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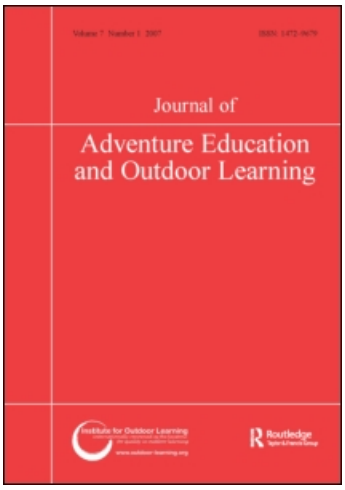

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Outdoor Adventure Risk Management: Curriculum Design Principles from Industry and Educational Experts

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Abstract

Leaders working in the outdoor adventure field are faced with making critical decisions that keep students, clients, or customers safe from the perils of risk-related activities while enabling them to benefit from these experiences. The knowledge and competency necessary to analyze and manage risk is integral to those providing outdoor adventure programs. A review of related literature suggested the need for further research and the potential standardization of training for outdoor adventure leaders. In order to address the issue of outdoor adventure risk management curriculum design specifically, this inquiry has (a) incorporated expert outdoor adventure industry and educational risk management perspectives, (b) synthesized findings with related literature and researcher perspective, and (c) described five key principles for related curriculum design and delivery. This qualitative analysis involved interviewing industry-leading outdoor adventure program directors and postsecondary outdoor adventure faculty in the province of British Columbia, Canada. Although developed through a risk management lens, the principles may be generalized to other aspects of outdoor adventure curriculum design.

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Introduction

When outdoor adventure accidents happen, the outdoor adventure field receives mixed reviews and reactions from the public and governing bodies. For example, in the winter of 2002–03 there were 28 lives lost to backcountry avalanches in Western Canada and almost 50 in North America (Israelson, 2003). Numerous investigations and rumors of class-action lawsuits quickly followed one fatal avalanche involving youth, and government officials suggested a review of backcountry use (Frankel, 2003). When tragedies such as these occur, public opinion often reflects a lack of understanding of the benefits of outdoor adventure activities and the level of care with which they are actually conducted. As the outdoor adventure industry grows in size and diversity (Attarian, 2001), the potential for fatalities will increase as well. Negative public perception of outdoor adventure activities can substantially influence the industry. Responsibility and blame are ascribed to outdoor accidents more readily today in an increasingly litigious society (Thomas & Raymond, 1998). Rising insurance rates, reduced park and land access, and reduced funding or subsidization (for service providers in education and social service) of adventure-based programming lends support for further examination of outdoor adventure risk management education.

The past decade has seen tremendous growth in the development of both the outdoor adventure industry in British Columbia and postsecondary educational institutions providing related training and certification to students within the province. British Columbia's number of postsecondary outdoor adventure programs has grown from one in 1992 to 25 in 2002 (Cloutier & Valade, 2003).

Risk management has been identified as "a top priority" in the outdoor adventure industry in British Columbia (Cloutier & Valade, 2003, p. ii). Outdoor adventure activities involve an essential interaction between the participant and the natural environment, and have some degree of inherent risk or uncertainty (Ewert, 1989; Priest, 1992).

Risk has been most commonly defined in health and business literature as the potential for loss; in contrast, risk in adventure-based programming has been more often defined as the potential for gain tempered with the reality of potential loss or harm (Ewert, 1989; Hunt, 1995; Liddle, 1998; Priest & Gass, 1997; Russell & Hendee, 2000). Such gains or losses may be physical, social, emotional, or financial (Brown, 1998). Risk management research and literature is supportive of the goals and outcomes of outdoor adventure experiences in effort to maximize participant benefits while minimizing harm (e.g., Ajango, 2000; Cloutier, 2000; Hanna, 1991; Gregg, 2002).

Standard postsecondary curriculum and the development of reputable outdoor adventure education programs need to be considered (Guthrie, 2001) to prepare competent leaders for this rapidly expanding industry. Cain and McAvoy (1990) stressed that judgment and decision-making ability are two of the most essential competencies of an outdoor adventure leader. Other skills such as awareness, ethics, intuition and communication skills have also been identified as necessary for the development of an effective leader (Cain & McAvoy, 1990; Priest, 1987; Priest & Gass, 1997; Raiola & Sugerman, 1999). Although identified in the literature, these essential competencies have yet to be consistently integrated into risk management training or education. The gap between these identified skills and their inclusion in training is being addressed through recent research (e.g., Galloway, 2002; Harper, 2004) but still requires further inquiry and development. This paper proposes five key principles for consideration in the design of postsecondary risk management curriculum. This paper will not, however, identify risk assessment theory or specific risk management policy or practices to be included in curricula.

