

Abstracts

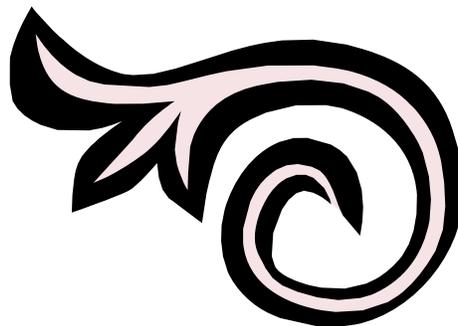
from the

Symposium on Experiential Education Research (SEER)

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Welcome to SEER

Welcome to the Second Annual Symposium on Experiential Education Research (SEER). The purpose of this Symposium is to provide you with a formal setting for the reporting of research findings germane to the fields of Experiential Education. Toward that end, all the research presentations were blind reviewed by a panel of referees. There were over 20 submissions for the 12 available presentation slots. Whether accepted or not, the authors who submitted material should be congratulated for their efforts. In many cases, their works were not selected because of the strict time constraints and not because of any deficiencies in the quality of their work.

Along with the researchers who submitted their work for review, a number of other entities and people deserve a note of thanks for their efforts in making this idea a reality. First, the AEE and its various staff members including Cheryl Schwartz and past AEE CEO John Koenig and conference coordinators Christine Lupton, Laurie Frank, and Catherine Monro for their support, coordination, and encouragement in the development of SEER.

Much appreciation goes to the many scholars and academicians who graciously served as reviewers of the submitted abstracts. These reviewers include: Aram Attarian, Cheryl Estes, Shayne Galloway, Ken Gilbertson, Lee Gillis, Will Hobbs, Leo McAvoy, James Neill, Constance Russell, Erin Sharpe, Amy Shellman, Steve Simpson, Tom Stuessy, and Alison Voight. We would also like to thank Karla Henderson and Christian Itin for providing for the opening and closing comments to the Symposium and Shayne Galloway and Pete Allison for providing summaries and reactions to the sessions.

And finally, a special thank you is given to the attendees of the Symposium, as it is on you and the other members of the experiential education community that this Symposium is focused. For without you and the various educational endeavors you provide within the experiential education rubric, all of our efforts would be for naught.

Thanks to all of you for being a part of SEER.

Alan Ewert
Jim Sibthorp
SEER Coordinators, 2003

Nature experiences and outdoor pursuits in psychological adjustment to acquired physical disability

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This presentation will share the findings of a qualitative study being conducted in British Columbia in summer 2003. Outcomes and dynamics of how contact with ‘green’ nature and outdoor pursuits may assist recovery from trauma and facilitate adjustment to changed life circumstances are the focus of the study. Interviews and participant observations are being conducted with approximately 30-40 individuals who are in rehabilitation from an accident or illness which results in physical disability, who are living in the community and who are participating in outdoor activities, either for therapy or recreation. Data analysis follows standard procedures in qualitative research (thematic content analysis, constant comparative method) and is electronically assisted by N-Vivo software. Theoretically, the study is informed by trauma psychology and ecopsychology. The study has implications for experiential education: it builds and expands research in adventure therapy, adds to previous research in leisure and physical disability, and applies the adult learning model of spinal cord injury rehabilitation to other types of acquired mobility impairment.

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An examination of social interaction in Adventure Education facilitation sessions.

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The facilitation (processing/debriefing) of experiences through group discussion is well documented in adventure education literature (Luckner & Nadler, 1992; Priest & Gass, 1997). While there is considerable literature on how to facilitate an experience few published studies have sought to explicate the nature of leader-student interaction and the resultant social order in facilitation sessions. This research uses an ethnomethodological approach to explicate how members collaboratively construct what is taken to be a facilitation session. This empirically based research is significant in that it uses recorded data from actual facilitation sessions; it does not present an idealised or exemplary account of how talk should appear. The data was collected from year nine students (approximately 15 years old) who were participating in an outdoor education program at a private boys' school in Australia.

The research findings draw attention to how the leader and students in facilitation sessions structure the interaction in a manner that serves to regulate participants' opportunities to contribute. It is argued that the leader's right to establish the topic for discussion, to pre-allocate student turns at talk and the right to evaluate student replies places the leader in a position to determine what is contextually appropriate knowledge. The leader's pervasive use of the initiation-reply-evaluation (I-R-E) interactional sequence, and the right to evaluate student responses, is premised on the leader's asking questions that have a 'known-in-advance' answer. The use of the I-R-E sequence is evidence of the instructional nature of these sessions. It is argued that these sessions demonstrate marked asymmetries of knowledge and power relations that afford the leader a powerful position from which to orchestrate the direction of talk and determine contextually appropriate knowledge. The analysis of how talk is structured in these facilitation sessions is not merely a study of 'turn-taking', it is an account of how certain knowledge(s) is articulated and privileged in these settings, issues that are at the very core of adventure and experiential education theory. The issues of power and knowledge are not peripheral issues for adventure and experiential educators; they are central to adventure and experiential education's conceptualisation of learning that is based on the premise that the learner's experience, and their reflection on that experience, is the basis of valid knowledge.

I argue that in verbal facilitation sessions the leader is positioned as a 'gatekeeper' through whom student contributions must be mediated. These findings question the positioning of the facilitator in the literature and call for a reappraisal of the way that verbal facilitation is commonly practised. The use of transcribed conversation provides a potentially important new way of examining facilitation practises. The insights gained from this research act as a reminder for us all to carefully examine the consequences of our actions, consequences that if left unexamined may have implications that are contrary to the stated aims of our programs. This research opens up new and potentially productive avenues for investigating an area that is central to the adventure and experiential education paradigm.

