

Skills and thrills in outdoor environmental education: A contradiction or beautiful tension?

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Abstract

There has been some interesting discussion and research published in the outdoor education literature about the place of adventurous activities in outdoor education. It can be challenging for outdoor leaders to incorporate adventurous and challenging activities with attempts to foster environmental awareness, understanding and action. This “mission tension,” a term coined by Johnson (1999), requires a response from the reflective practitioner: eliminate the tension by dropping either the environmental foci or the adventurous activity, or find a workable solution which resolves the tension in some way. This paper presents the findings of an ongoing action research project which reports on how my colleagues and I, and our student leaders, have attempted to resolve the tension between adventurous activities and environmental learning and turn a source of potential disconnection with the environment into a meaningful connection for learners.

Adventure in outdoor environmental education

The place of adventurous activities in outdoor environmental education is contentious and has been the focus of considerable debate.

There is a tension between adventure and environment. Adventure is about uncertainty and challenge. The environment, in the form of wind, waves, white water, crag, fell or forest may provide the challenge. We pit ourselves against these natural elements, there is excitement of real or perceived risk, we overcome the challenge and we enjoy the ‘buzz’ of success. At worst we are in competition with the environment, at best it provides simply the backcloth for our activities. How can the outdoor leader of 11-16 year olds turn the self-centred ‘buzz’ into a more outgoing awareness of and interest in the environment. (Cooper, 1998, pp. 95-96)

In the early 1990s, Cooper (1991) encouraged outdoor centers to question the importance they place on activities and to consider whether they are an end in themselves or whether they are a vehicle for other learning? Around the same time Hogan (1992, p. 26) was warning outdoor educators against using the environment as a playing field, and he observed that, “from the bulk of the writings about the planning and conduct of outdoor experiences ... we give more attention to the technical aspects of outdoor activity than to interaction with the environment.”

A survey of environmental educators in 1992 (Palmer 1992, cited in Cooper, 1994) found that outdoor experiences had been a major influence in the participants interest in the environment. (At the time of writing no more details on this research were available). Cooper (1994) suggested that “direct contact with the environment, particularly in challenging situations, can be inspirational and lead to feelings of belonging or oneness with the earth” (p. 12). However, as is the case with much of the writing on this issue, Cooper does not substantiate his claim with any research.

Cooper (1997) contributed to the discussion again by providing a table indicating the potential of certain activities to contribute to a list of ten learning outcomes. Cooper (1997, p. 27) states that “Clearly some activities have a greater potential to meet the required competencies,” but again the claim is not substantiated? Cooper suggests adventurous activities like “kayaking”, “open canoeing”, “abseiling” and “rock scrambling” have less potential to contribute to learning outcomes with an environmental focus such as: “feelings for the natural world”; “creativity, personal response to the environment”; and “knowledge of ecology, social/political systems” (Cooper, 1997, p. 26). The reasons for the classifications are not really provided, which is disappointing.

In an historical review of the development of outdoor education in the United Kingdom (UK), Nicol (2002a) explains that the traditional adventurous, outdoor pursuits represent one of the two main traditions in outdoor education along with field studies. Nicol (2002b, p. 89) goes further to suggest that, "In the absence of stated philosophical underpinnings and empirical evidence it is clear that outdoor education has developed, to some extent, as a series of practical activities." In this sense, Nicol suggests that the rationale for much outdoor education in the UK, has grown out of accepted practice, and often lacks a clearly articulated philosophical foundation. This is a problem in so much as "philosophical debate proceeds in defence of what has always been done" and outdoor education is more likely to become just another "reinforcement of the status quo than a visionary pedagogical endeavour" (Nicol, 2002b, p. 90).

Brookes (2002) also suggests that the UK traditions of activity based outdoor pursuits have influenced and shaped outdoor education practice in Australia even though some of the pursuits are not obvious responses to local landscapes. Lugg (2004) concurs that Australian outdoor education programs have been shaped by northern hemisphere traditions and that there is an absence of robust educational rationales for conducting some activities. Payne (2002) also argues that the adventure pursuits that are core to outdoor education practice in Australia have not received due critique in relation to their appropriateness for socially and environmentally critical education.

