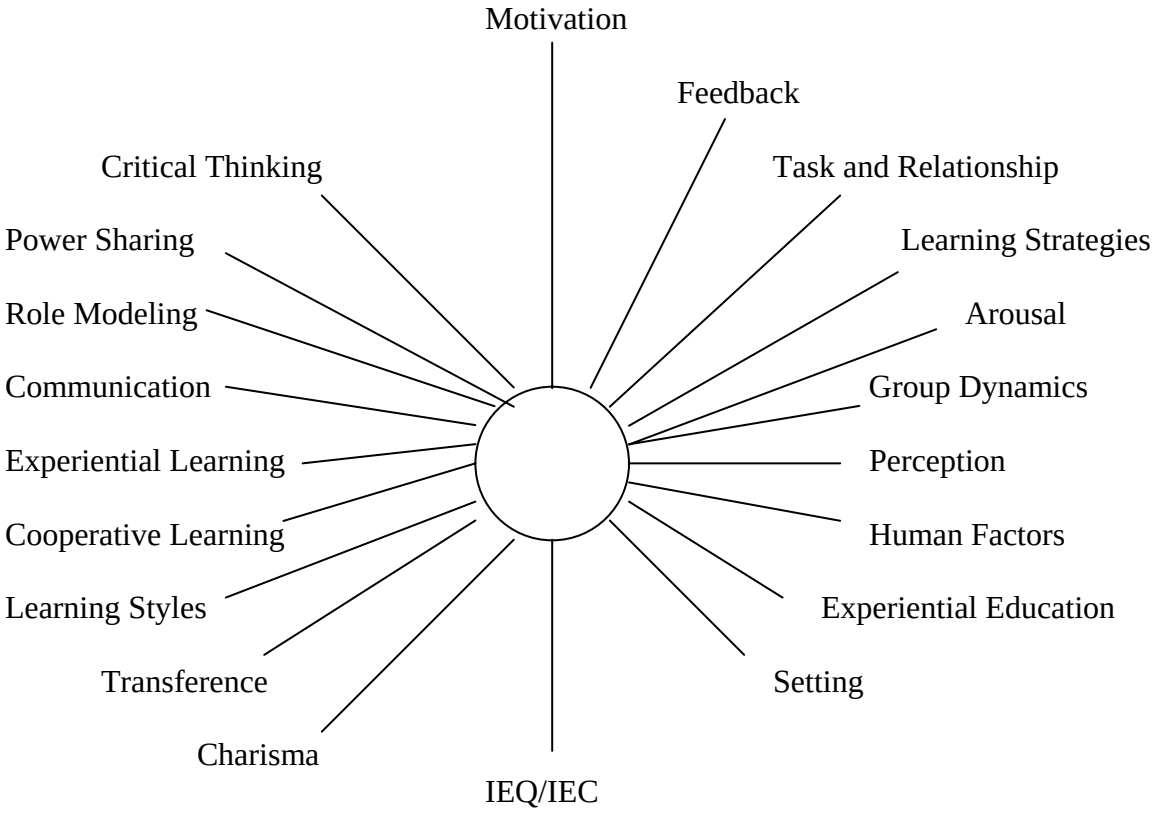

Figure 9. Concepts

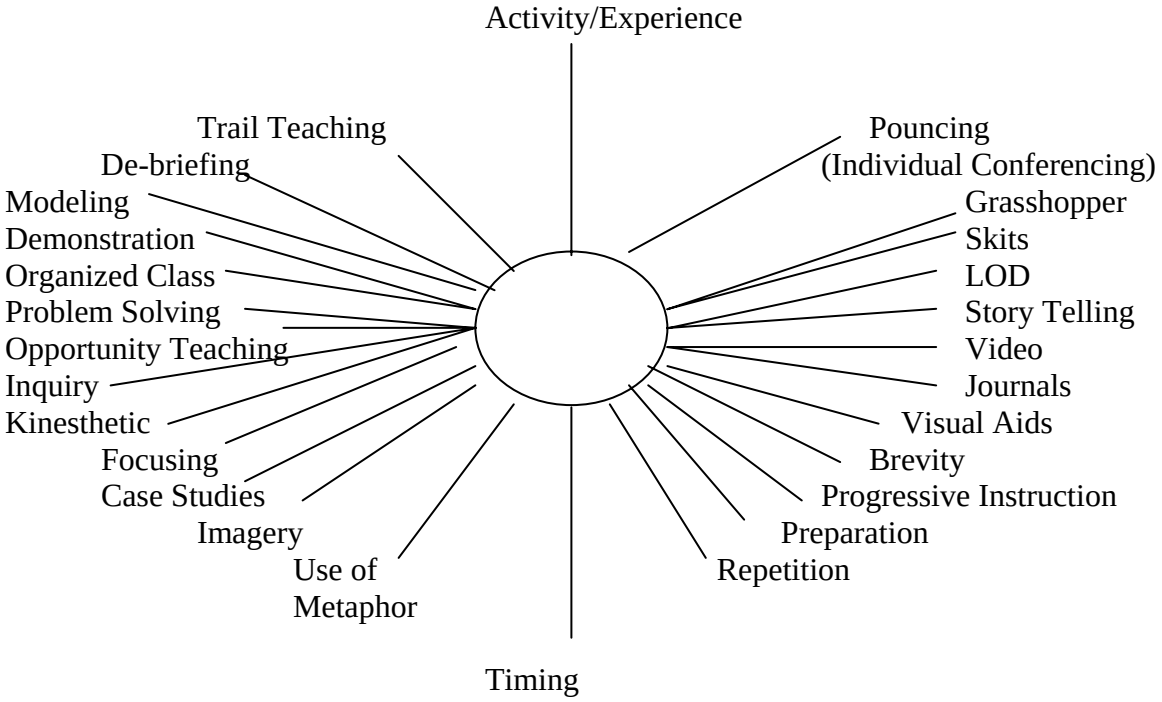

Figure 10. Strategies

Finally, the question was asked "What makes WEA teaching unique?" The following five statements were then provided by the workshop participants:

1. The 18 point curriculum
2. Judgement – the fact that we integrate it through the whole curriculum
3. "Petzoldtisms" – are used to teach many aspects of the curriculum
4. There is no best way – WEA believes that conditions preclude a "best way"
5. Outcomes Assessment – WEA has specific rubrics linked to assessment procedures

A consensus was reached that the above five aspects or "foundations" currently distinguish an instructional philosophy unique to the WEA.

Books and Book Chapters on Outdoor Instruction

The Role of the Instructor in the Outward Bound Educational Process by K. Kalisch. (1979). Three Lakes, WI: Honey Rock Camp.

Teaching in the Wild Outdoors in Paul Petzoldt (1984) *The New Wilderness Handbook.* New York: Norton.

Teaching in the Outdoors (3rd ed.) by Hammerman, D. R, Hammerman W.M., and Hammerman E.L. (1985). Danville IL: Interstate.

Experiential Learning by Richard J. Kraft. (1990) in *Adventure Education*. Miles J C and Priest (Eds.) S State College, PA: Venture Publishing.

Teaching by Inquiry by Donald R. Hammerman (1990) in *Adventure Education*. Miles J C and Priest (Eds.) S State College, PA: Venture Publishing.

Processing the Adventure Experience by Clifford E. Knapp (1990) in *Adventure Education*. Miles J C and Priest (Eds.) S State College, PA: Venture Publishing.

Transfer of Learning by Michael Gass in Miles, J. C., and Priest S (1990) in *Adventure Education*. Miles J C and Priest (Eds.) S State College, PA: Venture Publishing.

The Group Dynamics Teaching Model by Phipps, M. L. (1991). In *The wilderness educator: The Wilderness Education Association curriculum guide.* Cockrell, D. (Ed.) Merrillville, IN: ICS Books Inc.

Outdoor Leadership - What Style? Phipps, Maurice L. and Phipps, Cynthia A. (1991). In *The Wilderness Educator: The Wilderness Education Association Curriculum Guide.* D. Cockrell (Ed.). Merriville, Indiana: ICS Books Inc.

Teaching Technique in Drury J.K. and Bonney, B F. (1992*) The Back Country Classroom: Lesson Plans for Teaching in the Wilderness.* Merrillville, IN : ICS Books.

Experiential Education/Instructional Methods/ Teaching Models in Priest S and Gass M.A. (1997) *Effective Leadership in Adventure Programming.* Champaign Ill: Human Kinetics.

Theory-based Journal Articles on Outdoor Instruction (by author)

Phipps, Maurice L. (1988). The instructor and experiential education in the outdoors. *Journal of Environmental Education.* Fall.

Phipps, Maurice L. (1988). Experiential Leadership Education, a systematic training method. *Journal of Experiential Education,* Spring.

Hammerman, D.R., and Priest, S. (1989). The inquiry/discovery approach to learning adventure. The Journal of Adventure Education and Outdoor Leadership 6(2), 29-32.

Priest, S and Hammerman, D. (1990). Teaching outdoor adventure skills. The Journal of Adventure Education and Outdoor Leadership 6(4), 16-18.

Lucknor, J. (1994). Effective skills instruction in outdoor Adventure education. Journal of Physical Education, Recreation, and Dance. January.

Bibliography

Attarian, A (1996). Importance – performance analysis to evaluate teaching effectiveness. In *The Proceedings of the 1995 International Conference on Outdoor Recreation and Education*. . Rena Koesler and Ron Watters (Eds.). Pocatello, ID: Idaho State University Press.

Cashel, C. (1993). Augmented feedback in outdoor skills instruction. *In The Proceedings of the 1993 National Conference for Outdoor Leaders*. Maurice Phipps (Ed.) Tennessee State Parks, TN: The Wilderness Education Association.

Cataloochee Ski School instructor Information Packet. (1996). Maggie Valley, NC: Cataloochie Ski Resort.

Colorado Outward Bound School instructor manual. (2000). Denver, CO: Colorado Outward Bound School.

Drury J.K. and Bonney, B F. (1992). *The back country classroom: Lesson plans for teaching in the wilderness.* Merrillville, IN : ICS Books.

Fishman, S.E. (1971). Developing a system for describing teaching. *Quest*. 15, 9-16.

Grube, D.,Phipps, M. L., and Grube, A. (2002). Practicing leader decision-making through a systematic journal technique: A single case design. Tentatively ccepted for publication in the *Journal of Experiential Education.*

Hammerman, D. R., Hammerman W.M., and Hammerman E.L. (1985*). Teaching in the outdoors* (3rd ed.) Danville IL: Interstate.

Hammerman, D. R., and Priest, S. (1989). The inquiry/discovery approach to learning adventure. *The Journal of Adventure Education and Outdoor Leadership* 6 (2), 29-32.

Hersey, P., and Blanchard K. (1984). *Management of organizational behavior: Utilizing human resources* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Irwin, C., & Phipps, M. L. (1994). *The great outdoors and beyond: Common threads in leadership training on land in the air and in space.* In The 1994 Coalition for Education in the Outdoors' Research Symposium Research Proceedings.

Joplin, L. (1981). On defining experiential education. *Journal of Experiential Education* 4 (1), 17-20.

Kennedy, P. *(2000). Introduction to paddling "foundations" progressions and outlines for the master instructor.* Unpublished Manuscript, Springfield, VA: American Canoe Association.

Kalisch, K. (1979). *The Role of the Instructor in the Outward Bound Educational Process.* Three Lakes, WI: Honey Rock Camp.

Kolb, D., A., Rubin, I., M., McIntyre, J., M. (1984*). Organizational psychology: An experiential approach to organizational behavior.* Englewood Cliffs, NJ : Prentice Hall, Inc.

Luckner, J. (1994). Effective skills instruction in outdoor Adventure education. *Journal of Physical Education, Recreation, and Dance*. January.

Miles J. C., and Priest S. (1990). *Adventure Education*. State College, PA: Venture Publishing.

NOLS leadership education toolbox. (2001). Lander, WY: The National Outdoor Leadership School.

Padgett, Allison (2001). A case-study to investigate the efficacy of the Instructor Effectiveness Check Sheet. Unpublished Masters Thesis, Western Carolina University, Cullowhee, NC.

Petzoldt , P. (1984). *The new wilderness handbook*. New York: Norton.

Phipps, M. L. (1986). *An assessment of a systematic approach to teaching outdoor leadership in expedition settings*. Unpublished doctoral dissertation, University of Minnesota.

Phipps, Maurice L. (1988). The instructor and experiential education in the outdoors. *Journal of Environmental Education.* Fall.

Phipps, Maurice L. (1988) Experiential Leadership Education, a systematic training method**.** *Journal of Experiential Education,* Spring.

Phipps, Maurice L. (1988). Experiential Leadership Education, a systematic training method. *Journal of Experiential Education,* Spring.

Phipps, Maurice L., and Phipps, Cynthia A. (1991). Outdoor leadership - What style? *The Wilderness Educator: The Wilderness Education Association Curriculum Guide.*D.Cockrell (Ed.). Merrilville, Indiana: ICS Books Inc.

Phipps, M. L., and Swiderski, M. J. (1991). The "soft" skills of outdoor leadership. In J. C. Miles and S. Priest (Eds.) *Adventure Education*. State College, PA: Venture Publishing Inc.

Phipps, M. L. (1991). The Group Dynamics Teaching Model. In *The wilderness educator: The Wilderness Education Association curriculum guide.* Cockrell, D. (Ed.) Merrillville, IN: ICS Books Inc.

Phipps, Maurice L., and Claxton, David (1997). An investigation into instructor effectiveness using experiential education constructs. *Journal of Experiential Education* . 20 (1), 40-46.

Phipps, Maurice L. (1999). Practicing leader decision-making through a systematic journal technique**.** Edward Raiola (Ed.). *The Proceedings of theNational Conference for Outdoor Leaders* at Brevard. Radnor Lake, Nashville TN: The Wilderness Education Association.

Pierron M. (1979). Process analysis of teaching physical education. *Paper presented at the International Conference on Physical Education and Sport for Children*. Warsaw, Poland, October.

Priest, S., and Gass, M. A. (1997). *Effective Leadership in Adventure Programming.* Champaign Ill: Human Kinnetics.

