

Pedagogy of connections: Findings of a collaborative action research project in outdoor and environmental education

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Abstract

Improving human-nature relationships is often a stated aim of outdoor education yet it is not always made explicit in practice. This paper reflects on a pedagogical intervention, which aims to find ways to explicitly develop students' connections with natural places through a tertiary outdoor and environmental education program. It describes the intervention process which is guided by principles of collaborative action research and uses a multi-pronged teaching approach incorporating repeated visits to natural places utilising different 'ways of knowing', weekly readings, journal writing, collaborative discussions, etc. We summarise the key findings of the research project and report that repeated visits to a natural place using different ways of knowing (eg, historical, scientific, ecological, artistic, experiential, etc) are influential in deepening connections. We conclude with a discussion of the opportunities and dilemmas of using action research as a form of pedagogy.

Introduction

“Outdoor Education has as its ultimate goal the creation and maintenance of healthy, positive, sustainable relationships between people and the natural environment.”

(Victorian Outdoor Education P-10 Course Advice, Directorate of School Education, 1995, p. G1)

“The activities selected enable students to develop critiques of human-nature relationships and a sympathetic understanding of nature, and make informed contributions to discussions on environmental issues.”

(The Outdoor and Environmental Studies VCE Study Design, Board of Studies, 2000, p.7)

The advance of urbanisation and the expansion of consumer lifestyles have seen an increase in the disconnection between humans and nature. This alienation of humans from nature has been reported as a contributing factor in the decline of the natural environment. In response to this, outdoor and environmental education literature (for example, Martin, 1993; Nettleton, 1993; Cooper, 1996; Higgins, 1996/7; Russell, 1999; Birrell, 2001; Wattchow, 2001; Brookes, 2002; Curthoys & Cuthbertson, 2002; Cameron, 2003; Nicol, 2003) and curriculum (for example, see Victorian Outdoor Education curriculum above) support a core message that fundamental views about the relationship between people and nature should be challenged. Whilst aims such as increasing connections or improving human-nature relationships are often stated in outdoor education program rationale, they are not always made explicit in practice. This

paper is a reflection on a pedagogical intervention, which aims to explicitly foster connections with the natural world through an outdoor and environmental education program. This intervention used pedagogical principles that sought to interrogate rational ways of thinking and to deliberately unsettle participants' ways of thinking about human-nature relationships.

The interaction of various pedagogical processes, which were guided by principles of action research, was significant to the project. This paper seeks to illustrate how these methodological approaches can complement pedagogy and to demonstrate, in particular, the worth of collaborative action research in framing teaching and learning experiences in outdoor and environmental education. Such a framework was found to be engaging and empowering, providing students with opportunities to articulate their reflections and discoveries. This paper considers reflections in the light of understandings of human-nature relationships, and in relation to pedagogical innovation and practice.

Developing connections through different ways of knowing

The main focus of the project was to foster participants' connections with the natural world through exploring different perspectives on and 'ways of knowing' a natural place. This pedagogical approach derived from an understanding that disconnection between humans and nature has its roots in a Cartesian 'Western' tradition, one which separates nature / culture. The knowledge that directs this dichotomy is largely abstract and rational. Our Western culture privileges objective knowledge, yet the "... "real world" in which we find ourselves ... is not a sheer "object", not a fixed and finished "datum" from which all subjects and subjective qualities could be pared away, but is rather an intertwined matrix of sensations and perceptions, a collective field of experience lived through from many different angles" (Abram, 1996, p. 39).

We aimed to highlight for students within outdoor and environmental education some of these "intertwined sensations and perceptions" and to explore the importance of "many different angles" in developing connections to natural places. To do this we sought to develop alternatives to the abstract and technical ways of knowing, which have previously predominated in education broadly and, environmental education specifically. Responding to concerns about the reductionist, decontextualized and generic nature of education (eg, Bowers, 1993) and outdoor education (eg, Loynes, 2002; Brookes, 2002), we sought approaches that were more holistic, embodied and situated (Bell, 1997).

Bell (1997), in exploring the benefits of environmental learning through natural history, suggests that we should be seeking more than a cognitive engagement with facts and systems, an approach which she describes as "unduly cerebral" (p. 137). She promotes a "fully-embodied participation in the more-than-human world" which is grounded in the sensual and social (including relationship with non-human beings) (p. 137). Ecologist and philosopher, Abram (1996) also argues for the nurturing of sensual and emotional dimensions to reawaken our relationship with our surroundings. Booth (1998), however, points to warnings from some ecofeminists (eg, Plumwood, King and Code) about falling into the dualistic trap of focusing on emotion and subjectivity to the exclusion of other

forms of knowledge.