Methodology and Analysis

This study utilized a phenomenological design to gather knowledge from the expertise of individuals teaching, training, and managing outdoor adventure leaders. This qualitative approach acknowledges that research participants use their own experience and understanding to interpret and make sense of the world around them (Gall, Gall, & Borg, 2003; Palys, 1997). Risk management has been examined from the perspectives of "experts" in the outdoor adventure industry and related postsecondary institutions, and through a review of related literature providing triangulation of three data sources (Creswell, 2003; Mathieson, 1988).

Stratified purposive sampling (Gall, Gall, & Borg, 2003; Patton, 2001) was used to most accurately represent "expert" opinions from both the outdoor adventure industry and education in effort to identify the most credible participant sample. Three outdoor adventure organizations and three outdoor adventure postsecondary programs were selected as "industry leading" and then individual research participants were selected from each to best articulate risk management issues, trends, and needs. This sample was selected by convenience to the extent that it only contains participants from British Columbia, Canada. Two practitioners represented large outdoor adventure organizations having long-standing histories and reputations for high quality outdoor adventure training and service in Canada. The third practitioner was a business owner and nationally recognized industry

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leader in instructing and training leaders in the outdoor adventure field. These three practitioners hold senior positions in the management of their respective organizations and collectively have 60+ years in the outdoor adventure business, 4500+ field days, and have trained close to 1000 guides and instructors.

The three postsecondary institutions represented were chosen purposively as they graduate the highest numbers of students in related outdoor adventure programs in British Columbia (i.e., met sample criterion). The three "expert" faculty members chosen for this study were identified within each program for their advanced knowledge and teaching experience in outdoor adventure risk management. These three faculty collectively have almost 50 years in the outdoor adventure business, 2800+ field days, and have trained over 600 guides and instructors. Research participant selection did not attend to gender, age, cultural, or geographic representation.

A semi-standardized interview format (Gall, Gall, & Borg, 2003) was used. Interviews included predetermined questions and also allowed for, and encouraged, emergent dialogue on related issues and topics in effort to explore the full range of participant understanding (Denzin & Lincoln, 1994). Interviews were one hour in length and five of the six were tape-recorded by the researcher. All interviews were transcribed. One participant declined to have the interview taped but agreed to extend the interview to one and a half hours to allow for more extensive researcher note-taking. The researcher utilized a journal throughout the inquiry to capture his decision-making process, personal bias, and participant reaction and engagement during interviews. Furthermore, the researcher's journal assisted in pacing the interviews and provided interviewees with reflective time while the researcher recorded notable contributions or observations (Gray, 2004).

Member checking is a primary strategy to increase accuracy in qualitative findings (Creswell, 2003). Member-checking was employed in this study in two forms: 1) clarifying questions were asked during interviews to reduce researcher misinterpretation and more clearly articulate participant understanding of risk management education, and 2) participants were presented with a final report of findings and asked to provide feedback and further clarification on their contributions.

Multiple reviews of transcriptions, audio recordings, and researcher journal were used to clearly understand all material before coding the data. Coding and categorization of data lead to conceptual strength in understanding the phenomena through pulling together related concepts and ideas (Strauss & Corbin, 1990). Stauss and Corbin's "open" and "axial" coding process was applied in this study. Open coding of raw data produced categories from key words, phrases, ideas, and related question responses. These categories were then "axial" coded into a theoretical model; the five draft principles for risk management curriculum design. Following coding, the researcher engaged a "peer debriefer" (Creswell, 2003) to review, critique, and question researcher findings and interpretations to further validate accuracy in reporting.

Finally, the researcher determined whether the findings were unique, supported, or in contrast to related literature. The themes from participant interviews provided supplementary validation of the literature and contained only minimal contradictions deemed insignificant to the research focus and subsequently are not reported in this paper.

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Participant consent was ensured, and privacy and confidentiality were maintained (Gray, 2004). The inquiry included three distinct approaches to increase the trustworthiness of the findings: (1) triangulation from three data sources (i.e., outdoor adventure industry experts, postsecondary outdoor adventure experts, and related literature), (2) member-checking, and (3) peer-reviewing.

Findings: Five Principles for Risk Management Curriculum Design

Although generalizable to a variety of settings, these findings primarily reflect current circumstances of the institutions involved in this research, related standards and certifying bodies, and the developmental state of the outdoor adventure industry in Western Canada. This industry-educational analysis produced five key principles for the design and delivery of postsecondary outdoor adventure risk management curriculum and are presented in Figure 1.