Priest, S., and Hammerman, D. (1990). Teaching outdoor adventure skills. *The Journal of Adventure Education and Outdoor Leadership* 6(4), 16-18.

The Nantahala Outdoor Center instruction guide (1999). Wesser, NC: Nantahala Outdoor Center.

The ACA Instructor's trainer manual (2000). Wesser, NC: Nantahala Outdoor Center.

The American Canoe Association flat water instructor workshop manual. (1992). Springfield, VA: American Canoe Association.

Whiting, H.T.A. (1975). *Lecturing as a skill.* Unpublished paper at the University of Leeds, UK.

Whiting, H.T.A. (1976). Lecture notes from *Psychology and physical education.* University of Leeds, UK.

Racial and Ethnic Diversity in Outdoor Education

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Abstract

The purpose of this presentation is to provide outdoor educators and researchers with a better understanding of issues related to the racial and ethnic diversity in outdoor education from the available literature. In addition, the presentation will address the following two questions: 1) Why is diversity important in outdoor education? 2) How do outdoor organizations manage diversity issues? The presentation will also introduce a cross-cultural training technique called the Critical Incident Exercise (CIE). The audience will have the opportunity to work in group on real-life scenarios. The rationale behind this exercise is to prepare outdoor program leaders to anticipate critical incidents when working with a diverse population. Unless outdoor instructors are taught about cultural diversity in their training, they will not be equipped to handle this type of situations.

Introduction

According to the 2000 Outdoor Recreation Participation Study conducted by the Outdoor Industry Association, "the population of Americans participating in human powered activities is becoming more ethnically diverse-particularly trail running, cross-country skiing, side dirt and paved road bicycling, backpacking, rock climbing and kayaking." This trend will likely to increase because the 2000 U.S. projected that by the year 2010, about 30 % of population will be non-White, and by the year 2050, about 50% of the population will be members of minorities.

In order to meet the needs of a diverse population, many researchers have proposed ways to increase outdoor participations by ethnic minorities. For example, Ewert, Chavez, and Magill (1993) suggested that land managers and environmental agency employees nowadays are facing multicultural issues in the wildland-urban interface. Subsequently, they provided insights into different ethnic leisure preferences and ways to communicate effectively with diverse outdoor users. Similarly, Car and Chavez (1993) recognized that recreation researchers and managers are predominately White Americans; therefore, research often overlooks the importance of including multicultural issues in outdoor adventure literatures. In that regard, mainstream outdoor knowledge and management techniques are insufficient to meet the needs of people from different ethnic background.

Gibson and Moriah (1989) further pointed out that there are many barriers that keep minorities from participating in outdoor education programs. Some of the factors are self-imposed, while others are restricted by the long established European societal norms and perceptions. Consequently, the authors called for the needs and recognitions of cultural sensitivity and empowerment for minority groups. To facilitate this process, it is important to look at what factors contribute to ethnic minorities' leisure behaviors. For instance, Hom (1990) identified that Asian and Native Americans place high importance on the group and family cohesiveness, whereas White Americans place high value on tasks and objects. In addition, results from interviews of ethnic minorities indicate that American-born Asians considered safety, awareness of opportunities, knowledge of

proper gear, cost, and subtle discrimination or racism are important factors in their decisions to participate in leisure outdoor activities. In short, the importance of cross-cultural communication training in the outdoor leadership curriculum, especially pertaining to risk management in outdoor programming is vital in outdoor diversity management. Therefore, current outdoor industry can no longer ignore the diversity issues in the outdoors (Roberts & Gray, 1999).

Past & Current Cultural Diversity Efforts by the National Outdoor Leadership School (NOLS)

The NOLS is among the first outdoor organizations to promote diversity in the wilderness. They actively recruit students from different background to participate in its classes. Nonetheless, many minority students drop out of the courses because of negative experiences. In most cases, the instructors have good intentions, yet they fail to meet the diverse needs of their students. Currently, NOLS has re-examined its policy and training procedures in diversity, and they are able to recruit and retain more minority students in their classes. Their efforts include offering more scholarship to minority participants and actively recruit and train minority staff. They also have website and other training resources in Spanish to reach the Hispanic communities. Moreover, they have partnered with other organizations to support diversity in the outdoors. One such effort is the "Mosaic in Motion" conference, which focuses on increasing cultural diversity in the U.S.

Critical Incident Exercise (CIE)

One way to prepare outdoor leaders to handle diverse problem situation is through the use of critical incidents exercise (CIE), which Wight (1995) defines as "Critical incidents used in cross-cultural training are brief descriptions of situations in which there is a misunderstanding, problem, or conflict arising from cultural differences between interacting parties or where there is a problem of cross-cultural adaptation" (p. 128). The presentation provides four real-life scenarios pertaining to the cultural misunderstanding or conflicts which arise in the outdoor trips. Each participant in this exercise will work on the scenario individually and then discuss the issues in small groups and later in a large group. Here is one of the scenarios that will be used in the presentation:

Incident One

Jose and Johnny are Hispanic Americans, in their early twenties, from a Hispanic community in southern California. They received scholarships from a special program to participate in a month-long outdoor leadership expedition. Jose and Johnny are the only minorities in this group. The rest of them are all White Americans who come from middle and upper class. The course takes place in the southern Arizona wilderness. In the beginning of the trip, the instructors intentionally separate Jose and Johnny into different tent groups. However, Johnny requested he wanted to stay together with Jose and the instructors comply with his request.

As the trip goes on, Jose and Johnny seem not to bond with the rest of group; however, this does not really concern the instructors. Although Johnny intentionally separates himself from the group and shows no interests in the outdoors, Jose, on the other hand, is very excited about the expedition such as local plants and animals.

On the evening of Day 7, the group camps near a lake, and the next day will be the re-ration. Jose and Johnny tell the group that they will be leaving tomorrow with the re-ration staff unexpectedly. The instructors and the group are all surprised by their decisions. After a short talk with them, the instructors decided to let them go.

The Questions

1. To what extent do you agree or disagree with the instructors?

Totally disagree 1 2 3 4 5 6 7 Totally agree

Why?

2. If you were the instructors, what would you have done?

3. What are the main issues in this critical incident?

4. How would you feel if you were Jose and Johnny?

References

Benepe, S. (1992). *Racial and ethnic diversity in wilderness use and environmental education.* Lander, WY: National Outdoor Leadership School.

Carr, D.S., & Chavez, D. J. (1993). A qualitative approach to understanding recreation experiences: Central American recreation on the national forests of southern California. In A. W. Ewert, D. J. Chavez & A. W. Magill (Eds.), *Culture, conflict, and communication in the wildland-urban interface* (pp. 181-194). Boulder, CO: Westview.

Chappelle, S. and Bigman, L. (1998). Diversity in Action. Project Adventure.

Doran, M. (2001). Managing diversity in your group. In J. Gookin, M. Doran & R. Green (Eds.), 2001 NOLS leadership toolbox (pp. 10). Lander, WY: National Outdoor Leadership School.

Doran, M. (2001). Tips for working with students from another culture. In J. Gookin, M. Doran & R. Green (Eds.), 2001 NOLS leadership toolbox (pp. 11). Lander, WY: National Outdoor Leadership School.

Ewert, A. (1989). *A model of nonparticipation.* Outdoor adventure pursuits: Foundations, models, and theories. (pp. 170-172). Columbus, OH: Publishing Horizons.

Gibson, B., & Moriah, D. (1989). Meeting the interpretive needs of minorities. National Association of Interpreters Conference Proceedings, (pp. 223-227)

Hom, D. L. (1990). Natural resource challenges for a culturally diverse pacific northwest: An outdoor recreation model. Unpublished manuscript, Professional Development for Outdoor Recreation Management Program, Clemson University, ID.

Outdoor Recreation Coalition of America. *Human Powered Outdoor Recreation: 1997 State of the Industry Report.* Retrieved September 11, 2001, from http://www.orca.org/research/97SOI/index.html

Roberts, N. S., & Gray, S. (1999). The impact of diversity issues on risk management. In J. Gookin (Ed), *Wilderness risk managers conference proceedings* (pp.8-11). Sierra Vista, AZ: National Outdoor Leadership School.

Roberts, N.S., & Rodriguez, D.A. (1999). Multicultural issues in outdoor education. (ERIC Digest). New York: ERIC Clearinghouse on Urban Education.

Warren, K. (1998). A call for race, gender, and class sensitive facilitation in outdoor experiential education. *The journal of experiential education* (pp. 21-25)

Wight, AR. (1995). The critical incident as a training tool. In S. Fowler and M. Mumford (Eds), *Intercultural sourcebook: cross-cultural training methods*.(pp.127-140). Yarmouth, MN: Intercultural Press.

Perceived Change in Leadership Skills as a Result of the Wilderness Education Association Wilderness Stewardship Course

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Introduction

This study was conducted during a Wilderness Education Association (WEA) Wilderness Stewardship (WS) Course taught at Western Kentucky University (WKU) located in Bowling Green, Kentucky. The purpose of the study was to determine what change, if any, the course had on leadership skill development as perceived by the student involved in the course.

History of the WEA at WKU

In May of 1992, WKU began offering the WEA Wilderness Stewardship Course to students. The course emphasized experiential leadership and helped to fill the need for an experiential education component within the Recreation curriculum. At that time, the WS Course was 14 days long and incorporated field experience at Mammoth Cave National Park.

Today's WSP at WKU

Today, the WS Course is a total of 15 days. It is broken down into 1 initial meeting a month prior to the course. This meeting takes place in April and students are instructed on fees for the course, a basic outline of the course and assigned lessons that they are to teach. In May, students are to meet in the classroom for 1 day to go over format of the course and requirements. On this day there is also a gear check and food distribution. Following the classroom day there are 2 shakedown days. Students practice paddling skills and camp set up in the Barren River Area. Students then spend 10 days of field experience hiking and canoeing in the Big South Fork National Recreation Area. Upon return from the field portion of the course there is 1 debriefing day. Students complete evaluations and clean gear on this day.

Although the length of the course has changed the objectives remain the same. These objectives for this course are as follows:

The student will be able to:

--use and enjoy the wilderness with minimum impact.
--apply safe practices for groups in outdoor recreation activities.
--begin to recognize leadership abilities and limitations.
--demonstrate a basic standard of outdoor user knowledge and experience based on the WEA curriculum.
--receive WEA Wilderness Stewardship certificate for course completion.

Requirements

The WS course is considered a leadership training experience. Because of this, students are assigned a day to be the leader of the day. As leader they are encouraged to do the following:

1. Take charge and let others know they are the leader.
2. Lead by example.
3. Expect nothing but be prepared for anything, plan ahead and be ready.
4. Communicate; let others know what the plans are.
5. Practice mature decision-making skills.
6. Help debrief and process the day's activities.

Students are also required to teach lessons during the field portion of the course. Lessons are on a variety of topics. Many of the lesson plans for the lesson topics are found in The Backcountry Classroom by Drury and Bonney.

Other texts used for the WEA course are Wilderness Stewardship Field Manual – by Dr. Steve Spencer. This manual provides students with course information, leaders of the day materials, risk management information and information of the Big South Fork. The NOLS Outdoor Cookery – by Claudia Pearson is also used during this course.

Evaluation

Evaluation is a major component in the WS course. Students are required to journal daily with specific mention of decisions made during the day. Students also complete a peer review with the Student Observation Tool. The Self-Ability Assessment is also used. On this assessment students state their abilities and limitations as relating to leadership.

Purpose of the Study

The purpose of this study was to examine the change, if any, students had in their leadership skills after participating in the WEA WS course.

The skills measured in this study are the "soft" skills of leadership. Included in the "soft" skills of leadership are interpersonal skills, organizational skills, instructional skills, and decision-making skills. Though soft leadership skills are more difficult to assess they are nevertheless essential to safe effective instruction in the outdoors. The hard skills of leadership are solid, tangible, measurable skills. Hard skills are easier to teach, assess and are often technical in nature.

The information from this study may be beneficial to outdoor educators, those who train outdoor educators and those who develop curricula for the purpose of training future instructors in outdoor education. Assessing student perceptions of self-efficacy as an outdoor leader is one way to monitor the effectiveness of a course focused on the development of leadership skills.

Leadership Skills Inventory

The Leadership Skills Inventory (LSI) was used in this study as a pretest and posttest tool to measure perceived ability within areas of leadership. The LSI was

established in 1985 by Frances Karnes and Jane Chauvin and was developed to assess leadership skills in individuals ages 9 to adult and to determine areas needing additional development and those that are already developed. The inventory is an self-paced, self-administrated, self-scored inventory of personal leadership skills, with broad-based utility. The LSI is a 125-item Likert-type measure that takes approximately 20-40 minutes to complete. Reliability and validity of the inventory have been established.

Individuals are required to respond to questions that have been separated into 9 leadership categories. Strengths and weaknesses of the individual are measured by their answers. The categories are:

Fundamentals of Leadership – skills which include defining terms and identifying various leadership styles.

Written Communication Skills – skills which include outlining, writing a speech, and doing research reports.

Speech Communication Skills- skills which include defining one's viewpoint on issues, delivering a speech, and offering constructive criticism.

Character-Building Skills – skills which include understanding the importance of free choice, identifying things that one values and prizes, and affirming one's choices.

Decision-Making Skills – skills which include gathering facts, analyzing consequences of certain decisions, and reaching logical conclusions.

Group Dynamic Skills – skills which include serving as a group facilitator effecting compromise, and achieving consensus.

Problem –Solving Skills – skills which include identifying problems, revising strategies for problem-solving, and accepting unpopular decisions.

Personal Development Skills – skills which include self-confidence, sensitivity, and personal grooming.

Planning Skills – skills which include setting goals, developing timelines, and formulating evaluation strategies.

The LSI was used in this study based on the relevancy of the leadership sub-categories to the WEA course.