Luckner, J. L., & Nadler, R. S. (1997). *Processing the experience: Strategies to enhance and generalize learning* (2nd ed.). Dubuque, IA: Kendall Hunt.

Priest, S., & Gass, M. A. (1997). *Effective Leadership in Adventure Programming*. Champaign, IL: Human Kinetics.

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Understanding Perceived Risk and Challenge Course Activities.

John J. Confer, Amanda Wilson, Jung-Eun Kim & Madeline Constintine

The growth of adventure leisure endeavors, such as challenge courses, that contain elements of danger has resulted in an increased concern for the safety of the participants. The risk or danger encountered in ropes courses may be actual, which can be determined by the number of incidents, accidents and/or injuries that occur perceived, meaning they are apparent and “real” to the participant irregardless of the probability that actual injury or death might occur (Ewert & Hollenhorst, 1997). Although there has been a considerable amount of focus placed on ropes course risk management, there has been limited research the on the perceived risk of the individual.

Because behavior in an adventure recreation experience is based in part on perception of risk and competence, it is important that instructors understand what elements individuals perceive as dangerous (Priest, 1992). When the participant is able to exert sufficient control over a task, such arousal may be experienced positively as feelings of competence and enhanced sensation (Robinson, 1992). However, if the instructor does not know the level of perceived risk of his participants, it is possible that the task may be beyond the influence of the participant, and the outcome may be a socially, mentally or physically negative experience (Robinson, 1992; Priest, 1992). In order to maximize the benefits of the experience, it is essential to understand the participant’s needs.

The data for this study were collected at the Stony Acres Challenge Course, an East Stroudsburg University student-owned, off-campus outdoor recreation area located in the Pocono Mountains of Northeast Pennsylvania during the Summer and Fall of 2001. This study utilized a pretest/posttest design. The data were collected just prior to participation and then again immediately after participation. The effective sample size included about 470 individuals who responded to both the pretest and posttest questionnaire for most of the perceived risk items and the covariates.

Respondent’s were asked to indicate on a scale of 1 (no risk) to 9 (extreme risk) how great they felt their chances of being hurt were in a total of 28 different situations. A t-test was then used to determine significant differences among the pretest/posttest scores. The results indicated that the differences were significant ($p = .05$) for 25 of the 28 items measured. The posttest mean score was higher in 5 situations, and lower for the remaining items indicating that the perceived risk decreased for a majority of the items. The 28 items were then factor analyzed, yielding four dimensions of risk, two of which were related to the type of element and two to the environmental conditions. General participant characteristics were compared to identify significant differences in overall risk and the four identified dimensions. In addition, the survey examined individual participation in a variety of recreation activities (i.e. hiking, camping, mountain biking, etc.) and previous experience with challenge course activities. These activities were classified according to the level of risk inherent in each activity into three levels (low, medium and high risk) on risk perception prior to participation in the ropes course. As expected, females tended to report higher perceived risk than males, however age, education and previous challenge course experience had no impact on risk perceptions.

Ethical Outdoor Leadership: Opening a Dialogue

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Traditionally, the fields of experiential education (EE) and outdoor education/recreation (OE/R) discuss ethics in terms of either/or dilemmas, rules such as minimum impact or leave no trace practices, values associated with philosophical frameworks such as justice, fairness, caring, and freedom of choice, specific leadership frameworks, or codes of ethics related to patient and client care. James MacGregor Burns has written, "One of the most universal cravings of our times is the hunger for compelling and creative leadership....The crisis of leadership today is the mediocrity or irresponsibility of so many of the men and women in power." This statement, written over ten years ago, speaks to the practitioners in environmental education and outdoor education and recreation facing various controversies related to the environment, diversity, cultural relevance, post-colonial critiques, social justice, discrimination, and peaceful solutions. Leo McAvoy states: "An outdoor leader has the potential to have significant impacts on the lives of participants and on the integrity of our most beautiful natural resources...We should be doing everything possible to ensure that these leaders have appropriate preparation to assume that responsibility." The purpose of this research was to describe the ethical thinking and practices of outdoor leaders who were identified by the field of outdoor education and recreation as ethical. The hermeneutic investigation of the characteristics, values, thinking, and practices of environmental education and outdoor education and recreation identifies how the field "performs" its ethics through its leaders, and provides a foundation for discussion of personal perspectives, emerging ethical issues, and processes of ethical development within the fields.

This study describes the characteristics, views, beliefs and ethics of ethical outdoor leaders specifically through a hermeneutic analysis of interviews with identified ethical outdoor leaders. This information provides (1) the basis for comparison with other studies conducted by Shapiro (1990) on ethical leadership in business, education, health care, and religion; (2) the direction for further research concerning ethical outdoor leaders themselves, the ethical dilemmas inherent in outdoor leadership, and the role of ethical followers and/or ethical community in experiential education and outdoor education/recreation; and (3) the foundation for developing educational and professional development courses about ethical outdoor leadership, followership, and community. A hermeneutic framework will create space for an in-depth analysis of the interviews, context of ethical outdoor leadership, and relationship to philosophical perspectives, social critiques, and changing social conditions. The definition of ethical outdoor leader is left up to the practitioner, because the goal of the research is to describe what practitioners see as an enactment of our ethics. The ethical outdoor leaders in this research come from Australia, Canada, New Zealand, Norway, South Africa, and the United States. The in-depth readings focused on ethical frameworks, types of ethical issues identified by the leader, processes of personal change, reflection, and learning, specific, operational examples of ethical values and practices, contextual analysis of the location of the ethical outdoor leader, consistencies and inconsistencies of application of values, and processes related to developing, nurturing, and sustaining ethical leadership, followership, and community.