Figure 1. Five Principles for Risk Management Curriculum Design

1. Identify industry needs	Align curriculum with industry Preferred qualifications Legal responsibilities
2. Define and articulate program goals	Skills and competencies Tolerance for risk Student responsibilities
3. Identify essential skills and competencies	Technical Leadership Experience
4. Determine teaching methodologies	Field experience Scenarios History Theory and literature
5. Select suitably qualified staff	Recognized professionals Technical competency Teaching / Facilitation skills

1: The Identification of Industry Needs

One faculty and three outdoor adventure practitioner interviewees identified the critical importance of aligning academic curriculum with the current needs of the industry. Regular dialogue with outdoor adventure service providers and organizations increases academic program's ability to remain current with both the training needs of the industry and employment opportunities for their students. In describing the current level of industry-academic collaboration and communication, one practitioner interviewee stated "There is a need for more dialogue amongst peers [practitioners

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and faculty]...there are too many experts working in isolation who choose to not engage with their community of outdoor leaders, the literature, or contact through symposiums or training courses."

Interviewees suggested understanding and addressing preferred or necessary qualifications of outdoor leaders as essential in designing current, meaningful curriculum. Recognized industry standards within specific disciplines of outdoor adventure should be considered including levels of training or experience needed for entry-level employment. Postsecondary outdoor adventure programs should be aware of the diversity of employment options for their students and able to anticipate or react to areas of growth or recession in the industry.

One practitioner interviewee expressed the need for students to be aware of their "legal responsibilities as leaders." Further, one faculty interviewee stated "An understanding of ethical practices and standards of care for participants expected of an outdoor leader needs to be a part of [postsecondary] curriculum." Additionally, two practitioner interviewees addressed the need for academic programs to remain current with legislation and ensure that program activities are being conducted in accordance with it.

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2: Define and Articulate Program Goals

Findings suggest that academic programs need to determine what skills and competencies they can offer students in alignment with the standards and requirements of the outdoor adventure industry. By defining goals and objectives, the program faculty and administration can (1) determine the level of training to be offered (and associated risk), (2) define course curriculum content, (3) articulate industry expectations and necessary career preparation and, (4) design a student selection process to ensure minimum competencies, if necessary, for acceptance into the program.

In addition, each academic program needs to identify its own level of tolerance for risk to which it will expose students and articulate that tolerance through clearly written objectives. One faculty interviewee gave the example of backcountry skiing where "students can be taught [the skills] while vicariously experiencing the mountains without being exposed to unreasonable risk of avalanches, cold, or anything else." An academic institution with this belief may write an objective that describes learning to backcountry ski in an introductory course. The objective may state that students would not be exposed to the risks associated with moderate to difficult terrain (e.g., avalanches) nor give them the responsibility of guiding or instructing the activity, which more advanced training or certification courses may require. The goal would be to describe the learning objectives including the level of risk to be tolerated in reaching those objectives.

Two faculty interviewees described postsecondary adventure tourism students as being at the beginning of their careers, "a starting point of a lengthy process" and emphasized the responsibility of the educational institute to clearly articulate this perspective to their students. Due to the various outdoor activities, academic program lengths, and levels of qualification offered across institutions, programs that can clearly articulate their goals and objectives will better serve students and the outdoor adventure industry. Students should clearly understand the competencies by which they will be assessed and the performance expectations they will need to demonstrate for the [outdoor adventure] workplace (Soine, 2003).

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3: Identify Skills and Competencies

Skills and competencies identified here are supported by the interviewees and literature (e.g., Priest & Gass, 1997) and are described in the following three subcategories: (1) technical skills, (2) leadership skills and, (3) experience. Although similar, to previously described outdoor leader skill categories in literature such as "hard, soft, and meta skills" (see Priest & Gass, 1997), these categories were derived specifically in the context of risk management. The key distinction between the outdoor leader skill categories in the literature and these findings is that elements of 'hard, soft, and meta-skills' were found to be included within each of the three subcategories. Given equal weight, the three risk management subcategories will be further described below emphasizing the need for a balanced, multi-faceted approach to knowledge and skill development.

Technical Skills

Technical skills were described as including activity specific skills along with knowledge of risk management theory or guidelines. A higher degree of activity proficiency (technical competence) in any given activity provides the leader with more confidence to focus on more subtle risk factors and group management issues. Advanced technical competence of a leader allows for increased awareness of environmental and group conditions while participating in the activity themselves. The outdoor adventure activity should be completed comfortably by the leader, requiring minimal effort or stress, thereby giving the leader his or her full attention to manage the group, assess risk, and instruct or guide the activity safely.