Methods and Procedures

Participants involved in the WEA Wilderness Stewardship course were required to sign an informed consent the first classroom day in May. At that time students were given the LSI. No names were used on the inventory, only sex, age, race, and previous leadership classes. Each test had a number in the corner. Pretests and posttests were

labeled with coinciding numbers. The informed consent was attached to the participant's pretest to ensure each student received the posttest with the same number. Upon return from the field portion of the course students were given the posttest LSI on the final debriefing day of the course. Students were pre- and post-tested without interruption from outside sources.

Findings

Results were analyzed using a paired-samples t-test. Mean difference from pre to posttest scores for all LSI categories showed higher posttest than pretest ratings, but not all proved statistically significant. A significant ($p<0.05$) difference was found between pre and posttest in the areas of Fundamentals of Leadership, Speech Communication Skills, Character-Building Skills, and Group Dynamic Skills.

Discussion

Why were significant differences found in only these four categories of leadership (Fundamentals of Leadership, Speech Communication Skills, Character-building Skills and Group Dynamic Skills), when all LSI categories were addressed on the WEA course? Possibly the length of the course played a factor. A longer course may have caused a greater change in more areas. Students would have further opportunities to practice the skills they know, and work on those they have not developed.

Specific instruction on the fundamentals of leadership may have lead to a change in this category. A lesson plan from the Backcountry Classroom was taught which focused on the background of leadership theory. The course focused on participants leading the group and evaluation of that leadership.

Change in speech communication skills may have taken place as a result of daily opportunities to speak in from of the group. The opportunity to practice the skill may have affected participant's perception of their ability.

Character-building skills and group dynamic skills were not specifically listed in the course outline. However the nature of the course encouraged growth in these areas. Extended time with others in a semi wilderness setting fosters development of group dynamic skills and character-building skills.

The category of decision-making skills did not show significant change despite the daily journal opportunities to reflect on decisions made during the day. A factor involved is the high self-rating on the pretest in this category. Participants still had opportunities to practice this skill on the course.

Perhaps low scores on decision-making and problem-solving are a function of limited opportunities for student practice in these aspects of leadership. As an example, because of the current availability of trail signs, navigation opportunities in the Big South Fork Wilderness Area are no longer necessary. Consequently students have reduced opportunities to solve problems and make decisions related to the use of map and compass.

Having 12 students in the WSP course allows for only 1 Leader of the Day opportunity. A smaller class size would allow for more opportunities and possibly greater perceptions of personal efficacy where certain dimensions of leadership are concerned.

Conclusions

The WEA Stewardship Course provides an opportunity for students to begin recognizing their leadership abilities and limitations. Within the limits of this study, the findings suggest that students perceived a change in their abilities in four areas. These areas included: (1) fundamentals of leadership, (2) speech communication skills, (3) character-building skills, and (4) group dynamic skills.

Recommendations

Evaluation of the results suggests the need to place more emphasis on those leadership skills that did not show significant change. Assigned teaching opportunities could be modified to address areas of leadership that need improving for the group.

Additionally, further study is recommended. Such study needs to take place with the WKU WSP, with a larger sample size, at different institutions and with different instructors to determine the role course content and course instructor play. Furthermore, it is recommended that future studies exam student perceptions of their leadership efficacy in learning experiences where a greater number of leadership opportunities are available to students.

The results of this study provide the beginning framework for future evaluation of WEA courses. It is important to constantly evaluate courses to determine if future outdoor leaders are learning the skills necessary to be successful leaders.

Wilderness Leadership for Physical Education Majors: The Current National Status of Wilderness Education

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Abstract

Outdoor/Adventure education is a relatively new content area required by the National Council for Accreditation of Teacher Education (NCATE) for students majoring in physical education. Due to these new requirements teacher preparation programs in physical education have yet to adopt a standardized curriculum. Consequently, content and curricular support materials vary widely across the nation. This has resulted in the necessity for surveying the status and programmatic needs to assist faculty teaching in this area.

This study surveyed 536 colleges and universities in the United States with undergraduate programs in physical education. Results of the survey indicated a need to develop course/syllabus guidelines and comprehensive outdoor education text to assist them in complying with NCATE requirements and improve program quality.

Introduction

Activities traditionally associated with outdoor education provide participants with a degree of risk, challenge, and excitement. Currently, in North America, activities such as backpacking, hiking, orienteering, biking, rock climbing, skiing, and other types of adventurous recreation are becoming increasingly popular. Millions of school-aged children and others are becoming increasingly involved in outdoor pursuits. More people and students are turning to educational programs that offer instruction and/or simply participation in outdoor adventure activities (Darst & Armstrong, 1980; Davis & Carter, 1994; Rohnke, Tait & Wall, 1989, 1994; and Seaborge & Dudley, 1994).

Educational and recreational programs that include physical education have improved their offerings with more opportunities for adventure activities. Offering leadership training in outdoor education to college students majoring in physical education has become a must to meet the growing popular demand for outdoor adventures. The training provides the knowledge, physical skills, and attitudes that are necessary for thorough enjoyment of these pursuits, to teach the students how to achieve control in high-risk situations and to instill a healthy respect for the natural environment. Better-prepared and qualified leaders should be able to win the confidence of administrators and convince them of the increased need for expanded outdoor education programs in public schools.

The National Council for Accreditation of Teacher Education (NCATE), a national accreditating body, has clearly stated that outdoor education competency in

physical education teacher education undergraduate programs have to be met in order to be accredited. The National Organization for Sports and Physical Education (NASPE) states that students should have opportunities to develop participatory skills in adventure and other challenge activities such as camping, hiking, backpacking, skiing, skating, canoeing, walking, frisbee, and cycling. California Commission on Teacher Credentialing (CCTC) expects a university to consider the extent to which the program includes study of outdoor education activities such as orienteering, outdoor survival skills, ropes, canoeing, hiking, and backpacking when reviewers judge whether a program meets this standard.

The addition of outdoor adventure activities to the physical education teaching curriculum has proved to be a most significant development. The instruction of these pursuits makes available new opportunities for people to find enjoyable movement activities that can be practiced for a lifetime. Many physical education teachers have become disenchanted with traditional sports and recreation activities. They seek alternative lifetime activities that provide a physical and mental challenge, confidence building, teamwork, and even a degree of risk, or an element of danger.

It has become apparent that the utilization of outdoor education activities in physical education teacher education curriculum has become abundant. These activities help educate the future prospective physical education teacher to love, enjoy, and care for the outdoors and help them to learn to preserve the environment and transcend their passion of the love of nature to new generations.

Purpose of the Study

A group of outdoor education professors developed the National Outdoor Education Task Force (OETF) for the purpose of determining the status of outdoor education in the nation's universities within physical education programs. The first task was to collect essential information about outdoor education course(s) in order to disseminate the information to interested faculty. The results of this initial effort will be used to create a knowledge base for curriculum and text materials to support these courses.

Methodology

The OETF developed a five-part Outdoor Education Survey consisting of the following categories: (1) Accreditation requirements, (2) Curriculum/Instruction, (3) Instructor qualifications, (4) Textbook used, and (5) Additional Comments. This survey had discrete (yes and no) response items, selected response items, and open-ended response items in each category.

Category I (Accreditation Requirements): This category contained three questions regarding accreditation by NCATE, CCTC (California Commission on Teacher Credentialing), and other accrediting agencies.

Category II (Curriculum/Instruction): This category contained four questions related to activities taught in the curriculum, format for teaching the course, teaching aids used in delivering the course, and number of units devoted to outdoor education in the program.

Category III (Instructor Qualifications): This category contained three questions about faculty preparation in regard to the highest degree attained, area(s) of specialization and the number of years of teaching experience.

Category IV (Textbook): This category contained six questions determining the extent to which text were used by the respondents. The respondents were asked to respond to a checklist of contents and outdoor activities they felt would be necessary in a text. Also, the respondents were asked if a text were to be developed in this subject area would they participate in its development and then adopt the text.

Category V (Additional Comments): was an open-ended section of the survey for the respondents to add relevant comments not covered by the questionnaire.

There are 536 Colleges and Universities in the United States with undergraduate programs in physical education. Surveys were mailed to all of these institutions and 162 were returned for a response rate of 30%. The results were tabulated for each category of the survey and presented in tables and graphs summarizing the major results.

Results

Survey results in the category of Accreditation Requirements showed that less than one-half of the schools were compliant with NCATE accreditation requirements for outdoor education. Of the 162 respondents 46 schools (28%) reported being in compliance and 106 (65%) reported non-compliance. There were 10 schools or (6%) who did not respond to this item. The second item on the survey for Accreditation Requirements was specific to schools in California and related to the California Commission for Teacher Credentialing (CCTC). Because this item did not apply to 137 schools nationally who responded to this survey, the tabulation for this item was based on the 25 schools from California who responded to the survey. Four schools (16%) were in compliance with the CCTC and 21 (84%) of the schools were non-compliant with CCTC standards. The third question on offering outdoor education regardless of accreditation requirements indicated that 85 (52.5%) of the schools did offer the course in physical education teacher preparation curriculum and 65 (40.1%) did not offer the course(s). Twelve schools (7.4%) did not respond to this item. Table 1 summarizes these results.

	NCATE		CCTC		Part of PE Program	
Yes	46	28%	4	16%	85	52.5%
No	106	65%	21	84%	65	40.1%
No Response	10	6%	137 not applicable		12	7.4%

Table 1. Reported levels of compliance with accreditation requirements in physical education teacher preparation programs.

Survey results in the category of Curriculum/Instruction were ranked according to most common activity to least common activity presented in the courses. Table 2 lists the number of respondents and percentage in rank order by activity. Activities presented most commonly or reported by at least 25% of the respondents were ranked as follows: Orienteering, Hiking, Backpacking, Ropes Course, Canoeing, Initiative Games, Rock-Climbing, Biking, and Survival Skills. Activities presented least commonly or reported by less than 25% of the respondents were ranked as follows: Swimming, Outdoor, Casting/Angling, Other (SCUBA, in-line skating, mountaineering, archery, map reading,

riflery, hunting, environmental education, and conservation activities), Cross Country, Skiing, Kayaking, Down Hill Skiing, Rafting, Snow Shoeing, Wind Surfing, and Outdoor Photography.

Orienteering	62/38.3%	Biking	41/25.3%	Skiing	20/12.3%
Hiking	62/38.3%	Survival Skills	40/24.7%	Kayaking	20/12.3%
Backpacking	60/37.0%	Swimming	39/22.1%	Down Hill Skiing	17/10.5%
Ropes Course	50/30.9%	Outdoor	27/16.7%	Rafting	15/9.3%
Canoeing	50/30.9%	Casting/Angling	24/13.8%	Snow Shoeing	12/7.4%
Initiative Games	45/27.8%	Other (see *)	23/14.2%	Wind Surfing	5/3.1%
Rock Climbing	42/25.9%	Cross Country	23/14.2%	Photography	3/1.9%

* SCUBA, in-line skating, mountaineering, archery, map reading, riflery, hunting, environmental education, and conservation activities.

Table 2. Reported frequencies and percentages of outdoor-related activities taught within physical education curricula.

Table 3 presents the percentage of class time spent in lecture or field settings. Fifty-one respondents out of 92 (55%) indicated they spent 20 to 30% of their class time in lecture. Forty-two respondents out of 89 (47%) indicated they spend 70 to 80% of their class time in the field.

	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Lecture	9	27	24	11	9	5	3	3	1	0
Field	2	2	6	9	9	11	19	23	6	2
Other	11	9	3	0	2	0	0	0	0	0

Table 3. Percentage of class time spent in either lecture or field settings.

Table 4 lists the Teaching Aids used for the course. Video use was the most frequently reported at 47.5% and the Internet was the least frequently reported at 27.8%. Also reported were Guests, Text, and Periodicals.

Teaching aids	Counts	Percentage
Internet	45	27.8
Video	77	47.5
Periodicals	59	36.4
Guests	67	41.4
Text	65	40.1

Table 4. Teaching aids used in outdoor instruction.

Table 5 presents the number of units of outdoor education required for physical education majors. Thirty-four percent of the respondents require no units in outdoor education. Thirty percent require one unit, twenty-four percent require two units, twenty-five percent require three units, and thirteen percent require four or more units.

Number	Units and Credits
26/34%	
23/30%	1

18/24%	2
19/25%	3
4/5%	4
6/8%	other

Table 5. Outdoor education units (credits) required for physical education majors.

Survey results in the category of Instructor Qualifications were summarized in the areas of highest degree attained, area of degree concentration, and teaching experience. Table 6 indicates 36.8% of the respondents had earned their terminal degree, 48.7% of the respondents had earned a master's degree, and the remaining had earned a bachelor's degree and/or other certifications.

	Ph.D. Ed.D.	Master	Bachelor	*Other
Counts	43	57	6	11
percentage	36.8%	48.7%	5.1%	9.4%

*Recreation Administration, Recreation and Leisure Activities, Skiing.

Table 6. Instructor qualifications.

Table 7 indicates that 79% of the respondents had a degree in physical education, 7% had a degree in outdoor education, and 14% listed other (for example, Wilderness Education and NOLS).

	Physical Education	Outdoor Education	*Other
Percentage	79%	7%	14%

*Leisure behaviors, Wilderness Education, Recreational Parks and Leisure Services.

Table 7. Instructors' degree posted.

Table 8 lists the number of years of teaching experience reported by the respondents. Sixty-five percent had college teaching experience, twenty-two percent had public school teaching experience, and thirteen percent listed other as their experience.

	1-3 years	3-6 years	7-9 years	10 years +	Total	percentage
College	10	11	8	26	56	65.1%
Public School	5	8	2	4	19	22.1%
other	3	4	3	1	11	12.8%

Table 8. Years of teaching experience.

Survey results in the category of Textbook included several areas: whether a text was used; the title of the text used; whether there was a need to develop an outdoor education text; what content would be necessary in an outdoor education text; whether the respondent would be interested in being a contributor to a new text; and if the text were created would they adopt the text. Table 9 indicates thirty-one percent of the respondents used a text for their outdoor education course, twenty–nine percent used no text for the course, and forty percent did not respond to this item.

	Yes	No	No Response
Counts	50	47	65
Percentage	30.9%	29%	40.1%

Table 9. Textbook use by respondents.