Youth Development through Outdoor Adventure: Results from the Outward Bound “Unity Project”

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The purpose of this research was to examine the outcomes associated with participation in “Unity Project” courses at the North Carolina Outward Bound School using means-end theory. “The goal of the Unity Project is to provide education that will be about a more humane, life-affirming, and responsible society in which everyone’s life is dignified, fulfilling, and meaningful. The Unity Project acknowledges that the barriers people experience in pursuing this society are both personal and social” (Randall & Genova, 2002, p. 2). The Unity Project was developed to bring together 12 students from a single high school to build a community in which they could engage with social and diverse issues in their lives. Students developed skills in social awareness, leadership, compassion, and moral courage over their nine-day Outward Bound course and then returned to their high schools to be agents of social change.

Means-end theory specifically examines the linkages between the means (the service) and the ends (the consequences and values important to the individual). This theory has typically been used to better understand consumer decision-making behavior. Recently, the approach was used to examine ropes course outcomes (Goldenberg, Klenosky, O’Leary, & Templin, 2000) and Outward Bound outcomes (Goldenberg, 2002). The current study extended the use of the means-end approach in an outdoor adventure programming context to examine the outcomes associated with a specific group focused on social awareness and diversity issues.

The data for the study was collected using a self-administered questionnaire in which study respondents were asked to identify the key outcomes they obtained from the Unity Project course they had completed. They were then asked to explain why each outcome was important. This series of questioning, known as laddering, uncovers the attributes, consequences, and values associated with the participant’s experience.

A total of 12 Unity Project courses, 123 diverse students, were offered through the North Carolina Outward Bound School during the summer of 2002. As the concepts were entered into the Ladder Map computer program, content codes were formed based on phrases or keywords that emerged. A series of hierarchical value maps (HVMs) were then constructed. These HVMs summarized the key linkages among the attributes, consequences, and values.

The data from this study contributes to our understanding of the outcomes and benefits derived from participating in a specific type of an Outward Bound course focused on youth development. Findings indicate that the results differ from previous Outward Bound means-end research in terms of the words used by participants to describe the outcomes. Some of the differences include the use of terms such as diversity interactions, diversity awareness, self-discovery, compassion, and moral courage.

Goldenberg, M. (2002). *Understanding the outcomes of outdoor adventure experiences using means-end analysis*. Unpublished doctoral dissertation. University of Minnesota: Minneapolis, MN.

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An Investigation of a Ropes Course Pick-off Cutaway Rescue

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Despite the widespread use of high ropes courses in experiential education, research has not examined the safety and effectiveness of ropes course rescue strategies. The purpose of this study was to: 1) identify the impact force, drop distance, and hand slippage generated in a pick-off cutaway rescue, 2) understand how rope type, top anchor, and subject and attendant mass interact and, 3) critically assess this ropes course rescue technique.

Methods were based on the pick-off cutaway rescue outlined in *The complete ropes course manual* (Rohnke, Tait & Wall, 1997). An attendant mass was connected to a load cell and attached to a top anchor hanging from the belay cable. At ground level the attendant's rope was fed through an anchored Figure 8 and into a mechanical hand calibrated to 335 N – the average maximum ungloved static grip strength of a belayer (Mauthner & Mauthner, 1994). The subject mass was hung parallel to the attendant mass, attached to 3.5 mm p-cord and clipped directly to the attendant mass with a 0.40 m tether. Once initial height and rope position were recorded, the p-cord holding the subject mass was cut. The 75 mock rescues examined 15 combinations of factors including: six rope types, two types of top anchors, and two masses.

Results for impact force, drop distance, and hand slippage were obtained by averaging five observations. With 80 kg masses, mean impact force ranged from 1.7 kN to 4.1 kN, mean drop distance from 0.15 m to 0.60 m, and mean hand slippage from 0.00 m to 0.07 m. With 100 kg masses, mean impact force ranged from 2.3 kN to 3.4 kN, mean drop distance from 0.20 m to 0.40 m, and mean hand slippage from 0.00 m to 0.06 m.

Multi-variate analysis of variance showed that rope and anchor were significant at $p < 0.001$ for the 80 kg masses with no significant interaction. At 100 kg, rope, anchor and rope x anchor interaction were significant at $p < 0.005$. Analysis of variance indicated that at 80 kg, anchor was significantly related to impact force, drop distance and hand slippage. Rope type had a significant effect on impact force and drop distance but not hand slippage. At 100 kg, both anchor and rope type were significant factors for explaining impact force and hand slippage but not drop distance.

The data indicate that, in general, different rope types behave differently, heavier masses act differently than lighter ones, and the top anchor affects impact force, drop distance, and hand slippage. In several tests, impact force exceeded what some standards and safety factors consider "safe." These higher forces occurred when a Figure 8 was used at the top, masses were 100 kg, or equipment was used in ways manufacturers did not envision. Because impact force, drop distance, hand slippage are interrelated, decreasing one variable leads to an increase in another. The study findings indicate that alternate rescue techniques should be explored.

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Rohnke, K., Tait, C. & Wall, J. (1997). *The complete ropes course manual* (2nd ed.). Dubuque, IA: Kendall Hunt.

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Got Research in Experiential Education? Theory and Evidence: SEER Opening Address

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No one can deny that we live in an information explosion. At our fingertips each day, literally, we have access to a world of ideas, thoughts, and data. We can find information about millions of topics. Yet, each one of us must sift through all those words to determine what the information means and how to best use it.