Recently Lugg (2004) encouraged practitioners to question whether adventure activities can be framed and taught primarily for environmental education goals and whether some adventure activities are more appropriate for environmental education purposes than others. Preston (2004) has also expressed concerns that adventure activities such as rock climbing and white-water paddling allow the environment to become the backdrop to the activity potentially encouraging students to focus their attention on the activity and themselves rather than the place. Even those who seek to use adventurous activities in outdoor environmental education have acknowledged that the focus on skill development, required by some adventurous activities, can become all consuming and may become counterproductive to the practice of thoughtful critical outdoor education (Thomas & Thomas, 2000). Before discussing this issue further it is perhaps worth considering the way outdoor environmental education has evolved over the last decade or so.

Towards a greener outdoor education

Nicol (2002b) explains that "outdoor education has never enjoyed statutory protection nor a societal tradition to support it whereas many existing school subjects are considered to be a good thing and beyond question" (p. 90). The personal and social benefits, often identified as chief outcomes of outdoor education, are not unique to outdoor education, challenging outdoor education's claim to a valid place in a crowded school curriculum. Nicol (2002b) also laments the fact that the majority of academic writing has focused on debates over definitions and less effort has been directed towards clarifying a philosophical foundation and crafting a better understanding of the contribution that outdoor education has to offer. In both the UK and Australia, some have sought to raise the profile of outdoor education by forging stronger ties with environmental education.

In the early 1990s Brookes (1993) developed the notion of a *deep* outdoor education and he challenged outdoor educators to become better equipped to understand and articulate the role of outdoor education in the broader school curriculum. For Brookes (1993), deep outdoor education would develop "alternative understandings of the nature of knowledge, the role of science, the ways on which nature should be valued, the relationships between individual and the wider community" (p. 16). Brookes was critical of weak justifications for outdoor education and he encouraged outdoor educators to provide a critical rationale for their programs and to be clearer on why other forms of traditional education do not provide the same opportunities for learning.

Martin (1998; 1999) coined the term *critical outdoor education* to describe a similar form of outdoor education based on *critical theory*. Critical theory originated from the work of Kant, Hegel, and Marx and was further developed by Habermas and his predecessors in the Frankfurt School (Rasmussen, 1996). Critical theory seeks to expose the operation of power and to bring about social justice by redressing

inequalities, and promoting individual freedoms within a democratic society (Habermas, 1984, 1991). From Martin's (1999) perspective, critical outdoor education

goes back to the bush, not just to recreate and have fun, but to look back with a critical perspective at the contexts left behind, particularly to those sets of beliefs which help shape human nature relationships. (p. 465)

Cooper (1991, 1994, 1997, 1998) was an advocate for a greener outdoor education all through the 1990s and he is a firm believer that outdoor education could make an important contribution to educating for sustainability. Cooper describes his involvement with the Adventure and Environmental Awareness Group whose aim is to "encourage awareness, understanding and concern for the natural environment amongst those involved with adventure, education and recreation" (Cooper, 1998, p. 95). After an extensive historical review of outdoor education in the UK, Nicol (2002a, 2002b, 2003) argues that outdoor education can contribute to sustainability education, sustainable living or environmental education. However, to achieve this outcome he calls for some major transformations to the traditional outdoor education commonly practised in the UK. He encouraged outdoor education leaders to develop programs that challenge existing social norms, address relationships between ourselves and the world we inhabit, and produce an aesthetic, cognitive, and action response. Only then does Nicol believe that outdoor education can make valid claims to the title of outdoor environmental education.

Removing adventure from outdoor environmental education?

Lugg (2004, p. 8) suggests, "It may also be necessary to be prepared at times to 'let go' of those activities with which we are most comfortable and familiar and to use completely different outdoor activities in order to educate in a more inclusive and responsive manner." Cooper (1991) observed that the potential for outdoor education to contribute to EE is enormous yet he maintains its influence on raising environmental awareness has been limited. Martin (2004, p. 20) also notes a paucity of outdoor education programs "which enhance environmental connectedness, yet retain the potency of adventure-based learning". So if outdoor education practitioners are serious about doing outdoor environmental education should they follow Lugg (2004) and Preston's (2004) lead and eliminate adventurous activities from their programs?

After conducting a naturalistic inquiry into human-nature relationships with tertiary outdoor education students, Martin (2002) warns that removing adventurous activities from outdoor environmental education may have unanticipated consequences.