The findings suggest programs determine the level of training they will offer and then ensure the appropriate level of skill development or industry-recognized certification can be provided. Although four interviewees stated that industry standards and certifications were the preferred form of competency evaluation, two believed that certifications could place leaders in the field with professional recognition, but not necessarily, with adequate leadership competencies or experience. Questions of validity and effectiveness of certification have been debated inconclusively (Cockerell, 1990; March, 1987; Priest, 1987; Wilkinson, 1987) but there is agreement throughout the literature that technical competency, assessed through certification processes contributes positively to safe, successful outdoor adventure experiences (Cain & McAvoy, 1990; Priest, 1987; Priest & Gass, 1997).

One faculty interviewee stated "You can't ask too much of students in introductory courses" and suggested that students cannot effectively learn risk management skills while learning basic technical competencies. Students' technical skills should be developed through progressive steps and also concurrently with leadership skills (covered in next section) and the accumulation of experience. Advancing theory and technical skill development in a progressional manner allows for increased activity competence and improved leadership capacity, suggesting increased risk management effectiveness.

Two practitioners and two faculty interviewees addressed the generality of risk management and its application to most outdoor adventure activities through related "common principles." Risk management skills may be very specific to an activity (e.g., distinct commands between climbing partners to ensure clarity in communication), but may share "common" principles with other activities. For example, a leader should "check in" with all participants just prior to conducting an activity to evaluate their physical and emotional state. This "check-in" is a risk management principle that applies to any outdoor adventure activity and can be used pre, during, and post activity with the intention of

assessing individual and group conditions. Principles should identify preferred outcomes and the general factors that lead to them, rather than concisely describing practices. Defined practices tend to become rigid and lead to complacency in decision-making. In the dynamic outdoor adventure environment, abdicating to rules potentially increases the likelihood of accidents (Hunt, 1997). Interviewees and related literature acknowledged the benefit of using principles as more effective in "developing judgment" and preventing leaders from "just following rules."

One faculty and all three-practitioner interviewees stated that leaders should have both "instructional" and "guiding" skills. Instructional skills include the ability to teach technical skills including safety practices to participants (e.g., the forward canoe stroke or top-rope climbing procedures). Guiding skills are those that allow the individual to lead groups successfully and safely (e.g., navigation or group management). Guiding skills will be further explored in the following section entitled "Leadership skills." Two practitioner and two faculty interviewees stated the benefit of leaders having "terrain specific" skills. Reference was given to both skill development in the activity being taught or guided and technical competence in conducting the activity in a variety locations and conditions. For example, becoming an alpine climbing guide in Canada requires being a proficient climber on alpine rock, snow, and ice in both summer and winter conditions.

Field time (actual activity participation) must be sufficient to meet the desired training objectives of the program. Providing appropriate and sufficient length of field time addresses interviewees' concerns regarding students becoming "qualified" through certification, but not necessarily becoming competent due to limited "mileage." In the author's opinion, if leadership-level training (e.g., guide or instructor level qualification) is offered by a postsecondary outdoor adventure program, either extensive field time must be provided or a selective entry process be used (i.e., higher pre-requisite competencies).

Leadership Skills

Leadership skills, described by the interviewees as "human skills", "meta-skills", or "non-technical or soft skills" are critical to successful risk management. These descriptors match those of general outdoor leadership skills in the literature (see Priest & Gass, 1997; Raiola & Sugerman, 1999). Specific leadership skills identified by the interviewees were attitude, passion, communication, reflection (including self-assessment), decision-making, intuition, judgment, awareness, compassion, and humility.

One practitioner and two faculty interviewees did identify the advantage postsecondary programs have in their ability to offer interdisciplinary coursework through other departments (e.g., psychology). In the author's opinion, it is the culmination of this broad-based approach that further improves student leadership skills and their ability to manage risk. A general trend in responses from interviewees was that leadership skills—as with technical skills—need extensive field experience to fully develop, and that this is unlikely to be completed within the structure or timeframe of most postsecondary programs.

One practitioner interviewee stated "Individuals should know their strengths and weaknesses and stay present to them." Another practitioner interviewee addressed the development of judgment as it relates to an outdoor adventure leader's responsibility for participants and stated "Clients recognize they don't have the ability, skills, and judgment to do this on their own and that you [the leader] are standing in for their judgment, you are making [risk management] decisions for others...that is what you are paid to do and so you need to engage in that in a conscious way."