We know in our hearts that experiential education is a good thing. Those of us who want to be successful educators know that regardless of the age of our students, personal experiences lead to learning. Those of us who spend time in the outdoors know that the most important lessons we have learned in life have come from our outdoor experiences. Yet, our perceptions about the value of experiential education are not enough. In the 21st century, the specter of accountability will grow (Neill, 2003). Both researchers and educators will need to articulate the value of the process and content of experiential education. To make the best use of a developing body of knowledge, we will need to continue to develop and apply theory and to address the emerging focus on evidence-based or outcome-based research and evaluation.

Theory

Last year in a research class that all the students take in our department, we spent considerable time talking about theory. These bright and socially committed students struggled with the idea of how theory really related to the problems in the world that they wanted to solve. One of them remarked one day that someone ought to set up a website called “I need a theory.com” for all the students searching to understand the myriad of theories that exist “out there.” Although I was amused, I was also a bit frustrated with the lack of understanding of why theory might be necessary if the research they were doing was going to serve more than just to solve a localized problem. They failed to see how theory was necessary to build a body of knowledge and how that knowledge led to new theories.

Theory is not new and its application to aspects of experiential education has been around “in theory” for a number of years. Some people question whether theory can be adequately applied to human behavior. Nevertheless, as Babbie (2001) suggested, theory enables us to offer logical explanations for patterns that we observe. These theories can also shape and direct research efforts so that we can better explain what we find out. Today more than ever we as researchers, as well as practitioners, need to show how theories explain what we do and how they build the body of knowledge of experiential education, not just the base of information. Our information is growing but not necessarily our theories. Note that I refer to “theories.” Different perspectives are going to yield different explanations. Further, as we have examined theories in experiential education over the last few years, the value of both induction and deduction is evident. Sometimes we start with a theory or hypothesis and set out to see how it works in a situation. In the inductive approach, we begin with a broad question and seek to find information that can lead to a general explanation.

In examining the paper abstracts that were presented last year at SEER and the abstracts accepted for this year, I noted several examples of theory that might be useful to highlight. For example, Pinch (2003) used the experiential learning cycle to examine how gender was operationalized in outdoor groups. Means-ends theory has also been used by Holman,

Goldenberg, and McAvoy (2003) to examine the outcomes, consequences, and values of an integrated wilderness adventure program. Goldenberg (2003) also used this theory to examine the benefits of Outward Bound for a group focused on social awareness and diversity issues.

Evidence-Based Research

Although the connections with theory have been an aspect of research for many years, the new ideas related to outcome-based or evidence-based research and evaluation are relatively new. An important aspect of research in experiential education is to explain the patterns that seem to be occurring so that the results can be applied to best practices.

Outcomes-based evaluation and research is an approach that has gained importance in the past two decades. It may be defined as the extent to which a program or intervention affects participants on a set of specified outcomes, variables, or elements. Until a couple decades ago, overall performance for any organization or program was often assessed relative to good intentions, resources available, and the quality of programming. These performance indicators are important but together are not sufficient without knowing to what end they are used. Outcomes might include achievements or changes in skill, knowledge, attitudes, behavior condition, or life status. One of the problems with outcomes-based research is that one must also explain the process or implementation associated with positive outcomes. To the extent that we know outcomes emerge will only be helpful if we can explain why they occurred so others can improve their practice to reach those same outcomes. Therefore, it is not only the bottom line, but also common sense, practical wisdom, and participant perspectives that need to be taken into account which is termed collectively as “evidence-based” research.

Decision-making and the improvement of practice is best supported by a balance of sound theory and relevant empirical evidence. During the 1990s, fields such as medicine and social services began to adopt an “evidence-based” approach to their fields (Tomison, 2003). The evidence-based approach refers to the conscientious use of current reliable and valid evidence integrated with individual expertise to make decisions about best practices. The focus is on making policy and practice decisions based on a critical appraisal of the best evidence.

In many areas of science, randomized control trials are considered the gold standard of research. Although this type of research is necessary, evidence-based research involves developing as complete picture as possible by critically assessing the most reliable and valid information available (Tomison, 2003). Problems exist in trying to apply randomized control trials in social interventions, as many of these interventions cannot be researched in this way. Randomization and control often cannot be applied to all real world problems and may not be sensitive to local and contextual factors. Further, these trials are often too difficult or too costly. Thus, a variety of methods might be used with the focus on tailoring the methods to the research question and considering the reality of the situation to uncover evidence.

Some examples of evidence-based research exist in the recent literature in experiential education. Neill’s (2003) application of meta-analysis in assessing adventure therapy outcomes provided insight into what the literature has suggested some of the outcomes of adventure therapy are, as well as what conditions might exist. He suggested that the most effective outdoor education programs were those that were longer, involved adult-age participants, and were conducted by particular organizations. In another meta-analysis done by Marsh (1999), the outcomes related to self concepts in campers were discovered to be more positive in camps that had intentionally stated goals for self-identity. These meta-analyses are emerging as important sources of evidence, but are only as useful as the primary research studies that they use.

Studies using other quantitative methods give information about outcomes although enough description must exist to see how “what” was done contributes to change. For example, Griffin (2003) found that Christian spiritual beliefs could be strengthened through a combination of explicit spiritual teaching and the group and personal challenges experienced in the outdoors. Russell’s (2003) examination of treatment outcomes using hierarchical linear modeling is an illustration of using data to understand not only that outcomes occurred but to show evidence of why some programs were more effective than others.