The risk is that as the modified outdoor activity, content and context of green outdoor education slides in, adventure, fun and a love of the bush with body and soul are squeezed out More importantly, outdoor education as reinvented geography may actually be less effective in developing a more environmentally sympathetic citizenry when compared to outdoor education's adventure-based possibilities ... [and] ... well-meaning academics and practitioners are potentially leaving out the very essence of what makes outdoor education so effective as a way of building profound relationships between people and nature. (Martin, 2004, p. 20)

Martin acknowledges that the skill learning, often associated with adventurous activities, can detract from environmental awareness. However, he notes there is no research supporting the view that a less adventurous outdoor education will automatically produce stronger environmental outcomes. In fact, Martin (2004) found,

in some instances, even for an ideal group of learners such as those in this study, the de-emphasis on skill learning was cause for frustration and resentment. In such cases students felt unable to enjoy the outdoors as a place to play, they felt forced to comply with particular ways of being in nature that were neither comfortable nor enjoyable for them. As a consequence, their relationship with nature suffered. (p. 26)

One conclusion from Martin's research was that increasing the environmental focus of outdoor education and de-emphasising skills could lead to some students hating their experience with nature. He explains,

there is a strong sense that without the challenge and fun which accompanied those (adventurous) activities, the desire for being in nature would diminish. In the outdoor education programme studied, adventurous activities enabled students to enjoy and be motivated to spend time in nature, but there was a growing sense that the balance between adventure and environmental appreciation is a fine one and for some students it had already been compromised to the detriment of their relationship with the outdoors. (p. 26)

Martin found that outdoor activities not only provide an initial excuse to visit natural places but they can also provide the continued motivation to develop deeper, ongoing personal relationships with nature. In closing,

adventure activities are a powerful medium to elicit emotional connections to the natural world. Adventure induces an emotional response, but also draws people to wild places that play their own role in eliciting emotional reactions from participants. Deskilling outdoor education ... carries an inherent risk of de-stabilizing the longstanding attractiveness of outdoor education processes for some students, and may even work against improved relationships with the natural world. (Martin, 2004, pp. 27-28)

It is important to recognize that Martin's research does not suggest that adventurous activities are essential for all participants to develop relationships with nature and it may well be that some participants would more effectively develop such relationships with less focus on adventure. However, it is also clear from Martin's research that adventurous activities may be important for some other participants to develop their relationships with nature and to remove such activities for all participants in an outdoor education program may be detrimental to those students realising environmental outcomes. Perhaps it is about maintaining some choice for participants or perhaps it is about the way these adventurous activities are facilitated.

Resolving the tension through specific program design and facilitation.

As mentioned earlier, some authors (Lugg, 2004; Payne, 2002; Preston, 2004) have advocated replacing adventurous activities with alternative activities to enhance environmental outcomes. However, the efficacy of these suggestions has not been tested and the unintended consequences may not have been adequately considered either. Other authors have suggested that the potential contribution of adventure activities to outdoor environmental education is not just determined by the nature of the activities but also by the way those activities are facilitated.

Cooper (1997, p. 27) warns people to be careful when judging the educational potential of activities "as the educational potential lies not in activity per se but in the way it is introduced and facilitated." Thomas and Thomas (2000) maintain that, for example, moving water paddling can make a significant contribution to outdoor environmental education but,

the responsibility for the quality of that contribution lies firmly with the teachers and leaders ... (and) ... the richness of that contribution will be determined by the way the moving water paddling experiences are designed, framed, and facilitated. (p. 53)

Martin explains it well, when he suggests that "a passion for spending time with nature, easily promoted through adventure activities, blended with reflective moments may well be the greatest gift we can give our students to take with them into the future of the world" (Martin, 2004, pp. 27-28). The Adventure and Environmental Awareness Group described by Cooper (1998, p. 96) developed some guidelines on how leaders can facilitate outdoor programs to encourage greater environmental awareness. The list included:

- Recognizing links between personal, social and environmental education
- Introducing good environmental practice into the whole organisation not just isolated activities and model that practice as a leader
- Encourage a sense of place, use all the senses, focus on the detail, and encourage a personal response through creative means
- Use the close contact with nature, experienced in some adventure activities, to foster greater environmental receptivity

- Raise environmental issues with groups but do so positively in a context of enjoyment, awareness and understanding
- Adopt the concept of journeys rather than quick thrills
- Use reflection and reviewing (even after an exciting session) astutely to challenge attitudes and actions towards the environment.