Nicol (2003, p. 15), seeking a philosophical framework for outdoor education, accepts the validity of abstract knowledge but contends also that it is an incomplete form of knowledge. He calls for an epistemological pluralism which legitimates and integrates other more subjective ways of knowing. Similarly, Broomfield (1997) suggests that western civilisation equates a rational way of knowing with all knowledge and “we have taken a thin slice of reality and mistaken it for the whole” (p.1). He seeks a rediscovery of ancestral teachings which can guide us to other ways of knowing, for example, through spiritual traditions, from feminine ways of being, from spirit in nature and knowledge embedded in our bodies.

Outdoor education, with its focus on experiential learning, is well placed to incorporate some of these ‘other ways of knowing’. Brookes (2002) argues for greater recognition (in curriculum discourse) of the tacit experiential epistemology that shapes outdoor education. He describes, for example, the specific local knowledge accumulated by a bushwalker through the physical and emotional experience of a place over time and periodic re-inhabitation.

The accrual of this tacit knowledge takes time and many re-visits to a place or region. Given the increasing transitory character of contemporary society, and the mobile lifestyle of teachers in particular, developing such local knowledge may be daunting to an outdoor educator without experience in a particular place. We hoped, then, to develop the local knowledge, as described by Brookes (2002), by providing participants with some strategies to uncover the stories of a place and experience the place in an embodied way. Here our aim was to provide interpretive resources for extending such relationships beyond one particular experience and to assist students to carry their understandings into other encounters with the natural environment. We offer below some critical self-reflections on this aspect of the project.

Because we also wanted to research this pedagogical process, and to reflect critically on the effects of our interventions, we sought a methodology that complemented our teaching goals. Collaborative action research is a methodology that values personal knowledge and practical experience, fosters collaboration and empowers students as members of a community. We will now turn to describing the methodology and the process for framing the research. This will be followed by a discussion of findings and limitations of the research project.

Collaborative Action Research

We wanted to promote learning as “an interactive relationship between the educator, the learner and the natural environment” (Nicol, 2003, p.18), and to provide opportunities for participants to be self-directed learners collaborating with a community and critically reflecting on the meaning and significance of theories, policies, structure and teaching practices for the purpose of improving practice (Robottom, 2001). To achieve these aims we employed Collaborative Action Research (CAR), a series of cyclical processes of

planning, action, observation and reflection. We use the term CAR to refer to:
a process of change, but not just change for change's sake; it is change specifically directed towards improvement. The improvement towards which action research is directed is not only improvement in the results of action ... Action research is concerned about improvements in the 'action' (professional practice) (Grundy, 1995, p.10).

The research process was based on the notion of promoting praxis, that is, the union of theory and practice, where participants' critical reflection on their practice leads to collaborative action proposals based on a transformed perspective within their own context (Robottom and Sauvé, 2003, see also Griffiths in press).

The research project was conducted over a period of three months during which sixteen students in a postgraduate outdoor and environmental education unit, and we, as the lecturers responsible for the unit, made regular visits to individually chosen natural places. We utilized action research as a means of studying how experiencing a place over a period of time using a variety of perspectives (what we termed 'frames') or ways of knowing nature and interacting with nature can shape how people respond to, or make connections with, nature. Weekly readings and classes focusing on exploring different ways of knowing natural places provided knowledge and skills which could be applied to place visits.

Participants were asked to choose a different focus for each place visit, the duration of which was expected to be no less than two hours and preferably longer. All participants were at some stage required to experience the place using an experiential, historical and scientific/ecological focus (or frame) but participants were unrestricted in their choice of other frames. The intention was not to compartmentalise ways of knowing into the above frames (and thus reinforcing a reductionist way of presenting knowledge) rather the frames were designed to provide opportunity to relate theory (i.e., different ways of knowing) to practice and to give purpose and direction to place visits. We were mindful that many students find the relatively unstructured nature of the unit and unconventional modes of learning and assessment quite challenging and welcome a framework at least initially to direct their explorations and inquiries. It was always assumed that participants would integrate (intentionally or unintentionally) numerous ways of knowing during each visit and the knowledge and familiarity with place would build with each visit.

To record and articulate experiences of connecting with the natural place participants engaged in journal writing and collaborative discussion. The journal provided a medium through which participants "describe their activities and observations and reflect on their own reactions (intellectual and emotional) to these experiences" (Sullivan & Caitlan, 2002 cited in Jakubowski, 2003, p. 26). Participants were encouraged to experiment with different means of recording and expressing their experiences and feelings. Heeding Francis' (1995, p. 239) observation that "reflection must be explicitly and systematically developed", we began by providing guiding questions and examples of journal recordings. The emphasis was on reflecting on thoughts, theory, feelings and reactions and then reflecting on reflections in the context of outdoor education practice.