Qualitative studies have an opportunity to show evidence relative to outcomes, although one must be careful about how cause and effect can be ascribed. Ross (2003) found that women survivors of sexual trauma who participated in a three-day adventure therapy program felt they had developed increased capacities of self-value, self-care/self-empathy, self-in relation, and personal competence. Brown (2003) drew upon ethnomethodology to examine how group members collaboratively constructed facilitation sessions. Similarly, Taniguchi and Freeman (2003) employed writing as a way to ascertain what meaningful learning experiences in an outdoor educational setting portend. Fox and Mullins (2003) also applied a hermeneutic analysis of interviews to identify evidence about ethical outdoor leadership. The dynamics of how outdoor pursuits might assist recovery from trauma and facilitate adjustment to changed life circumstances that Beringer (2003) examined also highlights the potential of evidence-based research.

So What? Now What?

Assessing how the ongoing research in the field of experiential education relates to theory and evidence must be a natural task of both researchers and practitioners. As we learn from this research, let’s continue to ask questions about the type of evidence that exists and how that evidence leads to future practice as well as how theory leads to future research questions.

More quality theory driven and evidence-based research is needed. We need to develop good instruments to help us with these measures (Galloway, 2003; Sibthorp, 2003). Although descriptive and correlational research is helpful, we need to strive to determine aspects of cause and effect as we focus on future research. Claims cannot be made for cause and effect if we do not have the appropriate data. A focus on evidence including aspects of process as well as content need to be high on our agendas.

Further, within the related fields of experiential education, it is important to develop a research-friendly culture where we can better understand the cause and effect of the ways that we lead and teach. Practical wisdom is important, but this wisdom alone is not going to change practices or policies within organizations. Evidence-based research requires that researchers work closely with practitioners. In addition, as has been advocated for a long time and as the editors of the Journal of Experiential Education are doing, the research must be translated for practice so this evidence can be informed by professional and participant wisdom.

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- Brown, M. (2003, November). An examination of social interaction in adventure education facilitation sessions. Paper given to the International Symposium on Experiential Education Research, Vancouver, British Columbia.

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SEER Closing Address

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In reflecting upon this year's "Symposium on Experiential Education Research," I have noted the wide range of research methods and data analysis used. The research considers a wide range of topics in adventure-based education from an equally wide range of methodological positions. This reflects a growing sophistication in the research about adventure-based programming. In total we have moved beyond the simple pre/post-test design, which utilize relatively static instrumentation and means of analysis, to embrace a wider array of methods and approaches. This approach has a place, but as this symposium has made clear it is by no means the only approach and often not the best approach to ask the more complex questions that this field must tackle. We see a nice mix of qualitative research to explore the deeper underlying questions and quantitative research bounded by higher order statistical analysis to explore the extent of relationships between identified variables.

The research gives us much needed information about the technical aspects of programming, including the length of programs to enhance change and the very nature of the equipment we use to keep students safe. There is some very nice information developed that measures the types of changes that occur for clients involved in programs and increased clarity on the variables that are important in promoting change. There is also important information developed about the nature of leadership and facilitation. Taken together this symposium has made significant contributions to the knowledge developed that should enhance adventure-based programming.

Research by its very nature often offers more questions than answers. The papers presented at this symposium are no exception and the results lead me to several questions that I will offer here for consideration. Those who know my work know that I have been concerned about the imprecise nature of language in the research and writing about experiential education (Itin, 1999). It should not be surprising that some of my initial questions relate directly to this.

- 1) While this is a symposium on experiential education research, the papers presented all related to one expression of that philosophy, namely adventure-based education. Have we clearly explicated the relationship between adventure-based programming and experiential education? Would this symposium be better labeled "Symposium on Adventure-based Research"? Are outdoor and adventure education the same thing?
- 2) There appears to be an attempt to indicate we have a "field" of experiential education. Is experiential education like the term medicine, with different specialization's, or is it more like health with different professions, conceptualizations, and modes of practice linked by a common philosophy of purpose? Is adventure-based practice a specialization within experiential education or is it a different method of practice linked to other modes of activity and experiential practice by a common philosophy?

- 3) Is it important to distinguish between recreation, education, therapeutic, development, and therapy programs? Is there a need for clarity of language that describes the purpose of the program and the very nature of the change desired?
- 4) In much of the research race/ethnicity is not mentioned. It is unclear if it is not considered because the "n" is not deemed statistically significant or if it not considered important? While gender appears to be well considered, ethnicity is not. What is the ethical responsibility of researchers to exploring the place, role, and relationships of ethnicity in adventure-based programming?

This is not meant to be an exhaustive list of questions but reflect those I find myself coming away from this symposium with. As such it is also reflective of one of the realities of research in that we as researchers bring our own biases and questions to the process. While quantitative methods attempt to hold these at bay and qualitative to acknowledge and embrace them, both acknowledge that they are a part of the process. Historically there has been a tension between qualitative and quantitative methods as reflecting different paradigm regarding the nature of truth, this symposium illustrates how both are important parts of developing knowledge. It is my hope that as we continue to grow and develop the research related to adventure-based programming that we will seek to combine these methods more deliberately. It is my belief that through triangulation we can derive the best answers to the questions we are asking and thereby refine, enhance, and improve the nature and level of work we do.

I believe that as researchers our work, writing and ideas carry with them power. Our work impacts the very nature of practice. Research is not a silent observer of reality but an active contributor to its creation. As such we have a responsibility to use this power and position to ensure the development of the most precise knowledge and best practices. Research must question the basic assumptions upon which programming is built upon. The questions not asked in research are often as important as those that are, and often reflect underlying assumptions. It is my belief that language has meaning and power, that unless we can clearly discuss what we are doing it is impossible to really measure it. Perhaps most importantly precision in language will enhance our ability to speak with others who use experiential education outside of adventure-based programming.