There were thirty-one different titles of texts reported by the respondents. The texts used by two schools were:
Cowstails and Cobra's II (Rohnke, 1989), Lightweight Camping: A 4 Season Source Book (Hatton, 1981), Outdoor Adventure Activities for School and Recreation Programs Darst and Armstrong (1980), and Quicksilver (Rohnke, 1995). The other texts reported are listed in Figure 1.

The Backpacker's Field Manual by Curtis
Backpacking by Berger
Boy Scout Field Book by the Boy Scouts of America
Camp Counseling by Mitchell
The Camping Guide to Outdoor Pursuits by Drury
Cowstails and Cobra's II by Rohnke
Experiential Education in Higher Education by Kraft and Keilsmeier
Tom Brown's Field Guide to the Wilderness Survival by Brown
Mountaineering: Freedom of the Hills by Mountaineers Climbing Committee
Advanced Backpacking: a Trailside Guide by Berger
How to Climb a Rock by Long
Leadership and Administration of Outdoor Pursuits by Ford
Lightweight Camping: A Four Season Source Book by Hatton
Outdoor Adventure Activities for School and Recreation Programs by Darst
Outdoor Education by Klaus
Outdoor Pursuits by Blanchard
Outdoor Recreation by Ibrahim
Skiing by Conner
Quicksilver by Rohnke
Outdoor Recreation in America by Jensen
Outdoor Recreation Safety by Dougherty
Sports and Recreational Activities by Mood
Take a New Bearing by Ford
Teaching Lifelong Leisure Activities by Bennett
Teaching in the Outdoors by Hammerman
Wilderness Educator by Cockrell
Your Way with the Map and Compass Orienteering by Disley

Figure 1. Adopted Texts Reported by the Respondents.

Table 10 lists 36.4% of the respondents as indicating a need for the development of an outdoor education text. Twenty-five percent indicated a new text was not necessary and 38% listed no response to this item. Fifteen percent of the respondents

	Yes	No	No Response
Counts	59	41	62
Percentage	36.4%	25.3%	38.3%

Table 10. Respondents' perceived need for a text.

indicated they would be willing to contribute to the development of the text (see Table 11). Forty-seven schools and universities indicated they would be willing to adopt the new text (see Table 12).

	Yes	No	Maybe	No Response
Counts	24	63	1	74
Percentage	14.8%	38.9	.62	45.7

Table 11. The frequencies and percentages of respondents willing to contribute to the development of a future text outdoor education.

	Yes	No	Maybe	No Response
Counts	47	14	18	83
Percentage	29.0%	8.6%	11.1%	51.2%

Table 12. The frequencies and percentages of instructors willing to adopt a new text in outdoor education.

Figure 2 and Figure 3 illustrate the didactic and activity content reported as necessary for the development of an outdoor education textbook. Both the didactic and activity content is presented in rank order of most reported topics/activities to least reported topics/activities.

Didactic	**Percentage**
Developing an Outdoor Pursuit Program	56
Introduction to Outdoor Pursuits	51
Planning for Outdoor Trips and Expeditions	49
Areas for Outdoor Adventure	45
Organizations and Other Resources	44
Measurements and Evaluations for the Outdoor Program	42
Safety and Rescue	other
Equipment Repair and Maintenance	other
Risk Management	other
Wilderness Medicine	other
Survival Skills	other
Curriculum and Unit Ideas for PK-12 Teachers	other .

Figure 2. Necessary didactic content reported by respondents in rank-order.

Activities		
Orienteering (33%)	Backpacking (33%)	Hiking (33%)
Ropes Course	Rock climbing (30%)	Survival Skills (28%)
Initiative Games (28%)	Swimming (24%)	Casting and Angling (18%)
Rafting (16%)	Kayaking (16%)	Cross Country Skiing (16%)
Wind Surfing (14%)	Down Hill Skiing (14%)	Snow Shoeing (13%)
Skiing (13%)	Outdoor photography (9)	Rappelling & Riflery (7%)

Figure 3. Necessary Activities Content Reported by Respondents in Order.

The open-ended question at the end of the survey netted a variety of responses with three common threads:

A. a concern that the region will affect content of outdoor education courses
B. a preference for no required outdoor education courses
C. a desire to review any new text that is developed

There were 34 respondents to the open-ended question.

Conclusions and Discussion

Since there was a 30% response rate to the survey, results can be generalized to the population of 536 College and University undergraduate physical education programs across the nation. The majority of outdoor education courses reported do not comply with accreditation by NCATE but are part of the physical education programs. While there was a general concern stated by the respondents about the regional nature of outdoor education activities, the survey indicated very few activities of a program-specific nature. Most programs reported teaching orienteering, hiking, backpacking, canoeing, rock climbing, biking, skiing, kayaking, rafting, and so forth.

The instructional format reported in the survey indicates students in outdoor education courses spend more time in the field than in the classroom. Teachers use a variety of traditional teaching aids. There is no consistent number of credit hours offered for outdoor education courses. However, universities reported a requirement of one to three credit hours.

Most instructors of outdoor education courses were prepared at least at the master's level with a major in physical education. Thirty-seven percent were prepared with a terminal degree and forty-nine percent with a master's degree. Most of the faculty teaching outdoor education had college-level teaching experience with about half having over ten years of experience.

Only about one-third of the schools used a text for their outdoor education course. There was no consistency in the title of the text used for the course. If a text was used, it was not comprehensive in regard to covering all aspects of outdoor education content. Many of the titles were activity-specific such as backpacking, rock climbing, initiative games, and so forth. There is no universally recognized text for the outdoor education course. Survey respondents clearly indicated the need for a comprehensive text in outdoor education. A third of the respondents were interested in adopting the text if it were developed.

Survey respondents were specific about the important content necessary to introducing outdoor pursuits. It would be essential to define outdoor education and develop an outdoor pursuit program design. Major concepts to be included are planning for outdoor expeditions, measurement/evaluation for the outdoor program, areas for outdoor adventure, organizations and resources, safety and rescue, equipment repair and maintenance, risk management, unit ideas for PK–12 teachers, and activities. The recommended activities would be orienteering, skiing, rock climbing, kayaking, hiking, survival skills, backpacking, rafting, ropes, and others.

Recommendations

There is a need to develop course content/syllabus guidelines that would meet NCATE Accreditation requirements. Since outdoor education should be experientially oriented, it would be especially important to include the learner competencies/outcomes for the major outdoor education activities. The outdoor education course should not be less than two credit hours with at least one of the credit hours being designated as field experience.

Special attention needs to be given to the outdoor education activities in the program design. Outdoor education experts would need to agree on the essential basic activities required in a course that could be supplemented with regional-specific

activities. The focus of the instruction needs to be field-based rather than classroom oriented. Any teaching aid would be a supplement to the hands-on experience in the field. In planning the field-based experiences, consideration for the minimum number of instructional minutes for each activity needs attention.

There is a need to develop a comprehensive outdoor education text for physical education majors with both theory and field-based information. The content of the text should embrace the concerns of the educators who responded to this national survey.

References

California Commission on Teacher Credentialing (CCTC) (1994). Physical education teacher preparation in California: standards of quality and effectiveness for subject matter programs. In handbook for teacher educators and program reviewers. Sacramento, CA: Commission on Teacher Credentialing for California.

Darst, P.W., & Armstrong, G. P. (1980). Outdoor Adventure Activities for School and Recreation Programs. Prospect Height, Illinois: Waverland Press Inc.

Rohnke, K., Tait, C., & Wall, J. (1994). The Complete Ropes Course Manual (2nd ed.). Dubuque, IA: Kendall/Hunt Publishing Company.

Rohnke, K. (1989). Cowstails and cobras II: a guide to games, initiatives, ropes courses, & adventure curriculum. Dubuque, IA. Kendall/Hunt Publishing Company.

Recommended Reading

Bennett, J.P. (1997). Teaching lifelong leisure activities. Boston, MA.: American Press.

Berger, K. (1998) Advanced backpacking : a trailside guide. (1st ed.). New York, NY: W.W. Norton & Co.

Boy Scouts of America (1984). Boy scout field book. Workman Pub.

Brown, T. (1993). Tom Brown's field guide to wilderness survival. New York, NY: Berkley Books.

Curtis, R. (1998). The backpacker's field manual: a comprehensive guide to mastering back country skills (1st ed.). New York, NY: Three Rivers Press.

Darst, P.W. (1991). Outdoor adventure activities for school and recreation programs. Prospect Heights, IL.: Waveland Press.

Davis, D., & Carter, D. (1994). Mountain biking. Champaign, IL: Human Kinetics.

Disley, J. (1971). Your way with maps and compass: orienteering. London, England: Blond Educational Publishing CO.

Dougherty, N.J., & the School and Community Safety Society of America. (1998). Outdoor recreation safety. Champaign, IL : Human Kinetics

Drury, J.K. (1999) The camper's guide to outdoor pursuits finding safe, nature-friendly and comfortable passage through wild places. Boulder, CO.: NetLibrary, Inc.

Edwards, S., & McKenzie, M. (1994). Snowshoeing. Champaign, IL: Human Kinetics.

Ford, K. (1994). Kayaking. Champaign, IL: Human Kinetics.

Ford, P.M. (1991). Take a new bearing: skills and sensitive strategies for sharing spiders, stars, shelters, safety, and solitude. Martinsville, IN: American Camping Association.

Ford, P.M. (1993). Leadership and administration of outdoor pursuits. (2nd ed.). State College, PA.: Venture Publishers.

Hammerman, D.R. (1994). Teaching in the outdoors (4th ed.). Danville, IL.: Interstate Publishers.

Hatton, M.J. (1981). Lightweight camping: a four season source book (1st ed.). Rexdale, Ontario: Humber College Press.

Jensen, C. (1995). Outdoor recreation in America. Chicago, IL.: Human Kinetics.

Kraft, R.J., & Kielsmeier, J.C. (1995). Experiential learning in schools and higher education. Dubuque, IA.: Kendall/Hunt Publishers.

Long, J. (1999). How to rock climb! (3rd ed.). Helena, MT: Falcon/Chockstone Press.

Mitchell, V. (1904). Camp counseling: an illustrated book of know-how for the camp worker (2nd ed.). Philadelphia, PA: Saunders Publishing.

Mood, D. (1999). Sports and recreational activities (12th ed.). Boston, MA: WCB/McGraw-Hill.

Mountaineers Climbing Committee (1975). Mountaineering: the freedom of the hills. Seattle, WA: Cordee Publishers.

Rohnke, K. (1995). Quicksilver: adventure games, initiative problems, trust activities, and a guide to effective leadership. Dubuque, IA.: Kendall/Hunt Pub. Co.

Seaborge, E., & Dudley, E. (1994). Hiking and Backpacking. Champaign, IL: Human Kinetics.

Watts, P. (1994). Rock Climbing. Champaign, IL: Human Kinetics.

Wilderness Education Association (U.S.) (1991). The wilderness educator : the wilderness education association curriculum guide. Merrillville, IN.: ICS Books

Leave No Trace Teaching Methodology

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Introduction

As wilderness use by organized groups increases, it follows that impact to the surrounding environment will increase proportionately. However, this impact typically occurs within the first few visits to a wilderness site, so if impacts can be avoided or reduced, not only initially, but over time by users, hopefully wilderness can stay wilderness. Impacts may be reduced through instruction, education and reinforcement of minimum impact techniques. It is the purpose of this presentation to allow participants to experience several techniques for educating wilderness users (especially groups led by an instructor). Three initiatives are presented that are usable with various sized groups, one is an icebreaker, one is a follow up to a lesson in minimum impact camping technique, and the other includes skits used to teach or reinforce a previous lesson.

For organized wilderness groups led by instructional staff, reduced environmental impact requires a transfer of minimum impact knowledge and behaviors between the instructor and student. It is through the wilderness instructor that students learn minimum impact techniques for traveling and camping in the backcountry. These techniques require the student to use specialized equipment, practice environmentally-sensitive travel techniques, and thoughtfully apply low-impact concepts within an ethical framework. Various methods exist to teach minimum impact techniques and there are several excellent sources to obtain lesson plans and other information (Bonney & Drury, 1992; Burr, 1997; Leave No Trace website). For the purpose of this presentation, teaching methods for minimum impact techniques will follow the 2002 Principles of Leave No Trace (LNT), Inc. These principles include:

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
6. Respect Wildlife
7. Be Considerate of Other Visitors

The Icebreaker

The following is a spin on an icebreaker known as “Have You Ever?” which allows new students to introduce themselves to each other and may be altered to complement any range of activities. Students are presented with a series of written questions (see Appendix) in which students are asked if they have ever participated in a certain activity or behavior. This activity can be tailored to anything from introductory wilderness courses to expert to even non-wilderness settings. The goal of

the activity is to encourage students to introduce themselves to one another and find out something about the other person. Upon asking, hopefully the new person will have done one of the items from the list of questions which the other person records. The person asking now moves on to find another new person who has completed one of the questions of the activity. A typical “Have You Ever?” question for an introductory backpacking course might be “have you ever, eaten GORP, …seen a bear in the wild, or …used iodine to treat water”.

The “Have You Ever?” activity included in the appendices utilizes a combination of questions relating to LNT principles and other various items. The other items do not have to be specific to the course itself, they help to provide variety, such as “have you ever, known someone famous, or …ridden a motorcycle”. After giving students enough time complete the activity, you may wish to go over the question list with them, some interesting facts about the students may surface aiding in group cohesion immediately.

The Lesson Follow-up

Another spin on the above “Have You Ever?” is a fast paced exercise, which may be effective with those already familiar with LNT principles. Gather participants in a circle facing inward, with one person in the middle. The middle person asks the surrounding circle a “Have You Ever” type question that relates to aspects of the LNT principles. Appropriate questions may be “have you ever started an accidental fire?” (LNT Principle # 5: Minimizing Campfire Impacts). Now all the participants who have started an accidental fire must run and swap places with someone else that has started an accidental fire. The person in the middle tries to catch one person that is trading places. The person caught goes to the middle and asks the next question, or if no one is caught the original middle person goes back and asks another question. Also, if after asking a question, no one moves, then another question must be asked. Add variation by giving the middle person a rubber chicken or other silly object to tag others who are trading places.