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As Ewert and Galloway (2002) point out, the balance between rules and instructor judgment is becoming more difficult now with fewer experienced leaders available resulting in greater reliance on policy guidelines or rules. If Zink and Leberman (2001) are right in their assertion that instructors are actually more reliant on their own subjectivity and judgment than rules or guidelines, it is critically important for academic programs to focus energies on developing student decision-making skills such as judgment. The use of established risk management models from the literature should be incorporated and integrated into outdoor adventure leadership curriculum (e.g., Brown, 1995; Williamson, 2002). As training tools, models and theory can be compared and contrasted with students' judgment and subjectivity in risk management decision-making. One faculty interviewee stated the benefit of pre-existing risk management models providing a "template for discussion" in both the field and classroom environments.

Reflection was given the most attention by interviewees regarding leadership skill development. Priest and Gass (1997) stated "experience without reflection cannot result in learning" (p. 257). Research findings and literature suggest forms of reflective practice be embedded throughout the curriculum to further improve student learning and personal skill development (e.g., Galloway, 2002). This may be achieved through student logbook writing, self-assessments, debriefing sessions, or through ongoing dialogue (e.g., mentoring) with program faculty or practitioners.

The term "awareness" was described in the interviews as "improving the assessment of risk" and an "increased recognition of environmental or participant concerns." A classic example of limited awareness is the outdoor adventure leader who does not notice the weather deteriorating, resulting in completion of an activity in unfavorable or adverse conditions, and thereby increasing the likelihood of an accident. The development of leader awareness should be promoted through close supervision and accurate, meaningful feedback from instructors. Being an internally developed competency, awareness is a difficult leadership skill to assess. Four interviewees included "emotional" and "psychological" safety in their descriptions of risk management. The literature described participant perception of risk as a key element in the adventure experience (Berman & Berman, 1999; Priest, 1992; Robinson, 1992; Zink & Leberman, 2001). Academic programs should consider ways to increase students' awareness of the sociological factors (e.g., group dynamics, cultural differences) and psychological aspects (e.g., individual perceptions, emotional states) related to risk management in outdoor adventure experiences.

All interviewees recognized guiding skills as necessary for effective risk management of participants. Guiding skills were previously differentiated from instructing skills as being more closely aligned to themes of leadership rather than activity technical skills. A suggestion made by two interviewees was to incorporate guiding / leadership skill development in courses on technical skill development. The end result would be activity instructors developing increased "awareness of group dynamics and an ability to facilitate learning." Postsecondary outdoor adventure programs should consider drawing upon the literature and theory from the fields of leadership and education to diversify the learning opportunities of their students.

Experience

As competency and judgment improve through increased experience and reflection, risk management effectiveness also increases (Brown, 1998; Hunt, 1997; St Paul, 2001). All interviewees identified field experience (i.e., time spent participating in outdoor adventure activities) as a significant contributing factor in the development of risk management competence of outdoor adventure leaders.

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As one interviewee jokingly described experience gained in the field "You can learn more out in bad weather than in a classroom." Personal trips outside of academic programs provide the leader with more responsibility for the duration, difficulty, and level of risk they accept for themselves and potentially other participants. Without direct supervision from an instructor, the leader depends on his or her training, judgment, and awareness to make decisions, thereby contributing to the development of their technical and leadership skills.

Both practitioners and faculty interviewees frequently used the term "mileage" in reference to experience gained through activity participation and its necessity in becoming an effective outdoor leader. Leaders need to do more than learn technical and leadership skills, they also need to go out and test them. One practitioner interviewee stated "You need to go out and find your own boundaries, you may even cross them and screw up...but you can not do this with clients." By completing activities at a higher level of difficulty than which they will guide or instruct, leaders are likely to manage risk with students or clients more effectively. Increases in experience and confidence need to be tempered with supervision, personal reflection, and feedback to ensure that the leader is accurately assessing their own skills and not overestimating their abilities.

Three of the interviewees identified the benefit of leaders having technical competency in "multiple activities" and in "diverse physical environments and weather conditions." A sea kayak guide, for example, would benefit from paddling in a particular waterway in both fair and inclement weather conditions as well as different seasons leading to a heightened awareness of environmental fluctuations. By gaining diverse experiences through participation in multiple outdoor adventure activities, leaders increase their ability to manage risk through making leadership and safety decisions more often. Two interviewees suggested diversity in roles be experienced by the outdoor adventure leader. Possible roles may include the student as leader, co-leader, participant, observer, administrator, or evaluator. Risk management decisions are often affected or perceived differently depending on individual's roles and responsibilities. As an outdoor adventure program administrator for example, the researcher's risk management decision-making was influenced by external factors including governmental legislation, the political environment, public perceptions, and the relationship to the program funders.