It is my hope that as SEER develops we will see not only the range of depth of analysis in adventure-based programming, but the addition of research that looks to other forms of practice that reflect the philosophy of experiential education. As we bring in research related to service learning, cooperative education, expressive forms of experiential work, and the many other arenas that are experiential in nature we will gain greater clarity about the nature of experiential education broadly understood. In doing so we will also enhance the research specifically within the field of adventure-based education. We will enhance the knowledge that informs how we conduct this research, the methods used, and the interpretation of the data. Ultimately, we will all be strengthened in our ability to articulate where, how, and when experiential methods are preferred over none or less experiential ones.

PREDICTING RECIDIVISM AMONG JUVENILE OFFENDERS PARTICIPATING IN AN ADVENTURE-BASED THERAPY INTERVENTION

Sandra L. Newes, Ph.D.

Juvenile crime is a problem of national concern. Given the high level of recidivism among this population, it is important to identify variables that may be predictive of recidivistic behavior. This study examined whether the predictive value for variables found previously in the non-intervention literature is the same or different in the context of an adventure-based therapy (AT) intervention with an adjudicated youth population (Project Challenge of Project Adventure). In addition, this study examined whether any additional predictive value was attributed to predictors that are theoretically associated with the AT intervention, but not specifically linked to recidivism. These predictors were chosen to begin testing components of the theory that is thought to underlie AT.

Specifically, logistic regression analyses were utilized to investigate whether the historical variables of age of first convicted offense and number of previous offenses and the psychological characteristics of pre-test levels of MMPI-A scales 4 and 9, pre-test and adjusted post-test (adjusted for pre-test levels and therefore analogous to change over the course of the intervention) levels of the Tennessee Self-Concept Scale (TSCS) Total, and pre-test and adjusted post-test levels of the sensation seeking Disinhibition (DIS) subscale were predictive of recidivism among juvenile offenders court mandated to an adventure-based therapy program (N=100).

Results indicated that age of first offense and the adjusted post-test Disinhibition subscale were significant. Age of first offense accounted for 13% of the variance in predicting outcome, with younger offenders being more likely to recidivate. This was expected, as age of first offense is thought in the literature to be one of the most robust predictors of recidivism. However, the fact that this variable was predictive despite participation in an adventure-based therapy program has applied implications. Significant efforts should be made to avert future offenses with younger individuals, and additional resources should be put towards the development of prevention programs.

It was also expected that adjusted post-test DIS scores would be predictive, as the impact on behavioral disinhibition and risk appraisal (associated with DIS scores) is theoretically hypothesized to be a mechanism of change in AT. The finding that adjusted post-test DIS scores have predictive utility for recidivism provides empirical support for this contention. Treatment programs might make additional efforts to impact adjudicated juveniles in these areas, and researchers in the AT area are encouraged to focus efforts in exploring this further. AT practitioners should consider delineating what components of their program may have impacted on these constructs and test the efficacy of such components using specific measures that capture these theoretical elements. It is also important to explore any factors that may lead to differential impacts for participants, and how these may relate to DIS scale constructs. This can be done using predictor models and through well-controlled outcome studies.

The lack of findings on the TSCS was unexpected and has potential implications for AT theory. These possible implications, study limitations, and future research possibilities will be discussed.

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The Effect of Physical Characteristics on Perceived Competence of Outdoor Leaders

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In the outdoor education field, the success of a group largely depends on how effectively the leader establishes her or his competence as an outdoor leader. If a leader is not perceived as competent from the onset, a group's goals and safety can be compromised because the leader does not have the group's confidence. According to Elsea (1984), people first focus on physical characteristics such as age, sex, and appearance when formulating their initial impression. In addition, group members frontload the first meeting with "personal assumptions about the characteristics and abilities needed for successful leadership" and automatically place their leaders into preconceived categories (Nye & Forsyth, 1991, p. 361).

Data were collected from voluntary registrants (n=108) in outdoor classes offered for undergraduate credit at a western university during the winter of 2002-2003. Of the participants, 44 were women, 64 were men. Based upon the work of Elsea (1984), the physical characteristics examined by this study were age, sex, and facial adornment, each viewed as having two levels: younger vs. older, male vs. female, and presence vs. absence of facial hair for men or make-up and jewelry for women. A professional sketch artist was hired to create the "instrument" for this study and drew head shot sketches of a non-distinct male and female to contain of possible combinations of levels of the specified attributes. On each card was a different black and white sketch of an individual with a specific combination of attributes: younger male with facial adornment, older male with facial adornment, younger male without facial adornment, older male without facial adornment, younger female with facial adornment, older female with facial adornment, younger woman without facial adornment, and older female without facial adornment. A member of the research team attended the first meeting of each of the outdoor skills classes. Prior to the arrival of the instructor, participants were asked, to take four minutes, the time it takes to make a first impression (Elsea, 1984), to rank and secure the randomly ordered sketches, with the person they felt would be the most competent outdoor leader on top of the stack through to the person they felt would be the least competent on the bottom.