Using Skits

Divide students into seven groups (depending on total group size), instructors may wish to remain detached from groups or participate with student groups or form their own group. Each group is handed a LNT plastic card that includes the seven LNT principles and details about each principle. Then each group is given five to ten minutes to create a highly entertaining and educational skit that highlights each detail about the principle they choose or are asked to present, from the plastic card. Each group member must participate in the skit in some form and groups are encouraged to within reason, utilize their surroundings to facilitate the presentation, and create props. Also, encourage creativity, being dramatic, role-playing and remind groups to applaud one another for all skits. Depending on course timing and/or instructor preference, the activity may need to be frontloaded with an explanation of the LNT principles.

References

Bonney, B. F., & Drury, J. K. (1992). The backcountry classroom, lesson plans for teaching in the wilderness. Merrillville, IN: ICS BOOKS Inc.

Burr, S. W. (1997). Wilderness stewardship-minimum impact and Leave No Trace techniques for the wilderness. In R. Zabriskie and J. O'Connor (Eds.), *Annual Bradford Institute on Americans Outdoors* (pp. 27-38). Bloomington, Indiana University.

Leave No Trace Outdoor Ethics (n.d.). Retrieved February 14, 2002, from http://www.LNT.org/.

Appendix

Have You Ever…?

Objective: Find as many other people that have done the following items. Write their name down to help you remember who has done what.

Have You Ever…

…been to a foreign country? Where?
…gone camping and forgotten your tent poles? what happened?
…found a fire ring in the middle of nowhere?
…camped on/under a rock?
…known someone famous?
…found a great campsite right next to a creek/river?
…found cool cultural artifacts? What was it?
…used a backpacking stove?
…seen a bear in the wild?
…started an accidental fire? How?
…ridden a motorcycle?
…climbed a big mountain? Where?
…had a tire fire?
…had frostbite?
…found garbage in the backcountry?
…seen a wolf in the wild?
…been caught in the rain with no rainjacket?

The North Carolina Outward Bound School Program Delivery Structure

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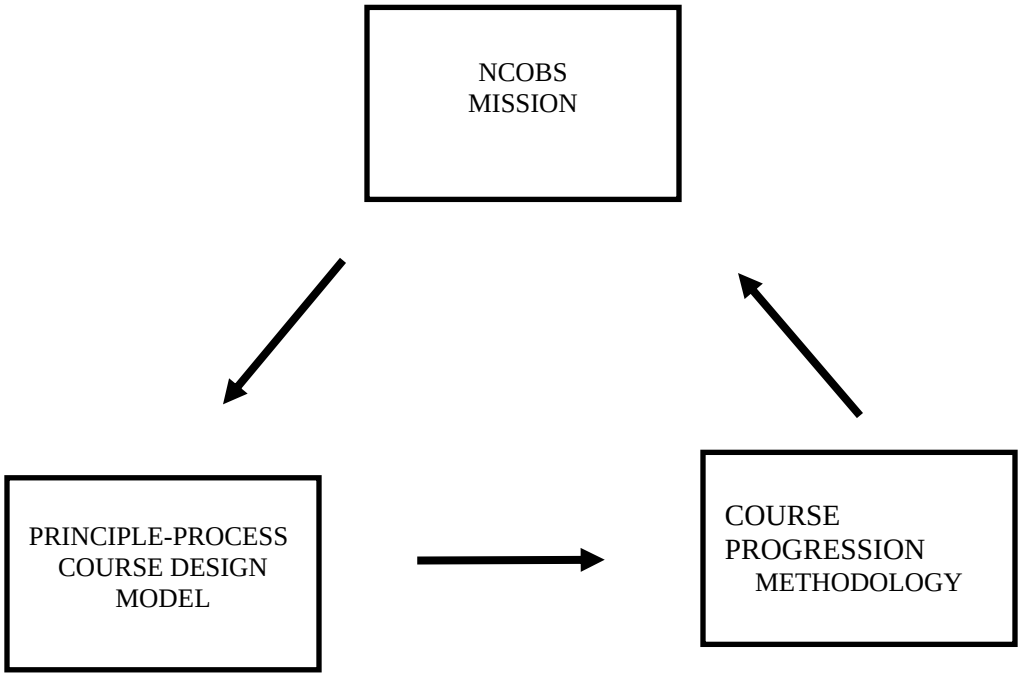

Introduction

The mission statement of North Carolina Outward Bound School (NCOBS) states that, as an organization we are assigned with the task of delivering a safe, adventure-based learning experience that is challenging, affirming and significant. It goes on to state that these experiences will then result in personal growth, self-reliance, compassion, a commitment to serve, moral courage and respect for the environment.

There is little debate that NCOBS in its' 35 year history has attempted to deliver courses that on some level meets these ambitious expectations. The question of consistency, however, has had our organization in dialogue about whether we can honestly say that every course is in line with our stated mission. In order to establish such consistency with regards to program delivery, it was determined that a clear delivery structure be created to support the desired end-results of our mission.

Principle-Process Course Design Model

The Principle-Process Course Design Model is a clear and logical structure for designing wilderness courses. This model begins by establishing the "key processes" that sequentially structure all wilderness courses and then defines their function within the

structure of our organizational mission. These key processes are known as the **5 P's** and are set in order in the following sequence:

1) **Principles**
2) **People**
3) **Place**
4) **Program**
5) **Performance**

Operationally, this model is used most effectively in pre-course planning to structure the course design for both the course director and the instructors. This model insures that the key elements of a wilderness course are logically being cared for and that a principle-based performance will be the end result.

Principles. The first key design element that is put in place is a set of guiding principles that will become the "rule of conduct" and the fundamental truths that the course will operate under. They provide the "true north" direction that will be constantly referred to, defined and evaluated. Instructors design the course so that they "language" these principles and have them become a part of the course vocabulary.

The guiding principles that have successfully regulated NCOBS through its' history is the four pillars: **Self-Reliance, Physical Fitness, Craftsmanship and Compassion.** It is a testament to their longevity and strength of purpose that anyone associated with NCOBS, when asked, would be able to recite them. What is critical for this model's success has been to bring these pillars, plus the addition of **Wilderness** and **Leadership,** into the forefront of the curriculum and structure them as the guiding principles of all wilderness course designs. What is important from an instructional standpoint during pre-course activities is arriving at a common understanding of each principle. Once that common ground has been reached these principles serve as the driving force with regards to the course design, the relationships that are built around them and the performance levels that are reached on course.

People. Although it is acknowledged that there are many individuals involved with the delivery of a course, the course director, instructors and students are the key individuals to design the course. It is during this process where a working relationship is set up between all three. Understanding the others' roles in the process of designing a thoughtful principle-based course sets up this relationship. It is also here that instructors begin viewing themselves and the crew as a learning community.

Course Director. Course directors serve to set-up the operational structures that allow the instructors to establish their working relationship around the guiding principles. They act as a supervisor and guide in keeping the instructors mindful of the principle-process model and the "big picture." Directors also serve as the critical eye regarding the evaluation of overall performance levels of instructors and crew.

Instructors . Key to the success of any course is the working relationship among instructors. From a principle-process course design model this means that the instructors initially establish their relationship around the six guiding principles. This provides a common ground for the instructors to begin designing a course that will establish some structural norms and language that will be modeled to the students.

Students. After the instructors establish their working relationship, the next step in the "people" process is to begin studying the profile of the crew. There is much information that is available that will help guide the creation of an appropriate course through careful review of the make-up of the students. How to design a course around a set of guiding principles is different for juniors, youth and adults. It also can vary from individual to individual. That is why it is critical to spend time really studying your audience and its' diversity.

Place. With the establishment of clear working relationships and the profile of the population determined, the next order of things is to structure a thoughtful expedition. It has been important that the expedition serve the purpose of fulfilling the guiding principles and the people served, not the other way around. A well-designed expedition should not only be evaluated on where a crew goes, but also the manner in which they get there and what they learn along the way.

It is during this process that instructors map out not only the destinations, but also establish a safe learning culture that will be a stage where the guiding- principles can be played out. This is where consistent referencing to the principles allows students to rally around a set of structural norms that gives an educational purpose to the oftentimes-perceived adversity of expeditioning.

Program. Once the course design has established parameters for creating a safe learning environment, instructors can then begin designing a curriculum driven program. It is here that instructors create dynamic lesson plans for each course component that focuses on various learning styles and mastery of skills.

Established course curriculums become the vehicle that drives the guiding principles. There is also an established methodology that structures the delivery of the lesson plans to insure that skills are being assessed and evaluated along the lines of a natural learning progression.

Performance. This is the final key process where the principle-process course design model comes full circle. From both an operational and program delivery standpoint this is where a determination is made on the effectiveness of the course in establishing the guiding principles and also bringing the stated mission to fruition for the crew.

A critical component to this design process has been creating effective evaluation criteria that clearly target the desired end-results. These performance-based evaluations have allowed for a dynamic process in which assessments are made in a timely manner and adjustments are made accordingly both during the course and after.

The overall course design should lay the groundwork that builds on both personal and technical skills. It is important to note that performance is an expectation for every course at NCOBS. With the guiding-principles grounding the course design process, the intentional outcome is that a principle-based performance should always become the "norm" both for the instructional team and the students.

Course Progression Methodology

The Course Progression Methodology at NCOBS is a sequential process that addresses both the individual and group development of a crew as they move from fear and anxiety of the unknown towards personal power and performance (Training – Main – Final).

It is during this process of the program delivery structure where the educational structures that were established during the course design are set in motion. At the center of the teaching are the guiding principles.

What has been key to the success of this educational progression is that instructors do not remove themselves from the learning process. As students are developing and asking themselves the critical questions of individual development so are the instructors, creating a truly dynamic learning community. Training in this methodology has allowed instructors to be mindful of the indisputable laws that govern how individuals /groups develop and learn on a course. It also has assisted in building instructor judgment by establishing a clearer understanding of the connection between what is happening on a course and how it happens. **(See table of Course Progression Methodology).**

Course Progression Methodology

Stages of Individual Development	Critical Questions	**Stages of Group Development**	**Outcomes**
1) Identity	Who am I?	Norming	**Setting of static and dynamic norm structures. Set high expectations**. Training Expedition
2) Connectedness	Do I Belong?	Forming	Establishing relationships based on support. Begin developing a safe place for learning. **Training Expedition**
3) Competence	Am I worthy?	Forming	Expanding skill base. Addressing learning styles and teaching for "mastery". **Main Expedition**
4) Purpose	Why am I here?	Storming	Re-visiting principles established with dynamic norms. Re-affirming commitment and expectations. **Main Expedition**
5) Power	Does what I say or do have any significance?	Performing	Through a continuous process of building on principles, support, engaged learning and pushing past conflict, a level of power and self-reliance is obtained for both the individual and the group. **Final Expedition**

Outcomes

Throughout the history of NCOBS, wilderness courses have gone through many evolutions. The basic key processes that underlie their design, however, have remained the same. What makes this delivery structure unique is it brings to the surface a structure that is simple for everyone, from logistics to field staff, to comprehend. It has created a common language and direction for the entire school. It has illustrated the need for changes in an institution that was experiencing some stagnation with regards to program delivery. It has enabled the organization to remove antiquated policies and procedures, replacing them with operational structures that support staff development and retention. Other key outcomes have been:

- This structure has set clear program norms for both field staff and logistics with regards to pre-course efficiency. It has created an atmosphere where course design expectations are to be both intentional and educational. The norm is that an instructors' performance evaluation begins at pre-course, not at course start.
- High quality trainings have been developed focusing on course design and methodology. This has raised the standard for more seasoned staff as trainers and mentors to new staff.
- Individual Development Plans for field instructors have allowed staff to direct their own development in areas such as; Leadership, course design, teaching presentations, technical skills, professionalism and risk management.
- Base camp operations have become more systematic with regards to course planning. Logistics and programming are coordinating efforts to insure that instructor's time is used efficiently with regards to creating quality course designs.
- Everyone from the Executive Director to Course Directors has participated in supervisory trainings that focus on staff development and retention. A by-product of this is that the school is beginning to experience a more stable leadership structure, which will in time positively effect the retention of our skilled field staff.
- NCOBS has become a safe place to learn new skills for both the students and staff. Many innovative principle-based lesson plans and course designs have already been developed in the field.

Reflections

In the two years since this program delivery structure has been implemented it has clearly created a stronger culture among our staff with regards to their responsibility as outdoor educators. What has made the NCOBS program delivery structure so innovative is that it has taken the complexities of running a wilderness school and reduced it into its' most simplest of terms. The principle-based course design (5p's) could be introduced to any OB school or wilderness school because the key processes we all share. The Course Progression Methodology is based on indisputable laws of both individual and group development that are universally accepted by most outdoor educators. It is not that any of this structure is that radically new. What is new and worth sharing, however, is NCOBS commitment to its guiding principles and systematically structuring the delivery of our programs around them in fulfilling the mission of our school.

Resources

Association for Experiential Education. (1990). *Experiential learning in schools and higher education*. Iowa: Kendall Hunt Publishing Co.

Covey, S. R. (1990). *Principle-centered leadership*. New York: Simon and Schuster.

Fritz, R. (1989). *The path of least resistance*. New York: Fawcett-Columbine.

Glasser, W. (1984). *Control theory*. New York: Harpers and Row.

Kotter, J. P. (1996). *Leading change*. Boston: Harvard Business School Press.

Napier, R. W. (1993). *Groups: Theory and practice*. Boston: Houghton Mifflin Co., 1993.

North Carolina Outward Bound School Instructor Field Manual.

Purkey, W.P. & Novak, J.M. (1988). *Education: By invitation only*. Bloomington, Indiana: Phi Delta Kappa Educational Foundation.

Senge, Peter M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Currency Doubleday, 1990.

Wheatley, Margaret J.(1992). *Leadership and the new science: Learning about organization from an orderly universe*. San Francisco: Berrett-Koehler Publishers, 1992.

Proposed Development of a Standardized Testing Instrument and Administration Procedures for Cognitive Evaluation of NSP Candidates.