4: Determine Teaching Methodologies

One faculty and two practitioner interviewees described the reality of most academic programs as being limited in their ability to provide extensive experience to students through field time. In response, time available to train students in risk management needs to be used effectively. Interviewees identified the following training tools as being most effective in developing risk management knowledge and competency for outdoor adventure leaders: Field experience, scenarios, history, theory and literature.

Field experience is defined here as time spent participating in adventure activities by students' in a variety of environments, either independently, in a leadership capacity, or under the direction of a qualified instructor. Whether formally structured or not, field experience increases student's competence by advancing both technical and leadership skills. A high degree of competence is not likely to be attained within the structure of most postsecondary programs due to limited time allotted for activity participation. Student participation in outdoor adventure activities on their own time prior to, during, or post-program, becomes critical in the development of their technical and leadership skills.

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Scenarios, whether used in the classroom or in the outdoor environment, simulate events that have and may again occur in the outdoor adventure field. All interviewees described the use of scenarios as being highly effective training tools. A common use of scenarios in outdoor adventure training includes placing a student in the role of leader, thereby providing opportunities for students to gain the experience of risk management decision-making and responsibility for their participants. Scenarios also allow faculty and instructors in outdoor adventure programs the opportunity to first observe, and then provide feedback to students performing in realistic situations.

Interviewees described history as a teaching methodology through the use of case studies, story telling, and statistics. History can provide students with actual accounts of accidents and incidents thereby further demonstrating the level of responsibility they may take on in their career. Instructors in postsecondary education can easily include history as a training tool as it is often in written form and can be easily included in classroom curriculum.

Staying current with outdoor adventure literature is suggested to keep academic programs aware of, and accountable to, industry research and trends. The researcher has first-hand experience of outdoor adventure administrator's aversions to research and academia. Many outdoor leaders are strong believers in experiential learning and letting the mountains speak for themselves. Those interviewees supported further academic research within the outdoor adventure industry and encourage working more closely together to bridge the gap between theory and practice.

The interviewees described dialogue within the industry as taking many forms. One faculty described the use of "guest lecturers" from various outdoor professions in the outdoor industry as providing "current, meaningful insight into the field." Outdoor adventure and risk management conferences and symposiums exist and provide faculty, practitioners, and students the opportunity to share knowledge and network (e.g., Wilderness Risk Managers Conference). Postsecondary outdoor adventure programs also need to remain current through sharing knowledge with similar academic programs, the industry and professional and academic literature. All three practitioners expressed the need for more research and dialogue between the industry and academic programs supporting related literature encouraging industry-postsecondary dialogue (e.g., Guthrie, 2001; Toohey, 1999).

5: Select Suitably Qualified Staff

All interviewees identified the need for students to be taught and examined by recognized professionals within each outdoor activity. The findings encourage postsecondary programs to use available recognized standards, certifications, and qualified leaders when delivering outdoor adventure training. From a purely legal perspective, outdoor adventure practitioners must have technical competence to lead or guide activities. When program faculty does not instruct the activity, the researcher suggests that external staff selected have both industry recognition (e.g., certification and experience), and demonstrated effective teaching skills to best meet the needs of postsecondary outdoor adventure students. The author is aware of numerous postsecondary faculty instructing outdoor adventure activities with a range of technical skills, leadership skills, and experience. All interviewees supported the notion of providing training by individuals who are working in a professional capacity as a guide or instructor. To maintain professional currency is, however, difficult for faculty with the competing demands of the academic environment. It is here suggested by the author that if professional recognition can not be maintained that post-secondary programs employ external qualified staff.

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Furthermore, interviewees suggested instructors delivering outdoor adventure programs model appropriate facilitation, leadership, and risk management practices. Students should have the opportunity to gain technical and leadership skills within a safe learning environment, while under the supervision of a qualified leader. Following the base competency development, students should then progress into more advanced skills relevant to the activity. The importance of exemplary teaching practices of the instructor cannot be stressed enough. Relative to the level of risk-related decisions that students may become responsible to make in the outdoor adventure field, they do not gain extensive experience in the timeframe of most postsecondary programs. It is for this reason that the researcher stresses the effective use of professional student-faculty contact time through sound teaching practices and well designed and delivered curricula.

Supported by the literature (e.g., Cain & McAvoy, 1990), interviewees described the ability of the instructors to provide effective and meaningful supervision and feedback to the students as a key to maximizing their learning. Evaluation and assessment also needs to be conducted to identify whether the defined goals and objectives of the program and curriculum have been achieved. Students participating in outdoor adventure activity courses with industry standards and qualified instructors will also have a pre-existing framework for evaluation (i.e., recognized industry certification or standards).