For some authors (see Payne, 2002) the suggested changes to outdoor education listed above will not be radical enough to justify the acclaimed title of critical outdoor education. However, the research described in the next section of this paper is not so concerned with academic definitions or debates. Rather, it seeks to engage outdoor education practitioners (involved in adventurous outdoor education) in reflection and discussion. I suspect that many of these outdoor leaders are unlikely to heed the counsel of those who would call for a shift away from adventurous activities in outdoor education. This research project described in the next section of this paper is founded on the belief that a better way to effect change towards a greener outdoor education is to describe the way the tension between adventure activities and environmental foci can be addressed. In this respect, this research seeks to be a strategic change agent 'from within' the field.

An action research methodology

Following the traditions of action research, this project involves an ongoing dialectical interplay between practice, reflection and learning. Educational action research can be defined as "an enquiry which is carried out in order to understand, to evaluate, and then to change, in order to improve some educational practice" (Bassey, 1998, p. 93). Although there is both agreement and disagreement in the literature on what constitutes action research, Denscombe (1998) suggests that typically action research is practical in nature, focuses on change, involves a cyclical process, and is concerned with participation. The project described in this paper (and the corresponding conference presentation) follows these principles and describes some of the changes in my own practice implemented over the last five years as a result of my action research. However, this project also focuses on more than just my own personal practice. It also describes the way a number of my colleagues, and our students, have modified their practice as a result of their engagement with the issues raised earlier.

Operating within an interpretive paradigm, the research described in this paper and corresponding conference presentation does not pretend to be uninfluenced by preexisting understandings, theories and assumptions. On the contrary, "it actively engages these preexisting understandings, theories and assumptions allowing them to be transformed and changed so that new theory can be developed" (Ezzy, 2002, p. xiii).

In accord with recent developments within the interpretive paradigm (Lincoln & Guba, 2003) the research described in this session has attempted to empower both myself and others to act with greater purpose and effectiveness. This movement from understanding and interpretation towards social action is probably one of the most conceptually interesting shifts in research described by Lincoln and Guba. In negotiating this terrain I have had to be careful to avoid slipping into a self-interested, justification for my practice. As indicated by Brookes (2002), enquiry into outdoor education curriculum is complicated.

Passions for particular forms of recreation, commitment to certain programmes or forms of programme, and professional and personal identities are at stake. It is clear from the literature that outdoor education adherents frequently link their practice with strongly held personal beliefs and values (p. 422).

It is hoped that this research project is not read as a defence of personal and/or professional 'territory'. However, in accordance with an interpretive research paradigm, I also do not feel the need to discount my personal beliefs and values, nor do I pretend that they don't influence or shape the way I practice as a teacher and a researcher. My beliefs and values define who I am, how I teach, and how I encourage others to learn to teach. However, it is hoped that I have been able to maintain an appropriate level of critical reflexivity which involves "reflecting critically on the self as researcher, the 'human as instrument' ...

which demands that we interrogate each of our selves regarding the ways in which research efforts are shaped and staged around the binaries, contradictions, and paradoxes that form our own lives” (Lincoln & Guba, 2003, p. 284).

Ultimately it is the reader who will need to make judgments about the usefulness of the research findings presented in this paper and the corresponding conference presentation. I have avoided making generalisations because my findings are defined by the specific contexts in which they occur. However, the thick description that will be presented in the conference presentation should enable participants “to make tentative judgments about applicability of certain observations for their contexts and to form 'working hypothesis' to guide empirical inquiry in those contexts" (Erlandson, Harris, Skipper, & Allen, 1993, p. 33).

Data collection, analysis, and presentation

Data was collected through a number of channels: through a professional journal that I have maintained over the last few years, through formal and informal student feedback and writing over the last five years, and more recently through a series of formal, focus group discussions with staff and students in the Bachelor of Arts (Outdoor Education) program at La Trobe University in Bendigo, Victoria, Australia. The interviews, focus group discussions, and analysis of student writing were transcribed, coded and analysed using the Nvivo Qualitative Analysis software program. All names used in this paper and the conference presentation are pseudonyms to preserve the anonymity of participants.