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Rick Grimes
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Presentation Overview

The concept of an instructor National Standards Program (NSP) certification implies standardized evaluation and performance across the curriculum to assess the cognitive components of outdoor leadership skills. This presentation was to introduce the development of a suggested evaluative instrument and supporting procedures intended to assess NSP candidates for knowledge, comprehension, application, analysis, and synthesis of the 18 point curriculum and to propose it's implementation as a pilot project. Currently students are evaluated primarily by the subjective appraisal of the certifying instructor (peer and self-evaluations notwithstanding). From a measurement perspective an objective component will add to the standardization of the process. This workshop focused on the developmental process of constructing such an instrument and developing supporting administrative procedures for its implementation. Topics discussed included test construction and analysis, as well as reliability, validity, objectivity of tests. Testing philosophy related to discrimination versus mastery type instruments was also discussed as they might relate to NSP certification process.

Reactions to the Presentation

As expected, the suggestion of standardized testing for NSP Certification had both proponents and opponents. The presentation generated philosophical discussion [which led to] heated debate with respect to both sides of the issue. Point(s) of view opposed to standardized testing articulated such concerns as "*over*" standardization of the certification process, the potential for confusing certification with the process of "*true*" education and the potential for establishing validity and reliability in for a curriculum that aspires to focus on judgement and decision-making. In contrast to those in opposition to a standardized testing instrument/process there was also significant support. The primary position being that in order to achieve greater endorsement of the NSP model, certification must be based on consistent standards capable of being assessed, demonstrated, and documented in a format recognized by external entities. Namely an instrument that was objective, valid, reliable and administered in a format understood and accepted by professional peers, land-managing agencies/personnel, and/or the public at large.

For the Membership at Large

As a follow-up to this presentation an article being written for publication in the WEA Legend is currently in process. The focus of the article will be a point / counter-point position statement articulating the contrasting philosophies of the implementation of a standardized test for NSP Certification.

Successful Leadership of Adolescents in Backcountry Settings

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Objectives

*At the conclusion of this workshop, participants should be able to:

1. Describe the unique psychosocial features of adolescents which impact successful leadership;
2. Recognize behaviors in adolescents which may adversely affect group dynamics and plan strategies to deal with these;
3. Demonstrate some successful facilitation techniques for use with adolescents.

BIOPSYCHOSOCIAL FEATURES OF ADOLESCENTS CRITICAL TO FACILITATION ON CHALLENGE COURSES

- Rebelliousness. "Adolescence" is a twentieth century concept; before 1900, many late-teenagers were independent, married, working members of society. Adolescents, who are now biologically mature at an earlier age than a century ago, are paradoxically much less independent. A consequence of this is a constant need to challenge authority. Arguably, failure to exhibit this to some degree is indicative of abnormal development.
- Risk taking. In many ways, risk-taking behavior is an extension of rebelliousness. Psychologically, adolescent "egocentrism" may result in a perception of invulnerability. This dynamic is behind the tragedies which make up the headlines of newspapers every day. Challenge courses, however, may offer the opportunity of a "controlled risk" situation.
- Variations in the tempo of puberty. The timing of the onset and completion of puberty and the pubertal growth spurt is highly variable. A group of adolescents ranging in age from 13-18 will likely include some in whom puberty has yet to commence and others who are fully mature. Discordance between chronologic, biologic, and emotional maturity may impact interactions within the group and between the facilitator and the group.
- Cliques. Adolescence is a time of intense friendships. If a group is composed of teenagers who have known each other for awhile, it is likely that there will be some pre-existing cliques. If these are not significantly impacting group goals, it is pointless to attempt disrupting them.
- Bullying. One of the least savory aspects of adolescent interpersonal relations is the bullying dynamic. This must be distinguished from the nearly constant, random "microconflicts" which characterize many groups of male teenagers.

***Note that the concepts and techniques developed in this workshop are mainly pertinent to "normal" adolescents. It is not designed to address the needs of facilitators working with adolescents in therapeutic situations.**

QUALITIES OF EFFECTIVE ADOESCENT LEADERS

- Non-authoritarian style. Teenagers with an element of rebelliousness will be innately distrustful of adults with an authoritarian approach. Authoritarianism may be subtly conveyed by mannerisms, tone of speech, and general attitude.
- Consistency and fairness. Adolescents are particularly adept at recognizing adults who seem to favor one over another, or who have responses to similar situations which are not uniform.
- Age appropriateness. Adults who try to relate to adolescents by adopting their speech, dress, mannerisms, etc. are generally looked upon with derision.
- Respect. Adolescents deserve and expect to be treated as adults. If one has any questions about the appropriateness of an action toward a teenager, imagine the identical action taken by an adult supervisor toward an employee. If the action is not appropriate in an adult-adult setting, it is inappropriate in an adult-adolescent setting.
- Concrete communication. Adolescents often function with a rather concrete level of communication. General suggestions about safety or procedures are less effective than specific statements. "Please don't step on the climbing rope" is a more effective statement than, "Be careful of the climbing rope."

GROUP PROBLEMS

The following three scenarios are very typical situations developing on a trek with a group of adolescents. We will split into three groups, and each group will develop a list of suggested strategies for a leader to use when confronted with similar circumstances. Try to employ some of the concepts developed during the first part of the workshop in developing these strategies.

Problem #1:

Shelly is the youngest, least experienced person on the trek. Her skill level in stove use, tent placement, etc., is clearly marginal. The other participants are clearly losing patience with her.

Problem #2:

John is significantly overweight and is having a great deal of difficulty in keeping up with the rest of the crew. Some of the others are beginning to resent what they perceive as his "holding everyone back."

Problem #3:

Craig is the most active of the trek crew. He seems to be in motion constantly. He ignores basic rules of stove safety, runs ahead of the rest of the group on the trail, and occasionally wanders alone out of the campsite.

IS IT ALL WORTH IT?

People who work with adolescents for any extended period of time will eventually question whether there is any point in their efforts. The "pay off" for this kind of work is frequently delayed, usually to a time well after the adolescent has left the program. The following true story may help facilitators through the inevitable down periods that come with dealing with teenagers.

From Scouting magazine, September, 1999. © Boy Scouts of America, 1999.
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Handheld Computers in Wilderness Education

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Introduction

As our small field of wilderness education progresses as a profession it has been our practice to seek out information and resources from other fields to advance our knowledge and increase its boundaries. Often because of the nature of our work outside we have neglected the use of current technologies in fear of not having an authentic wilderness experiences. Technology in the wilderness has been a controversial subject for many years. The first valuable technology that affected us dramatically was the use of cell phones. In the mid 1990's the debate raged on both sides of the issue of whether or not they belonged in the field. Many programs now issue them as standard equipment on extended expeditions. The use of handheld computers in many ways is very similar to the onset of the cell phone technology. The handheld computer or Personal Digital Assistant (PDA) can allow outdoor professionals to professionally organize and carry information into a wilderness setting without the bulk of paper, the weight of field manuals, and allows for easy compilation of participant medical and information forms. It will enable professional outdoor leaders new resources that have not been available in the past and keep documentation and paper work organized to professional standards. Professionals across many fields such as education, medicine and law have found them invaluable tools for personal organization and performance.

Meeting Basic Instructional and Instructor Needs

At first it is easy to defend a pad of paper, pen, and calendar, but when one realizes the true possibilities in using handheld computers in the wilderness it is apparent that it is a more effective and versatile tool. Course notes, student profiles, first aid notes, daily mileage log, can all be retained and organized onto the handheld and then easily printed once returning to civilization and computers. Handhelds allow instructors to do their work in the field and provide clear and professional documents immediately at course end. Many more possibilities exist for the handheld computer. Imagine having an entire collection of field guides in the palm of your hand. Color pictures and even sounds are a possibility. Many of our classic texts could be added to these databases for on the spot student information and reference. Data could be collected and analyzed immediately in the wilderness for research purposes whether it was environmental or sociological.

Having been an instructor who has done a hundred plus days of course work a year for the past few years, I have come to realize how important it is to be able to stay in touch with partner, friends, and family. It is easy to at first battle ethical issues of calling out of the field during a wilderness experience, but I will argue that as professionals we must be able to stay in touch with friends and family in order to maintain some resemblance of a personal life outside our work. All too often it is easy to become so

invested in a course that our personal lives become almost secondary. Service is a beautiful component of what we do, but in order to be effective at it we must first do service for ourselves. Keeping in touch is one form of this service. Communications is one need that a handheld computer can answer for outdoor educators. Cell phones add-ons are a popular addition to a handheld computer, but so are wireless Internet modules that allow the handheld to access the worldwide web. Thus, an instructor could check their email as well as send group information to the base.

Selecting a Handheld Computer for Wilderness Use

There exist some challenges to overcome when bringing this kind of technology into the field. Most of these machines are made for the casual office environments. Our office tends to be a bit more demanding on electronics and batteries. Fortunately many like-minded people have been producing items that make handheld computing a little easier on the outdoor professional. There are quality hard cases that enable the user to write through the case hence keeping the computer water tight and impact resistant. Several companies have provided possibilities for keeping the computers battery charged via external batteries or solar chargers. These are steps in the right direction for us, and I know of at least one of the major handheld companies that are manufacturing outdoor oriented PDA's.

Many people in our profession have a tendency to buy the best gear available because we rely on it often for our lives. With the PDA currently I would recommend not to buy the top of the line machines. The conditions we work in tend to be difficult on gear and currently PDA's are very affordable and thus if damaged replaceable. There are environmental factors that must be considered as well such as sunlight and cold. Many of the high-end machines tend to have color screens that are difficult to impossible to see outside on a sunny day and tend to have lithium rechargeable batteries, which quickly die in cold weather and must have a special recharger for outdoor use. The black and white or gray screen models have adjustable contrast and can be seen even at night with the help of an indiglo backlight that comes standard on many PDAs. Many of the middle price models tend to run on triple A batteries, which are easy to find and replace. I do recommend buying a model that allows the user to back up the data to a card or module. Occasionally as with any computer they do crash or lock up and it is nice to know that all the valuable information is safe.

PDA's allow the outdoor professional to organize, compile, and share vast amounts of information. It is a useful tool on a wilderness course and increases the margin of professional documentation. With the right PDA it can effectively replace many of the field guides we carry in the field; as well as our field journals, cameras, cell phones, and much of the paper work. Resistance is a natural reaction to change, but the benefits of these little machines and the fact that they are intuitively easy to use quickly win the favor of even the most skeptical.

Suggested Websites:

http://www.compaq.com/products/handhelds/index.html
http://www.handspring.com
http://www.hp.com/sbso/product/handhelds/
http://www.Palm.com

Development and Validation of the Outdoor Leader Experience Use History Instrument

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Introduction

Expertise gained in naturalistic settings has been shown to affect decision-making in a variety of ways (Zsambok & Klein, 1997; Fox, 1996; Simon & Chase, 1973). Outdoor leader decision-making is often cited as one of the most important competencies that professionals in the field possess (Priest & Gass, 1997; Cain & McAvoy;1990, Petzoldt, 1984). This abstract describes the conceptualization, development, and validation of an instrument designed to measure the personal and professional experience levels of outdoor leaders-the Outdoor Leader Experience Use History (OLEUH). The OLEUH represents one method to generate empirical measurement in what has historically been an intuitive arena. Researchers have utilized a method known as "experience use history" (EUH) to measure the multidimensional motivations of recreationists to participate, constraints to participation, subjective perceptions, and the influence of past experience on recreation behavior (Petrich et. al., 2001; Williams, Schreyer, & Knopf, 1990; Schreyer, Lime, & Williams, 1984; Schreyer & Lime, 1984). The EUH instruments solicit frequency of participation and activity information from subjects, as well as demographic information. This information can then be used as behavioral research variables. The instrument under development utilizes this approach to generate a norm-referenced measure of the "experience use history" for an outdoor leader. It was conceptualized that an outdoor leader's personal and professional experience in outdoors pursuits combines in the development of an individual's expertise as an outdoor leader and professional development. The OLEUH serves as a preliminary effort to develop a psychometrically sound instrument for the measurement of outdoor leader expertise for use in future research and training and professional development.

Method of Development

A Delphi process was utilized in the development of the OLEUH. A pool of 12 researchers and practitioners with expertise in the fields of outdoor leadership, adventure recreation, and experience use history were asked to submit, review and respond to a list of factors that they felt would encompass the experience of an outdoor leader. This list was refined through several iterations via email distribution list discussion. Through the discussion, the experience factors were grouped into two broad areas of personal and professional experience (Figure 1). Personal experience factors included level of education achieved, major area of study, estimated weeks of outdoor experience, average trip length, environments encountered, seasons in which experience was gained and frequency of participation by activity. Professional factors include an index of profession employment (compiled from trip length, tier of employer [local, regional, national, international], type of contract [seasonal, contract, full-time, etc.], and number of trips),

environments encountered (activity), seasons worked, weeks of experience by population, weeks of leadership by level (assistant instructor, instructor, etc.), certifications, and courses or trainings attended. This variable set was compiled in an instrument and administered to a small sample of college students (N = 21) for the purpose of coding and instrument revision. A revised instrument was generated that added longest personal trip and longest professional trip to the variable set. Tier of employer, type of contract, and major area of study were eliminated from the instrument due to difficulty in coding responses. A larger sample was obtained in order to generate reliability and validity data for the OLEUH from outdoor leaders at a university outdoor education center and an Outward Bound school (N = 121) during their respective staff trainings. Ninety-six (56 male and 40 female with a mean age of 28.66) usable forms were entered into SPSS for analysis.

Data Analysis and Results

The sample items were compiled into eight subscales along conceptual lines: professional activity, professional environment, professional population, professional leadership, personal experience level, personal environment, personal activity, and demographic. The subscales were then transformed into standardized scores (mean = 50, std. dev. = 10). Internal consistency reliability for the OLEUH was estimated by computing Cronbach's Alpha (α) for the eight subscales resulting in an overall reliability coefficient of .71 (Table 1). This coefficient meets the accepted standard for reliability coefficients of .70 (Nunnally, 1978).