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Summary and Conclusions

Five principles have been proposed to increase continuity in the design and delivery of risk management curriculum in postsecondary outdoor adventure programs. These findings are not intended to define specific curricula or programming; rather they are to provide a template to inform the curriculum design and delivery process. These principles can be defined as fundamental elements necessary to ensure industry, student, and academic program needs are met relative to risk management. While specifically addressing risk management, the findings support a process that can be applied to other aspects of outdoor adventure curriculum design and delivery.

The growing awareness of the need for risk management training and research is related to increased litigation (Brown, 1998). Public perceptions of outdoor adventure accidents do not reflect the level of thought and effort invested in risk analysis and management to prevent accidents. Relative to these public perceptions, collaborative efforts between related industry practitioners and educators need to be enhanced. Although this study highlighted fairly consistent risk management beliefs among participants, the researcher observed differences in educational program practices, length, and level of collaboration with the outdoor adventure industry.

Consideration in research design was given to the level of training and knowledge of the interviewees regarding the research topic. The sample group chosen for this inquiry was intended to draw upon "expert opinions," however, presents a limitation to generalization of findings outside of parameters of this inquiry. International perspectives on the topic would provide a stronger platform for increasing training continuity or standardization.

As with the assessment of risk, many factors should be considered when developing curriculum. This paper contributes a theoretical framework to assist in planning and delivery of the technical and leadership training of outdoor adventure leaders as well as considerations for evaluating existing curriculum. Postsecondary education has assumed a role in preparing future outdoor adventure leaders and needs to be cognizant of their role in the broader context of the industry.

Recommendations for further research include the development of a risk management research agenda to track and evaluate outdoor adventure accidents and incidents in Canada. With geographic, programmatic, and often philosophical differences between the Canadian outdoor adventure field and other nations (Potter & Henderson, 2004), the collection and analysis of national risk management data would provide trends and indications of industry needs in a Canadian specific context. Locating this study in the international context could also be accomplished through similar studies abroad. The term "industry-recognized professional" may, for example, not be consistent between countries.

With current growth in academic outdoor adventure education (Cloutier & Valade, 2003; Medina, 2001), shorter technical programs and longer undergraduate programs may consider collaborating in the development of transfer equivalencies, most notably between one, two, and four year programs. Furthermore, collaboration between outdoor adventure industry professionals and postsecondary faculty is strongly encouraged in the findings to better meet the needs of students and increase the quality of risk management education. Finally, it is hoped that this paper will encourage further evaluation and research in efforts to increase continuity in training and qualifying standards of outdoor adventure leaders in postsecondary institutions.

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References

Ajango, D. (Ed.). (2000). *Lessons learned: A guide to accident prevention and crisis response*. Anchorage, AK: University of Alaska.

Attarian, A. (2001). Trends in outdoor adventure education. *The Journal of Experiential Education. 24*(3), *141–149.*

Berman, J.D. & Berman, D. (1999). Risk and anxiety in adventure programming. *Journal of Experiential Education. 25(2),* 305–310.

Brown, T. (1995). Adventure risk management: A practical model. *Australian Journal of Outdoor Education. 1*(2), 16–24.

Brown, T. (1998). Risk management: Research needs and status report. *The Journal of Experiential Education. 21*(2), 71–85.

Cain, K.D., & McAvoy, L.H. (1990). Experience-based judgment. In J.C. Miles & S. Priest (Eds.), *Adventure Education* (pp. 241–250). State College, PA: Venture Publishing.

Cloutier, R. (2000). *Legal liability and risk management in adventure tourism*. Winnipeg, MN: Hignell Printing.

Cloutier, R. & Valade, G. (2003). *Risk management for outdoor programs: A handbook for administrators and instructors in British Columbia.* Province of British Columbia: Ministry of Advanced Education.

Cockerel, D. (1990). Outdoor leadership certification. In J.C. Miles & S. Priest (Eds.), *Adventure Education* (pp.251-262). State College, PA: Venture Publishing. Inc.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks: CA. Sage.

Denzin, N. K. & Lincoln, Y.S. (1994). Introduction: Entering the Field of Quantitative Research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp.1–17). Thousand Oaks, CA: Sage Publications.

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

Ewert, A. & Galloway, S. (2002). Using video simulation in training for decision-making and judgment. *Proceedings of the Wilderness Risk Managers Conference* (pp. 39–44). Lander, WY: National Outdoor Leadership School.

Frankel, A. (2003, April). *Tumbling down: Will outrage over the deaths of seven students change how the B.C. backcountry is run?* Outside. 107.