In accord with emerging innovations in the reporting of interpretivist research (see Gergen & Gergen, 2003) my conference presentation will use some creative means to present my findings because they:

- allow for *multiple voicing* which provides a “rich array of interpretations or perspectives” (p. 580) allows for a more conscientious attempt to ‘tell the truth’ from the participants perspective.
- offers a greater expressive range and an opportunity to reach audiences outside academia
- provide the audience with “possibilities for rich engagement with the issues but leaves them free to interpret as they wish" (Gergen & Gergen, 2003, p. 583).

Preliminary Findings

At the time of writing, data collected in 2004 as part of the ongoing project has not been completely analysed. However, it is possible to report how the practice of my colleagues and I, and that of our students, has changed over the last few years as a result of our critical reflection. Some of the potential implications for resolving the tension between adventure activities and environmental foci will now be discussed.

“Learnable” moments

When incorporating environmental education into the context of adventurous outdoor education it can be challenging to make environmental content relevant and appealing to students. It is not uncommon for students and leaders to feel like the inclusion of environmental material is contrived and not pertinent to student needs or interests at the time. This sense is often heightened by the fact that motivation and interest in learning about the adventurous activity itself, is in contrast, very high. For example, one of my students learning to lead others in moving water paddling observed, “At times I find these [environmental] activities a little contrived and perhaps it would be better to simply allow people to absorb the place in their own way” (James, 2001).

In 2003, in an attempt to help my students (from the subject “Teaching in River Environment”) see that environmental foci need not feel contrived when paddling, I experimented with a new approach. On a three day, overnight river journey, designed to help my students to learn to lead others on moving water, I encouraged them to look out for environmental “teachable moments”. We defined teachable moments as those opportunities where the possibility for some environmental learning presents itself to the group. In some ways the reduced pressure to “do” environmental education allowed learning to occur much more naturally. Our larger group, was paddling in three distinct groups, so each evening I facilitated a discussion where the students shared their teachable moments from the day. The quality and quantity of teachable

moments identified by the students was amazing and they felt liberated from the pressure of having to “make” opportunities for environmental education. They discovered that opportunities for relevant and interesting environmental learning abounded - they just had to notice them. The teachable moments varied greatly: for example, some were related to understanding why moving water behaved in a particular way; and others had nothing to do with paddling whatsoever.

This approach to “doing” environmental education is not without difficulty, as my students quickly found when they tried to use it themselves on a trip leading their own participants. One student observed that there was not “enough local knowledge among our teaching group to bring out the uniqueness of the place” and they quickly realised that to teach in this way “would entail knowing an area like the back of your hand, all of it. What’s in it, what’s around it, when did that happen etc. Because you never can know what the river will provide you with on any given day” (Don, 2003). These student realisations are congruent with Brookes’ (2002, p. 422) claim that “outdoor education curriculum requires of teachers a capacity to shape and interpret experiences in response to particular circumstances, and in accordance with a deep understanding of local curriculum imperatives.”

So it becomes apparent that to rely on a serendipitous teaching strategy necessitates a high level of local knowledge and perhaps even planning, which creates an interesting paradox as one student leader observed, “Perhaps more forethought could however, have been given to planning for ‘teachable moments’ as they arise along the river” (James, 2001). When teaching some of my other students climbing (in the subject Rock Environments) we visit the same place (Mt Arapiles in Victoria, Australia) each year. As a result of these visits with students and my own private trips, I have developed my local knowledge and have a good idea of the sort of teachable moments that might arise in particular places. Of course, there are times when using such moments could still feel contrived, but my local knowledge of that particular cliff environment has taught me that genuine opportunities for learning do present themselves to students again and again in particular places and on particular climbs.

Finally, when observing a teaching evaluation session with a colleague’s rockclimbing student leaders, one of the student leaders raised the issue that teachable moments seemed to be teacher focussed which for her seemed to be incompatible with an experiential education methodology. We were able to discuss with the group that teachable moments need not be teacher focussed at all, and that by definition they should be more focussed on the needs and interests of students. Later discussions with this colleague suggested that it may be more appropriate to refer to teachable moments as *learnable* moments, which removes the inference that the learning experience revolves around the teacher.