Data (complete preference ranks) were analyzed using conjoint analysis in SPSS. Since this study was exploratory in nature, the alpha level of .10 was selected. Significance tests for the Pearson's R indicate a significant model for the entire sample ($p=.0431$), for the men in the sample ($p=.0248$), and for the women in the sample ($p=.0705$). The median rankings of leader profiles consistently demonstrate that an older male with facial hair is considered to be the most competent outdoor leader, followed, in general by the younger man with facial hair – thus reinforcing the stereotype of the "rugged outdoorsman," regardless of age. However, the pattern does not hold universally for the women in the sample, as they rank the younger man with facial hair and the younger woman without make-up and jewelry as equally competent. In summary, participants do hold stereotypes that impact their first impressions of the leaders' competence – regardless of the leaders' actual level of competence. Further, if the sexes formulate their first impression differently, and if these first impression have a lasting impact on the relationship between participants and leaders throughout the trip, administrators may wish to consider assigning leaders based upon the sex mix of the participants.

Building a Program Theory: A Descriptive Analysis of Leader Beliefs and Participants' Experience

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The need for adventure education research to go inside the “black box” of evaluation and more thoroughly investigate how programs produce effects has been well established (e.g. Ewert, 1989). For researchers, theoretically driven evaluations must specify the mechanisms of how the program works and identify the program components that affect these mechanisms (Harachi et al., 1999). The current study was designed to build a program theory of an adventure based wilderness freshman orientation program using data from program leaders and participants. Using convergent sources of data, it was anticipated that the leaders' interpretations of the adventure experience reveal the guiding theories implicit in the program's design while the participants' accounts of the adventure experience characterize what actually occurred.

Leaders (n=8, 6=female) were individually interviewed and asked to discuss: a) the goals of program, and b) the program activities, experiences, or mechanisms accountable for achieving these goals. Interviews were systematically analyzed and coded to identify the dominant patterns of response linking the understood goals of the program to its specific activities or mechanisms. For participants (n=40), the researchers developed a 42-word list of positive, negative, and neutral descriptive terms derived from the literature. Participants were asked to indicate how well each of the terms described their experience in relation to three aspects of the program (backpacking, group living, and the natural environment). Using a q-sort, participants rated each term on a 6-point Likert-type scale indicating the extent they agreed the term described their experience. Exploratory multi-dimensional Scaling (MDS) provided a visual representation of underlying patterns (and potential latent constructs) within the data.

A conceptually-clustered display of the leader responses produced four dominant goals/outcomes of the program: a) making friends, b) exposing students to new outdoor opportunities, c) personal growth and competence, and d) outdoor skills development. Primary components of the trip influencing these outcomes included the adventure challenge day, team building activities, and group meetings producing experiences of “trust”, “teamwork”, and a “group mindset.” The cluster of terms “respected”, “successful”, “safe”, “supported”, and “trust” were rated highest among participants in describing their overall experience across three conditions. Spatial plotting of descriptive terms via MDS yielded a similar dominant configuration of these terms. The results suggest that the salient mechanisms of the program are oriented towards, and experienced foremost as, affecting interpersonal relationships, social competence and to a lesser extent personal accomplishment. Consistencies in patterning of descriptors across the three conditions may also suggest the need to explore other methods in distinguishing among program components.

Ewert, A. W. (1989). Outdoor Adventure Pursuits: Foundations, Models, and Theories. Columbus, Oh: Publishing Horizons.

Harachi, T., Abott, R., Catalano, R., Haggerty K., & Fleming, C. (1999). Opening the Black Box: Using Process Evaluation Measures to Assess Implementation and Theory Building. American Journal of Community Psychology, 10, 713-725.

Keeping it Simple: Improving Social Skills in Youth

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Since the spring of 1999, North Star Adventure, a therapeutic adventure program located on the North Shore of Massachusetts, has been conducting ongoing outcome research on our after school groups with children and adolescents in families currently involved with the Massachusetts Department of Social Services. At least 90% of the referrals of participants to North Star Adventure by DSS workers are due to a concern that these children and adolescents lack appropriate social skills.

Participants in North Star Adventure groups attend a bi-weekly group run after school for 9 weeks. In addition to the groups, home based intakes and outreach to youth and their families are provided prior to enrollment and throughout the group cycle. Our 9 week progression of experiential games, initiatives and ropes course elements has an overall focus at improving the social competency of participant by promoting the ability of participants to learn how to give and receive feedback, set goals, build appropriate relationships and experience a variety of small successes.

In an effort to measure the possible impact of North Star Adventure groups on the social skills of its participants, Gresham & Elliot's (1990) *Social Skills Rating System* is administered to participants at intake and again at the end of the 9 week cycle. Currently, North Star Adventure has collected pre and post-test data from 110 participants, 40 of whom are considered of elementary age and 70 of whom are considered secondary. Preliminary analysis of the participant scores found a variety of results. Overall, the level of social skill of the elementary group improved significantly ($p < .01$). When analyzed more closely and broken down into sub-scales, the levels of assertion and empathy of the elementary group were also shown to improve significantly ($p < .01$). On the other hand, despite some improvements in scores approaching significance in the group of secondary aged participants, there were no reported levels of significant improvement. Based on our research, our significant results are promising, yet they leave us with a variety of questions. Is the length of our intervention too short to have a significant impact on the embedded behaviors of our participants, especially the secondary population? Is Gresham & Elliot's (1990) questionnaire which is school and classroom oriented able to accurately measure the effects of an experiential or adventure oriented program not held in the classroom? If not, how do we create measures specifically focused on adventure based methods of intervention, which at the same time are shown to have strong psychometric properties?

Gresham, F. & Elliot, S. (1990). *Social Skills Rating System*. Circle Pines, MN: American Guidance Service.