Gall, M. D. Gall, J. P. & Borg, W. R. (2003). *Educational research: An introduction.* Boston, MA: Allen and Bacon.

Galloway, S. (2002). Theoretical cognitive differences in expert and novice outdoor leader decision-making: Implications for training and development. *Journal of Adventure Education and Outdoor Learning. 2*(1), 19–28.

Gray, D. E. (2004). *Doing research in the real world.* London: UK. Sage.

Gregg, C.R. (2002). Staying in the field and out of the courthouse. *Proceedings of the Wilderness Risk Managers Conference.* (pp.82–83). Lander, WY: National Outdoor Leadership School.

Guthrie, S.P. (2001). The profession of adventure education leadership. *The Journal of Experiential Education. 24*(3), 132–135.

Hanna, G. (1991). *Outdoor pursuits programming: Legal liability and risk management.* Edmonton, AB: University of Alberta Press.

Harper, N. (2004). *Risk management: A model for outdoor adventure curriculum.* Unpublished Master's Thesis. Victoria, BC: Royal Roads University.

Hunt, J. S. (1995). Risk-benefit analysis. *Proceedings of the Wilderness Risk Managers Conference* (pp. 51-56). Lander, WY: National Outdoor Leadership School.

Hunt, J. S. (1997). The danger of substituting rules for instructor judgment in experiential education. *Proceedings of the Wilderness Risk Managers Conference* (pp. 37–38). Lander, WY: National Outdoor Leadership School.

Israelson, C. (2003). Executive director's report. *Avalanche News. 65*, 5–6. Revelstoke, BC: Canadian Avalanche Association.

Liddle, J. (1998). Risk management: Walking the tightrope. *The Journal of Experiential Education, 21*(2), *61.*

March, B. (1987). Wilderness leadership certification: Catch 22. In J. Meier, T. Morash & G. Welton (Eds.), *High risk outdoor pursuits: Organization and leadership.* (pp.489–494). Columbus, OH: Publishing Horizons.

Mathieson, S. (1988). Why triangulate? *Educational Researcher, 17*(2), 13–17.

Medina, J. (2001). Types of positions, job responsibilities, and training backgrounds of outdoor adventure leaders. *The Journal of Experiential Education. 24*(3), *150–159.*

Patton, M. Q. (2001). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage.

Palys, T. (1997). *Research decisions.* Toronto, ON: Harcourt Canada.

Potter, T. G., & Henderson, B. (2004). Canadian outdoor adventure education: Hear the challenge-learn the lessons. *Journal of Adventure Education and Outdoor Learning, 4*(1), 69–87.

Priest, S. (1987). Outdoor leadership certification: Always an issue, but no longer a trend. In G. Robb (Ed.), *Bradford Papers Annual*, 2, 37–44.

Priest, S. (1992). Factor exploration and confirmation for the dimensions of an adventure experience. *The Journal of Leisure Research. 24*(2), 127–139.

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

Raiola, E. & Sugerman, D. (1999). Outdoor leadership Curricula. In J.C. Miles & S. Priest (Eds.), *Adventure Programming* (pp. 241–245). State College, PA: Venture Publishing, Inc.

Robinson, D.W. (1992). The risk-sport process: An alternative approach for humanistic physical education. *Quest. 44*, 88–104.

Russell, K. & Hendee, J. (2000). *Outdoor behavioral healthcare: Technical report #26.* Moscow, ID: University of Idaho.

Soine, R. (2003). Framework for a new design: The need for a common language. *Techniques.* March, 38–41.

St. Paul. (2001). *Rocky terrain: A look at the risks in the outdoor adventure industry.* Saint Paul, MN: The St. Paul Companies and Outward Bound.

Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded theory procedures and techniques.* Newbury Park, CA: Sage

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Thomas, S. & Raymond, C. (1998). Risk and provider responsibility in outdoor adventure activities. *Teacher Development. 2*(2), 265–280.

Toohey, S. (1999). *Designing courses for higher education.* Buckingham, UK: Open University Press.

Wilkinson, K. (1987). Another look at leadership certification. In J. Meier, T. Morash & G. Welton (Eds.), *High risk outdoor pursuits: Organization and leadership.* (pp.495–497). Columbus, OH: Publishing Horizons.

Williamson, J. (2002). Understanding risk. *Proceedings of the Wilderness Risk Managers Conference,* (p.38). Lander, WY: National Outdoor Leadership School.

Zink, R. & Leberman, S. (2001). Risking a debate- redefining risk and risk management: A New Zealand case study. *The Journal of Experiential Education, 24*(1), 5–57.

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