The influences of equipment, technology and the need for skills development

Adventurous outdoor education activities, such as rockclimbing and moving water paddling, do involve a stronger focus on skills and equipment in order to allow students to participate safely. This can become a significant deterrent to the successful inclusion of environmental education in such activities. I responded to this concern in 2001 by introducing rafts to the university flotilla (which to that point was made up of canoes and kayaks). This had a significant impact on the experience of my students who were exploring river environments using moving water paddling as the following excerpts from my student leader’s teaching evaluations indicate.

The raft became a great opportunity for me to talk about other aspects of river environments. Students were able to sit there and take in the surroundings without worrying about what was coming up ahead or what their boat was doing. In this respect the raft was invaluable for teaching about Big River geology, flora, fauna, and impacts. All the important things that I really want people to know about river environments. (Barb, 2001)

With this in mind, rafts are definitely the preferred craft for achieving this environmental/skills balance to learn. (Jonno, 2003)

If I were to do it again, I would do away with all the fuss of teaching them skills in hard boats and use more of the rafts to facilitate a friendly platform for learning. (Neil, 2003)

Using rafts to journey down rivers, rather than hard boats (canoes and/or kayaks), made it significantly easier for my student leaders to introduce their participants to river environments, especially in programs of shorter duration. The following comments about the use of hard boats indicates this.

Using kayaks on this trip for students was one of the biggest inhibitors to achieving all our aims. (Jonno, 2003)

Indeed, some students were so focussed on their paddling while in a kayak, they could barely lift their eyes off the water and look at their surroundings when being shown a rock or a wombat hole. (Julian, 2003)

However, not all my student leaders, found the experience of teaching using hard boats completely negative, nor was the experience of using rafts completely positive.

The most satisfying outcome from the students paddling different craft and of the whole trip experience was seeing the students' understanding of rivers features increase over the trip. (Liam, 2001)

With all participants in guided rafts it was easy to communicate as the group was easy to get together. However, I also noted that guided rafts allowed the participants to 'escape' the setting by having discussions about places elsewhere, they often ended up not paddling and all facing each other in the centre of the raft. I noted participants paddling on some flat sections and talking about cricket or things back at school. The rafts and ease of paddling seemed to create a setting where participants could feel at ease (safe) and free to hold discussions of things elsewhere. I felt that the rafts led to less being learnt and felt about the environment. (Bert, 2001)

The concept of 'dependence' as a means of attachment to place is of relevance here. Raffan (1993) explains that not all experiences in a particular environment lead to a growing sense of attachment. He observed, that some self-contained, recreational expeditions to places do not require visitors to pay much attention to the details of a place. In the case above, little was required of the rafting participants to journey down the river. My student leaders guided the rafts and assumed responsibility for the safety management, route finding and implementation and the participants were not required to pay attentions to the details of the place at all. This would not be the case if participants were more directly involved in determining the outcome of their journey or exploration of a place (e.g., self guided rafts, hard boating, lead climbing). Martin (2002) asks, "Could outdoor activities serve a parallel purpose by fostering connection through an activity that demands, for the sake of personal wellbeing, close attention to the characteristics of nature?" (p. 96). Alternatively, Martin suggests that a stronger sense of dependence could be created by decreasing our reliance on technology and equipment. This strategy could well conflict with an outdoor leader's requirement to optimise participant safety, but it is another interesting question worthy of more discussion and thought. Certainly, there is considerable anecdotal support for the power of "low tech" trips to generate interesting learnings for students.

Suffice to say, the issues of equipment, technology and the corresponding requirement for skill development creates issues for some adventure activities that simpler activities like bushwalking do not have to contend with. The resolution of some of these issues may be linked to the discussion in the next section.

Deliberate and careful planning

A consistent comment in my student leader's teaching evaluations is that they didn't prepare enough for the environmentally focussed aspects of their lesson plans. As indicated earlier in this paper, if the inclusion of environmental foci is important to the aims of a particular program then this importance should be reflected in the planning, organisation, and facilitation of the experience. Some students found this out the hard way as reflected in the following excerpts from some of the student's teaching evaluations.