Hierarchical Data Structures in Wilderness Therapy and Education

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In a recently submitted article Russell (in press) assessed treatment outcomes in seven participating outdoor behavioral healthcare (OBH) programs. The results of the study suggest that OBH treatment is effective at reducing the behavioral and emotional symptoms of adolescents entering treatment, and that that outcomes were maintained at 12-month follow-up periods. This type of research seems to support the existing premise that wilderness and adventure programs can lead to participant development (Cason & Gillis, 1994; Hans, 2000; Hattie, Marsh, Neill, & Richards, 1997). However, how and why this development occurs remains poorly understood.

Questions that are routinely asked of wilderness an adventure programming and treatment include: under what conditions are positive outcomes most likely to occur? What basic skills do leaders need to have to facilitate learning and therapeutic outcomes? What specific program elements enhance outcomes compared to more traditional approaches? What is the ideal length of time in wilderness treatment? Therefore, this paper attempts to take the analysis of this dataset one step further by asking if clients in some programs realized more developmental gains than others, and, subsequently, by investigating why some programs were more effective or some clients realized more benefit through examination of the nested structure inherent in this data set and in many wilderness/adventure programs.

Methods: Hierarchical Linear Modeling (HLM) 5.03 was used to analyze the data. Since previous research had already confirmed significant and positive changes from program start to finish, the focus of this study was to determine the portion of this variance that could be explained by program structure (specifically program length and amount of time in the wilderness) and to investigate the amount of variance accounted for by individual covariates such as sex and age. Hierarchical models for both parent and client (participant) reports on the Youth Outcome Questionnaire were examined.

Results: The initial results for a 2 level model of the client scores indicated that a significant amount of the variance in the sample was attributable to the program level ($\tau_{00} = 106.1$, $\sigma^2 = 681.9$). This indicates that ~13.5 % of the variance in the sample could be accounted for by program level variables.

Subsequent analyses looked at the importance of sex and age and number program days and number of program days in the wilderness as potential predictors (program level). The model with the most explainable variance included only number of program days as a level 2 predictor ($t = 5.24$, $p < .001$). This reduced τ_{00} to 34.7, thus indicating that program length accounts for ~67% of the variance attributable to the program level, or about 9% of the variance in the sample data.

The initial results for a 2 level model of the parent scores indicated that a significant amount of the variance in the sample was attributable to the program level ($\tau_{00} = 148.6$, $\sigma^2 = 584.6$). This indicates that about 20.3 % of the variance in the sample could be accounted for by the program level variables.

Subsequent analyses looked at the importance of sex and age and number program days and number of program days in the wilderness as potential level 2 predictors. The best level 2 predictor was number program days principally in the wilderness ($t = 3.39$, $p < .05$). This reduced τ_{00} to 80.2, thus indicating that program days in the wilderness account for ~46% of the variance attributable to the program level, or about 9.3% of the variance in the sample data.

Discussion: While these data do support the premise that longer programs and those spending more time in the wilderness may have potential for greater participant impacts and that females may have more positive outcomes than males from some wilderness therapy programs, the study's methodological implications are, perhaps, more important. Data sets collected in the adventure field, such as the one analyzed in this study, commonly ignore hierarchal structures because of the difficulty of appropriately addressing these concerns using the General Linear Model (and associated techniques). In addition, data collected for analysis with these traditional methods misses important sources of variance attributable to nested variable (e.g., data on course and instructor level variable).

Outdoor Education and Meaningful Learning: Finding the attributes to meaningful learning experiences in an outdoor education program

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To make learning meaningful, to make learning relevant, and to create events that make a difference in a person's life, is to make the goal of education one that "is ultimately the 'self-actualization' of a person, the becoming fully human, the development of the fullest height that the human species ... can become" (Maslow, 1971, p.169).

From 25 years of personal experiences in education and 20 years of wilderness guiding experiences, one of the researchers of this study, has seen learning experiences at both ends of the spectrum. In the formal classroom, experiences are often aseptic and devoid of all but the stimuli that the teacher wants to introduce. Exploration of self is very limited, due to the direction given by someone else, and meaningful learning is not necessarily the focus. In the outdoor setting, experiences are frequently haphazard and full of stimuli, both desired and unwanted. Individuals decide for themselves what to make of these experiences and their comfort zone is disrupted, forcing them to make relevant meaning out of the experiences. In these two educational settings, the researchers found that the former is usually lacking meaningful learning experiences, while the latter often provides such experiences. Finding those attributes in an outdoor education program that has a proven track-record of providing the very type of meaningful learning experiences sought for, is the objective of this research.

Students (N=15), enrolled in the Wilderness Writing Program, offered at Brigham Young University in Provo, Utah, were the sample for this phenomenological study. Their participation in four outdoor recreational activities along with writing and talking about their experiences became the sources of data for this research.

This research study has found that the phenomenon of meaningful learning experiences, in an outdoor educational setting, hinge on challenging experiences that create an impetus for the realization of one's abilities, short comings, and potentials. Attributes that were found in the data included perceived difficulties of the outdoor activity, peer associations, levels of competency, natural environmental influences, and time for sensory perceptions and reflections. Personal relationships developed with others, through the participation in activities in the outdoor setting, create a reference point from which individuals compare and contrast themselves with the other participants. The outdoor activities allowed for a personal sublimation process to occur. The sublimation removed facades that the subjects created for themselves in the societal environment that they came from. This purification process allowed for each subject to re-define themselves by facing their weaknesses, strengths, and potentials. Kant (1892) refers to the process of this realization as the personal recognition of the sublime, which must be meaningful to the individual.

Kant, E. (1892). *Kant's Kritik of Judgment*. London: Macmillan and Company.

Maslow, A. H. (1971). *The Farther Reaches of Human Nature*. New York: The Viking Press.

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