The instrument possesses a certain degree of prima facie validity due to the Delphi process with which it was constructed and due to the direct nature of the items. In order to estimate construct validity, a factor analysis was conducted using principal axis factoring with direct oblimin rotation for these data. A two factor model was returned explaining 44.62 percent of the variance in this data set (Table 2). Due to the conceptual structure of the data the factors were named the professional factor and the personal factor, and factor loadings correspond to the conceptual structure of the instrument. Given acceptable internal consistency reliability and construct validity data, development of the OLEUH proceeded to score construction.

Two scoring schemes were developed. The first summed the T-scores for each subscale for an individual, which resulted in a limited range of scores (Range = 251). T-scores were also grouped (300-350, 350-400, etc.) and represented in radar graphs (Figure 2) by group means in order to estimate interaction and to provide a visual representation. The polygons created as a result lead to the second scoring scheme. The T-scores for each subscale were transformed into grid coordinates and the area of each polygon was calculated. The resulting scores have a greater range (Range = 781, Min. = 366, Max. = 1147) than the initial scheme and theoretically take into account the Euclidian space between vectors and estimating vectors unaccounted for in the current conceptual model. A one-way ANOVA was conducted to test differences in grouped means (ranked from lowest to highest by increments of 100) resulting in significant differences ($p<.000$) for the group as a whole. A Scheffe' test of post hoc comparisons found statistical significance ($p<.01$) between all seven groups (Table 3). Thus this scoring scheme demonstrates good discriminatory ability between individuals for the purposes of comparison (Figure 4).

Discussion

Conceptualization and development of an instrument to accurately measure an outdoor leader's experience levels presents a number of challenges. Chief among these challenges is the lack of a clear development of a construct structure that represents the individual's true experience and, as such, interpretation of scores should be made with caution – particularly with regard to making employment decisions about an individual's ability or experience level. However, the reliability and validity data generated from this sample is encouraging and merits further investigation. As well, the ability of the instrument to discriminate between individuals despite great differences in their particular outdoor experiences provides some research utility. Collection of additional data from varied samples will enhance the development of the instrument, as well as provide information regarding other possible vectors to include in the conceptual structure.

Limitations of the instrument include a reliance on subject memory and self-reported data. Using weeks as a unit of measurement-although more parsimonious than using years of experience, places a great deal of reliance on the individual's recall ability. Possible differences in the individuals ability to accurately recall personal outdoor experiences as opposed to professional experiences, which are more likely to have been previously tallied in the form of a resume, contributes to this limitation. It is also possible that recall is equally deficit for both areas of experience. At its current level of development, the OLEUH produces polygon area scores across the subscales; further development may lead to polygon area scores within each subscale, yielding greater depth of measurement.

Potential uses for the OLEUH include the assessment of staff development needs (individually and as a group), and use as a research variable for investigating the effect of experience on leader performance, decision-making, and program and participant outcomes. The OLEUH also generates a graphic representation of an individual's experience patterns. The conceptual structure of the measurement would also allow for translation to other areas of experience (leisure service providers, land managers, as well as subsets of experiential educators).

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Recreation Hard Skills Courses for Credit: A Collaborative Effort Between the Academic Department and the Outings Program.

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Abstract

Many benefits can be realized when Outdoor Programs and Academic Recreation Departments work together to offer university students for-credit recreation skills courses. Some of these benefits include: increased revenues, higher course enrollments, increased awareness on campus, recruitment of students into leadership/trip leader roles and/or new majors, and improved overall relationships between outdoor programs and academic recreation programs.

This paper presents the case of Indiana University Outdoor Adventures (IUOA) and Indiana University, Department of Recreation and Park Administration working together to offer students hard skills courses on a for-credit basis. The relationship of IUOA and the recreation department in offering these courses is discussed with an emphasis placed on examining the benefits associated with such a cooperative venture. In addition to costs and benefits, information on the types of courses offered, academic requirements, course fees, tuition, course enrollments, and logistics will be covered.

Historical Background

The relationship between Indiana University Outdoor Adventures (IUOA) and the Indiana University Department of Recreation and Park Administration began in the early 1980's with the Department providing IUOA with lists of potential graduate assistants willing to work with IUOA. If a graduate assistant was hired, IUOA would pay the student a stipend and the Department would cover the academic tuition.

In 1994, Dr. Joel Meier was hired as the Chair of the Department of Recreation and Park Administration, to be referred in this paper simply as the Department. Among the many assets Dr. Meier brought to the Department, was the Conservation and Outdoor Recreation and Education (CORE) program he had previously developed at the University of Montana. CORE is a 19 credit hour, semester-long program where outdoor recreation majors learn and practice outdoor recreation, leadership, and conservation skills in the classroom and in the field.

Besides bringing the CORE program to the Department, Dr. Meier also provided the vision of offering one-credit courses in specific outdoor skills; these courses were developed and listed as R100 courses. To initiate support and structure for the initial R100 courses, Dr. Meier insisted that nationally recognized outdoor curriculums be used. In the Fall semester of 1997 three R100 courses were offered to the student body: 1) Fundamentals of Search and Rescue (FUNSAR) was taught by a National Association of Search and Rescues instructor, 2) the WEA 18-point curriculum was utilized by a Wilderness Education Association (WEA) instructor for a seven day canoeing course, and 3) an American Canoeing Association (ACA) moving water kayak course was taught by an ACA moving water kayaking instructor.

These initial R100 courses were deemed successful and subsequently, course offerings grew from three per semester in 1997 and 1998, to six per semester in 1999 and 2000. Table 1 lists the courses that IUOA has taught since the establishment of the relationship with the Department. Twelve courses were offered during the Spring of 2001 and Fall of 2001. Twenty-two courses will be offered during Spring 2002 (see Table 2) and Fall 2002 (see Table 3) and an additional seven courses are scheduled for the summer terms. These courses will include: wilderness first aid, backpacking, vertical caving, rock climbing, ice climbing, canoeing, whitewater canoeing and kayaking, coastal kayaking, fly fishing, snowshoeing, cross country skiing, snowboarding, and orienteering. Many of these courses have more than one section each semester.

The format for the R100 courses taught by IUOA typically includes formal classroom instruction time, local skills instruction (e.g. time at a local climbing wall, pool sessions for kayaking), weekend trip to various locales, and a final exam. The courses also include skills evaluation and a written course assignment.

Table 1
R100 Skills Courses Taught by Indiana University Outdoor Adventures: Fall 1997 to Spring 2001

Semester	Course Title	# of Students
Fall 1997	Fundamentals of Search and Rescue	2
	WEA Wilderness Steward Program	2
	Introduction to Flatwater Kayaking	3
Summer 1998	Whitewater Canoeing	4
Fall 1998	Introduction to Flatwater Kayaking	8
	Fundamentals of Search and Rescue	3
Fall 1999	Whitewater Canoeing	6
	Fundamentals of Search and Rescue	10
	Whitewater Kayaking	8
	Vertical Caving	12
	Coastal Kayaking	11
	Rock Climbing	12
Spring 2000	Backcountry Snowshoeing	7
	Ice Climbing	7
	Mountaineering	3
	Rock Climbing	14
	Fundamentals of Search and Rescue	8

	Whitewater Kayaking	6
Fall 2000	Rock Climbing	10
	Vertical Caving	10
	Whitewater Kayaking	9
	Coastal Kayaking	10
	Backpacking	13
	Canoeing	11
Spring 2001	Cross Country Skiing	7
	Ice Climbing	6
	Ice Climbing	8
	Wilderness First Aid	24
	Fundamentals of Search and Rescue	15
	Whitewater Canoeing	10
	Rock Climbing	11
	Rock Climbing	11
	Whitewater Kayaking	12
	Coastal Kayaking	9
	Vertical Caving	9
	Snowshoeing	10
Total Number of Students		321

Table 2
R100 Courses Scheduled by IUOA for Spring Semester 2002

Activity	Location	Dates	Cost	Max #
Dog Sledding	Ely, MN	Jan. 1-6	$725	10
Snowboarding	Paoli Peaks, IN	Jan. 9, 16, 23, & 30	$295	16
X Country Skiing I	Munising N.F., MI	Jan. 11-13	$175	16
Ice Climbing I	Governor Dodge S.P., WI	Jan. 18-20	$200	12
Snowshoeing I	Manistee N.F., MI	Jan. 18-20	$175	18
Snowshoeing II	Manistee N.F., MI	Jan. 25-27	$175	18
X Country Skiing II	Munising N.F., MI	Jan. 25-27	$175	16
Ice Climbing II	Governor Dodge S.P., WI	Feb. 1-3	$200	12
Wilderness First Aid	IMU	Feb. 2-3	$175	25
Backpacking I	Shawnee N.F., IL	Feb. 22-24	$150	10
FUNSAR*	IMU	Feb. 15-17	$175	30
FUNSAR*	Hoosier N.F., IN	March 1-3	$175	30
Whitewater Canoeing	Rio Grande, TX	March 7-17	$575	20
Sea Kayaking	Baja, MX	March 9-17	$900	12
Whitewater Canoeing	Frankfort, KY	April 5-7	$150	18
Rock Climbing I	Daniel Boone N.F., KY	April 5-7	$175	15
Whitewater Kayaking I	Frankfort, KY	April 12-13	$175	10
Backpacking II	Shawnee N.F., IL	April 12-14	$150	10
Rock Climbing II	Daniel Boone N.F., KY	April 19-21	$175	15
Coastal Kayaking	Indiana Dunes S.P., IN	April 19-21	$175	12
Whitewater Kayaking II	Frankfort, KY	April 26-27	$175	10
Vertical Caving	Bedford, IN	April 26-27	$150	12

*Fundamentals of National Search and Rescue

Table 3
R100 Courses Scheduled by IUOA for Fall Semester 2002

Activity	Location	Dates	Cost	Max #
Wilderness First Aid	Bloomington, IN	Sept. 7-8	$175	30
Canoeing	Lake Monroe, IN	Sept. 13-15	$175	20
Vertical Caving	Area Pit Caves, IN	Sept. 14-15	$175	14
Leave No Trace Ethics	Bloomington, IN	Sept. 14-15	$175	14
Rock Climbing	Red River Gorge, KY	Sept. 20-22	$200	16
Fly Fishing	Niles, MI	Sept. 20-22	$225	12
Coastal Kayaking	Indiana Dunes S.P, IN	Sept. 27-29	$200	15
Vertical Caving	Area Pit Caves, IN	Sept. 27-28	$175	14
Rock Climbing	Red River Gorge, KY	Oct. 4-6	$200	16
Canoeing	Lake Monroe, IN	Oct. 4-6	$175	20
Backpacking	Shawnee Natl. Forest, IL	Oct. 4-6	$200	16
Mt. Biking	Seneca Rocks, WV	Oct. 11-13	$225	14
FUNSAR*	IMU	Oct. 11-13	$175	35
FUNSAR*	IMU	Oct. 25-27	$175	35
Coastal Kayaking	Indiana Dunes S.P, IN	Oct. 18-20	$200	15
Rock Climbing	Red River Gorge, KY	Oct. 18-20	$200	16
Fly Fishing	Niles, MI	Oct. 18-20	$225	12
Vertical Rescue	Monroe County, IN	Oct. 26-27	$175	16
Adv. Rock Climbing	Red River Gorge, KY	Oct. 25-27	$200	16
Backpacking	Shawnee Natl. Forest, IL	Nov. 1-3	$200	16
Survival Skills	Hoosier Natl. Forest, IN	Nov. 8-10	$175	14
Map & Compass	Hoosier Natl. Forest, IN	Nov. 9	$175	14
Wilderness First Aid	Bloomington, IN	Nov. 16-17	$175	30

*Fundamentals of National Search and Rescue

Getting Started

It is critical to realize that, in many cases, it may take a few years to establish for-credit recreation skills courses at an academic institution. An outdoor program will need to show that it can manage a quality outdoor recreation program before diving into the academic circle. Some departments may be more conservative and willing to change than others. Programs need to be patient in their efforts, and let the actions and track record of the program speak louder than the words the coordinator might have to say.

It may be helpful to seek out a faculty member, with a good background in outdoor recreation that the program/coordinator can begin to build a rapport with. Contact this faculty member and share with them the great things that the outdoor program has done/is doing. Depending on the faculty member's background, it may be appropriate to ask for some feedback on the programs' current trip and instruction offerings, staff training, and other aspects of the outdoor program. A faculty member that

is able to see the benefits and progress of the outdoor program is more likely to become invested in seeing the implementation and success of academic recreation skills courses.

The Risk Management Department should already have a good relationship with an outdoor program, via such things as a risk management plan and efforts by the program to keep them informed and up to date. It might also be important to give the academic department a chance to look through the programs' risk management plan, as well as, any and all quality written materials. This further establishes the credibility and ability of the outdoor program to teach skills courses for the academic department.

Logistics

Although, the logistics of teaching R100 courses have been simplified over the last four years, they still remain somewhat more demanding than the trips and courses normally offered as part of an outdoor program. One such logistic that may be out of the norm for an outdoor program is that the R100 course offerings are submitted to the university approximately a year in advance. This is due primarily to university timelines for preparing registration materials and processing courses. To accommodate this requirement, the outdoor program management is required to both plan and attempt to forecast the availability of instructors and the interests of students. While this is not really any different than what would be done anyway each semester, having to complete this planning nearly a year in advance demands a little more time, thought, and attention.

Many of the course logistics that are not university requirement/timeline bound are fairly common and in many cases are identical to those already being carried out by program coordinators. Some of the logistics to be considered in conducting R100 courses include: type of courses offered, equipment reservations, location of courses, vehicle reservations, dates of courses, course classroom session(s), classroom reservations, course budgets, enrollment maximums and minimums, instructor selection, itinerary and syllabi, and grading.

Course selection:

For-credit skills course offerings need to reflect the strengths of the outdoor program as well as the leadership resources available. IUOA began its involvement in R100 courses in a very conservative manner. Starting conservative allows a program to develop the for-credit courses and monitor the strength of them. Like all trips and courses, theses courses take time to develop and refine. A conservative start will also allow instructors to find success and develop more confidence in their role as an educator in an academic setting.