The obvious solution to the problem is to plan particular activities into the program so there are times throughout the trip when you are focussed on the environmental aspects of the river (Jamie, 2001)

It is true that they may learn a lot about themselves and develop as an individual or a group but overall the educational benefits may be limited. To include purposeful [environmental] educational benefits like any other outdoor education program it needs to be programmed, otherwise it will too easily become all about the excitement and adrenaline of white water paddling (Susan, 2002)

However, other students managed to plan, organise and facilitate effectively the environmental aspects of their teaching experiences and the following excerpts demonstrate this.

I also feel the greatest educational outcomes were made during the touring section of the trip. At this time we were in a small group and the river and its environment became the primary focus. This journey was made successful due to the prior experience of the group on flat water and easy moving water. Perhaps this sort of sequencing is the key to engaging students in environmental issues and knowledge, which surely is the aim of outdoor education. (Anthony, 2001)

We used the river journey on day two as a tool for explaining geological river features, river health issues, impacts from human and recreational activities, and drew upon discussions concerning language use on rivers and names of rapids. (Harry, 2002)

We also ensured that skill development did not dominate over the experience of the place by breaking up each session with environmental activities. (Harry, 2002)

In programming an ecological curriculum framework we decided to use a river journey as the program theme, since a journey unfolds like a story, which we perceived would be conducive to teaching skills and environmental interpretation in a cohesive and holistic manner. (Nigel, 2003)

For me, the importance of careful facilitation was never more evident than on a three day river journey designed to prepare my student leaders for leading others in river environments in 2002. I encouraged the students to form three groups with an appropriate distribution of experience, expertise, and confidence in all relevant aspects of the planned river journey. The students dutifully sorted out three groups but their idea of 'appropriate distribution' was quite different to mine! I encouraged them to rethink the group formations they had come up with, but they were reluctant to change. The result was an uneven distribution of students with high levels of paddling, rescue and leadership competence. The group that I was responsible for supervising the next day included many competent paddlers and we moved easily down the river in good time. This allowed us to make numerous stops along the way and explore places of cultural, historical and aesthetic interest. However, the other two groups had long and difficult days with the need for many rescues, and subsequently, little time for exploration of the place. In the true sense of experiential education this was a powerful learning experience for the both the students and I. However, I realised that it is appropriate for me to be more directive about group formation because of it influences the group's rate of travel and subsequently the available time to do environmentally focussed activities. In the same subject in 2003, I did assume a more active role in the formation of groups and the result was positive, although some students lamented their loss of freedom as far as group formation was concerned.

Time limitations and adventure activities in outdoor environmental education.

The final theme worth discussing in these preliminary findings concerns the issue of time and in particular the place of skills intensive adventurous activities in programs of shorter programs. The following comments from student leader's teaching evaluations allude to the issue,

I think skill acquisition in hard boats can lead to an intimate knowledge and feeling of belonging to the river environment but this takes time and resources. (Marg, 2003)

Using kayaks was the greatest problem in trying to equip students with the necessary skills needed to experience moving water and satisfy one of our other aims of enhancing environmental knowledge whilst on and off the river ... in the time frame we were given for this trip I think it is unrealistic to achieve both of these aims using kayaks as a type of craft. (Jonno, 2003)

It seems clear that if an outdoor education program seeks to achieve environmental outcomes but the program is only short, or not part of an extended or ongoing program, then some forms of adventure activities will not be suitable for the realisation of these outcomes. In these cases it may be inappropriate to use activities that require participants to develop a high level of independent skill (e.g., paddling a kayak in moving water). On such trips, outdoor leaders may find it easier to choose alternate modes of travel and/or exploration so that skills development does not dominate the program (eg rafting, and guided climbing). In programs of longer duration or extended sequences the requirement for participants to develop skills may be less distracting to environmental foci.

Conclusion

This paper has attempted to discuss the tension that exists between the use of adventurous activities in outdoor environmental education. It has reviewed the literature and also described some of the preliminary findings of an ongoing action research project exploring this tension. I have been careful to avoid prescriptive solutions on how others might resolve these tensions, and the conference presentation will provide more rich data and some additional findings.

Acknowledgments

Sincere thanks to my colleagues and our students who agreed to participate in this action research project. The formal documentation of this research project is a work in progress and will hopefully be submitted to a relevant journal in late 2004. Any feedback on my paper or presentation is welcomed and should be forwarded to g.thomas@latrobe.edu.au.

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