Classroom reservations:

If a classroom is needed for indoor instruction time, please remember to consult with the academic department the courses are being offered through and find out how to reserve academic classrooms. It is helpful to do this well in advance of when the classroom will be needed. Also consider using the outdoor program's meeting space if it is suitable and has resources such as: desks or tables, white board or chalkboard, and audiovisual equipment. Classroom meetings within the outdoor programs area will help provide additional exposure of the outdoor recreation program. Keep in mind that it may also be necessary to schedule a pool or climbing wall for course instruction.

Enrollment issues:

Maximum course enrollment numbers are difficult to estimate and manage. The reality of academic courses and the many drops and adds into courses for credit can be overwhelming and time consuming. It has taken three years to grasp the tendencies of Indiana University students. As an example, for winter courses IUOA will submit a maximum enrollment figure that is twice as large as the program wants to accept. If a winter course will have a maximum enrollment of 8 students actually going through the course, IUOA will allow 16 students to register through the Office of the Registrar. Based on a winter course drop rate of about 50%, the course will fill with 16 students, but only half will end up taking the course; the rest will drop.

The ongoing challenge is to estimate the student drop-out rate and adjust the maximum enrollment. In setting the maximum enrollment numbers for courses, it is also important to remember that students will want to add the course or seek approval to over-enroll the course after the normal registration period has ended. It is crucial to note that not all courses will have students drop. If the outdoor program has stated a maximum enrollment of 16 and all 16 students show up to take the course, the program is obligated to teach all 16. If the course was only designed to handle 8 students, a problem arises. Such is the nature of the challenges of determining optimal enrollment figures.

The outdoor program coordinator needs to thoroughly understand the academic institution's add and drop and policies and how they relate to the outdoor program's refund policies and procedures. These policies and procedures should be simple and well articulated by skills course instructors and in written course materials; this makes them somewhat easier to enforce.

Instructors:

Skills course instructors should be chosen four to six months in advance of the courses to allow for proper course preparation. Instructors need to review the assigned textbook for the course and become familiar with the materials in the syllabi. R100 lead instructors are required to have at least two years leadership experience with IUOA and have displayed numerous competencies, such as these for whitewater kayaking instructors:

- Current ACA Whitewater Instructor certification to lead in whitewater
- Demonstrate a thorough understanding of all concepts listed in activity outline
- 7 days lead boating on at least class II water (shadow trips do not count)
- Shadow an R100 whitewater course
- Demonstrate moving water rescue techniques
- Comfort/skill on class III water
- Write a mock itinerary that allows for driving, camp set up, cooking, instructional time, and participant skill demonstration
- Possess current WFA (WFR preferred)
- Demonstrate an understanding of leadership and learning styles

More details on the R100 instructor requirements for IUOA are stated within the in-house, R100 Instructor Manual written by Tom Stuessy. At IUOA, over 80% of the R100 Lead Instructors are graduate students or college graduates who live in the area.

Syllabi and Grading:

Each academic skills course for credit is required to have a syllabus and this should be prepared in accordance with the academic department guidelines. Outdoor practitioners are aware of the value of the outdoor experience, but may not be practiced in translating a participant's (in this case, a student's) experience into a letter grade. Instructors teaching recreation skills courses for an academic department must have an assessment tool from which they can fairly and accurately assess student knowledge and skills. Written exams on the material discussed during a course and typed reports about the students' experiences are among the most frequently used by IUOA. The instructors also utilize a skills exam that evaluates the students' ability to perform specific skills taught in the course. Such an exam not only evaluates students' skills, but it can provide an instructor with an opportunity to give feedback and additional instruction to the student. It is important to remember that there is a subjective component to a skills exam.

Benefits – Students and Leaders

Students, both leaders and participants, can realize many benefits from their participation in the R100 courses. On the surface, the benefits to student participants are not profound. As expected, the courses give them a chance to learn new skills, meet new people, and to travel. On a deeper level though, by virtue of cost and time commitment, the student participant is likely to be more invested in the process and willing to assume more responsibility than perhaps they would in any other academic class. This level of investment provides the student leaders an avenue to instill environmental and self-awareness, responsibility, as well as learning the details of a "community" and a technical skill.

To teach effectively, student leaders must be invested in both an "academic" and "recreation" attitude. This takes careful preparation and strong role modeling on the part of the seasoned leaders they will initially shadow. Careful selection of leaders must be employed as patterns of less than objective evaluations of skill and "no biggy" attitudes are detrimental to a program's integrity.

To help prepare student leaders for this challenge, IUOA requires a resume, references, interview, policy and procedure manual tests, and shadowing at least two same skill R100 courses. Once leaders have shadowed two courses, the administration takes into account: 1) leader to leader evaluations, 2) participant to leader evaluations, 3) opportunities for potential leader to demonstrate skills and assess another's skill, and 4) performance on manual tests.

Once the leader has successfully made it through the process many benefits are realized. Since the courses are held both in the classroom and the field, the young leader is exposed to multiple learning and teaching styles. In preparation for a course, student leaders are required to submit a copy of the trip itinerary, syllabus, and risk management plan. These responsibilities have led to a wonderful organizational and philosophical understanding of outdoor programming for many of the IUOA leaders.

In addition, student leaders are exposed to the challenges of skill and performance evaluation techniques. Since each participant does earn a letter grade, the student leader needs to be cognizant at all times of each participant's actions and use of newly learned skills. This evaluation process often occurs while participating in the activity and keeping in mind all other controls of outdoor leadership. Further, student leaders are given far more in-depth feedback from which to improve their skills. Since a for-credit skills

course is more formal than a regular outdoor program trip or clinic and they've paid a considerable lab fee, students are more willing to provide more feedback. This honest feedback is integral to the growth of skills, both technical and interpersonal.

Benefits – Financial & Programmatic

IU Outdoor Adventures (Financial):

In order to take a R100 course at Indiana University, a student must enroll in the course, pay the tuition, and pay an additional course or lab fee. The average lab fee for an R100 course through IUOA is $200 and it covers expenses such as travel, food, permits, and instructor salaries. This $200 lab fee is paid directly to IUOA via a signed student BURSAR form that authorizes the billing of the student. In addition to the lab fee, IUOA has been receiving $30 per student from the Department of Recreation and Park Administration. This has now been increased to $35.

To provide a basic idea of the financial benefits to the outdoor program, during the Fall 2001 semester the average gross income per course was $2159. The average net income after paying instructor salaries, food, and transportation cost, etc. was $825 per course. Note: at this time IUOA does not include gear depreciation and administrative costs in calculating the cost of conducting R100 courses.

IU Outdoor Adventures (Programmatic):

Some programmatic benefits are received in addition to the dollars and cents generated by these courses. Outdoor programs are likely to see a greater overall percentage of trips going out into the field. Due to credit hour issues, academic courses are less likely to be cancelled and they help balance out low 'fill' rates from regularly scheduled outdoor program trips. Reducing the cancellation rate of trips also greatly assists in planning efforts and forecasting revenues.

The academic courses facilitate increased visibility on university and college campuses by providing a reason to interact with the program. Registering for an academic hard skills course does not require that a participant is aware of the existence of the outdoor program. Once registered, students in these kinds of activity courses are introduced to the outdoor program, its staff, and what the program is really all about. Course participants are then likely to talk to roommates and friends about the experiences that they had learning new skills.

Lastly, those participating in academic courses may decide that they are interested in what the outdoor program represents and pursue future opportunities with the program. These students may come back as participants in other courses, regular trips, or they may become involved with the program and eventually end up as trip leaders and instructors.

IU Department of Recreation and Park Administration (Financial):

Before beginning this section of the paper it is important to point out that the methods for calculating and distributing tuition dollars within a university setting is not clear-cut by any means. The numbers used in this paper were estimated as accurately as possible, in coordination with the IU School of Health, Physical Education, and Recreation (HPER). The intent is to educate the reader and give them basic data that are considered to be as accurate as possible at this time.

Tuition for undergraduate students at Indiana University is determined by the number of credit hours taken and by the residency status of the student. Indiana residents

who enroll in 12-17 hours pay a flat fee of $2097; non-residents pay a flat fee of $6965. If an Indiana resident chooses to enroll in any less than 12 credit hours, they pay $131 per credit hour; non-residents pay $435. Students who wish to enroll in more than 17 hours pay the flat tuition fee, plus the additional per credit hour fee $131/$435 for the number of hours they wish to add above the 17 covered by the flat fee.

In order to estimate the financial benefits to the IU Department of Recreation and Park Administration, the lead author met with a representative from the IU School of HPER. The resident and non-resident undergraduate tuition revenues to the School were combined and then divided by the total number of student credit hours. It was estimated that the School of HPER received an average of $200 per credit hour, per student during a three-year period 1998-2001. At Indiana University, the School of HPER has chosen to credit each department with the tuition revenues they generate from their courses. The representative from the School of HPER emphasized that the calculation and distribution of these tuition monies is somewhat complicated, but that the $200 per credit hour was as accurate as possible.

This being considered, Table 4 illustrates the magnitude of the financial benefits provided to the Department by the outdoor program. The table shows that IUOA generated approximately $52,700 for the Department from Fall 1998 and Spring 2001. During this time period, IUOA instructed approximately 310 students in the R100 hard skills courses. This figure factors into account the $30 per student given to IUOA by the Department.

Table 4
Tuition Dollars (Generated by IUOA R100 Courses - Fall 1998 to Spring 2001) for Indiana University School of Health, Physical Education, and Recreation and the Department of Recreation of Park Administration

Semester	# Students	Tuition $
Fall 1998	11	$ 1,870.00
Fall 1999	59	$ 10,030.00
Spring 2000	45	$ 7,650.00
Fall 2000	63	$ 10,710.00
Spring 2001	132	$ 22,440.00
	310	$ 52,700.00

Note. The tuition figures used in this table have been estimated as accurately as possible. The tuition figures in this table represent $200 per student minus the $30 per student fee that is paid to IUOA, for a total of $170 per student.

IU Department of Recreation and Park Administration (Programmatic):

Like outdoor programs, the academic program can receive programmatic benefits from offering skills courses. First of all, by participating in a cooperative venture with an outdoor program, an academic program gains the ability to offer skills courses in some situations where they may not have had the resources otherwise to do so.

This kind of venture does not interfere with faculty course teaching loads that are often limited due to budget and time constraints. Working with an outdoor program also enables an academic program to teach courses that may be outside of the skills set of the department’s faculty members.

The Department has the potential to gain increased levels of exposure on campus. This visibility can help combat the "I never knew this was a major…" statement often heard by students when they first encounter recreation and leisure studies departments. This increased exposure may also benefit academic departments by attracting new majors to enroll in their programs.

The amount of energy expended by the Department to help coordinate the paperwork and approval of these R100 skills courses has an excellent return on the investment. They are able to offer courses and receive tuition dollars, without having to provide instructors, materials, logistics, etc. This certainly is a winning proposition for the Department.

Future Goals and Conclusion

Changes and updates are essential for continued quality improvement in an outdoor program. In changing or adding course offerings, it is important to consider different types of courses students might be interested in. Thinking outside of an outdoor program's traditional offerings may be a productive process for generating good ideas. Re-examining the skills and interests of the programs' staff is one way of doing this. Some examples of courses that have been added to the skills courses schedule taught by IUOA include: fly-fishing, vertical rescue, whitewater canoeing and sea kayaking in Mexico, and orienteering.

Another avenue for expansion and improvement would be to offer advanced courses for those students who have already participated in one R100 course. Advanced beginner courses in rock climbing, kayaking, ice climbing and backpacking can expand on skills already learned by participants. Refining skills and more difficult routes allow for participants to stay challenged. Another potential idea is offering courses over fall or spring breaks for 2 credit hours. Courses longer than four days, with greater time in the backcountry than the regular R100 courses, are more demanding and provide additional learning opportunities for all involved.

Staff training is on-going process as students graduate and leave academic institutions regularly. The mission at IUOA, in regards to R100 staff training, is to better prepare staff to assist on these types of courses and to groom them for lead instructor roles. With both weekend trip staff and R100 leadership, staff training is an on-going challenge and concern. The major difference is that the staff members who teach R100 courses have more responsibility in regards to skill assessment and grading. Teaching methods, as well as learning styles need to be part of the formal training effort to prepare staff to teach R100 courses.

This paper has focused on the benefits of outdoor programs working with academic programs to offer recreation skills courses to students. The authors admittedly have not addressed the costs associated with this type of venture but, in all truthfulness, they have found that the benefits far outweigh the few costs that exist. It is the opinion of the authors, that cooperative ventures of this nature are beneficial for both the outdoor program and the academic program and well worth the time and effort required to foster relationships and work in conjunction with another campus entity.

Biographical Sketches

David Calvin is currently the Leisure Programs Coordinator at Indiana University and Executive Director of the Wilderness Education Association. He earned his BS in Recreation and Park Administration from Illinois State University and graduated with his MS in Recreation from Indiana University. Dave serves as the program coordinator for IU Outdoor Adventures and works closely with the School of Health, Physical Education, and Recreation instructing outdoor adventure trips for university credit. He has been working in outdoor recreation since 1992 and spends 30 to 40 days annually in the field.

Tom Stuessy is currently pursuing a Ph.D. in Leisure Behavior in the School of Health Physical Education and Recreation with a research interest in risk perception. Tom earned a BA from Western State College 1997 and an MS from Aurora University 1999. He is an ACA Whitewater Kayaking Instructor and a Wilderness Education Association (WEA) Instructor. In addition, Tom is currently serving as the Associate Executive Director of the WEA.

Raymond Poff is an Assistant Professor at Southwest Texas State University. Before his current appointment, Raymond was an Associate Instructor for the Department of Recreation and Park Administration at Indiana University from 1998-2001 while working on a Ph.D. in Leisure Behavior. During that same period, he also worked for IU Outdoor Adventures as the equipment purchasing coordinator and an ACA whitewater kayaking instructor. Prior to returning to graduate school in 1998, Raymond was the Recreation Coordinator managing Brigham Young University.