Every few weeks after scheduled visits to place, class time was set-aside for the collaborative discussion sessions. Participants took turns in facilitating this interactive group discussion where individual experiences were collectivised and patterns and similarities among experiences identified. These sessions also aimed to hear the many and varied voices, to help participants interpret and articulate their experiences and reflections as well as critically question the relevance to outdoor education practice. To direct participants towards praxis, each participant was required to facilitate one leg of a connection journey based on the application of new knowledge gained from the CAR process. A presentation of participants' findings concluded the study.

Findings - Sharing student voices

Autobiography

The first journal task was an autobiography of 'Your connection story' asking participants to; write about what they understood as their connection to natural places, describe their connections, and explain what shaped their connections. The intention was not to find causality in the autobiography – i.e., not to find links between past and present connections - but to begin the process of recognising the complexity of human-nature relationships. It provided a starting point in the discussion of the term 'connection with nature' and through this we explored its multiple and varied meanings.

While there was considerable discussion around what 'connecting with nature' meant to individuals, no attempt was made to elicit a common definition and participants grappled with their own working definition. Lee (pseudonyms used), for example, acknowledged the difficulty of finding the language to describe the term. *'The idea of connection is hard to put verbally, or in written words, this is more of an emotion, which may extend to physical and spiritual connectedness.'* She did elaborate, however, to draw the following meaning: *'...to have a connection with something means to have an appreciation for, to relate with, a relationship with. The relationship is very deep and goes beyond liking something more like a common bond or a kinship.'*

We also used the autobiography to investigate what our memories reveal about how our relationship to the natural world is socially constructed (Kaufman, Ewing, Hyle, Montgomery & Self, 2001). Through the journal we posed questions concerning how cultural values affect the way we think about and relate to the natural environment. As Gough (1999) and Payne (1999) argue, stories related to significant life experiences in the environment are shaped in response to the dominant culture and such memories may merely reproduce dominant values if we do not attempt to interrupt and interrogate our memories.

Through writing about earlier experiences in and with nature, participants recognised the effect of dominant cultural values and beliefs and particularly the socialising influences of family, for example:

Sarah – *'From a young age our family always travelled to exotic places for holidays – beautiful places!?! From this I think I began to draw that these were*

far more beautiful than the Australian bush and that to be important things or places had to be beautiful.'

Leslie – *'I gained my cultural values from my family, these had not been challenged by the different ways of perceiving the land, because I didn't know that there was different perspectives ... I used to know a box tree for its burning value and look at the area as a resource for firewood for my family...'*

'Frames' on the natural environment

While some participants were resistant to the structure of having set frames, most saw benefit in visiting places with a specific purpose and from different perspectives: Jo – *'To be able to look at a place from different perspectives makes me search for a different understanding of that place, and be able to appreciate there is more to this place than first meets the eye.'*

While the project focussed on the cumulative effect of using a variety of frames (or perspectives) on building connections with natural environments, reflections on the effect of individual frames provided insight into how students were developing their relationship to a particular site. It is naive to think that the effect of different frames can be studied independently. Nevertheless, students' reflections on them show how they were, in different ways, part of the accumulating experience.

Experiential frame

Not surprisingly, different frames or perspectives appealed to different people but almost unanimously participants spoke of the importance of visiting the place experientially. The following journal entries typify a desire of participants to explore the area, use their senses, and 'just be' in the place:

Bailey – *'For me the biggest thing that helped me to connect was when we used the experiential frame and I went there and just observed and touched things.*

Using all my senses and looking from every angle is what worked best for me to get to know my place.'

Jordan – *'The experiential frame allowed me to just be. To listen, look, feel, and smell.'*

The importance of using an experiential focus to frame the first visit was a common sentiment and supports Abram's contention that we need to give more recognition to the importance of the "spontaneous, preconceptual experience" (1996, p. 34).

Historical frame

There was a strong sense through discussions and journal entries that people, who were fruitful in their research of the history of the place, had an increased identification with place:

Olivia – *'I know that discovering about ... [the place's] history has helped me with forming my connection with place. ... I have formed a picture in my head of what it was like and the changes it has seen. This has helped in the sense that... [the place] has a story to tell and to connect I needed to find out what the story was.'*

History was often articulated as European history. While participants did endeavour to seek evidence of Koorie occupation, success was often limited to distinguishing some Koorie words in placenames. For a number of participants, unveiling some of the history of a place, helped them discover their “own roots” in the environment (Coles cited in Wattchow, 2001, p. 133). Slattery argues (2001, p. 29): “Through observing how others have spent their time in places we visit, we can place ourselves in a continuum of ideas and values that brings a new depth of understanding to our own presence and theirs.” Bailey’s journal entry echoes these views, and highlights the distinction between historical facts and stories in the connection process:

Bailey – *‘I found that history isn’t just about facts. Stories help to create more of a connection because you are learning about how others were connected to the land and then looking at where you fit in to the history of the place. Having stories told to you and finding related evidence, brings a closer sense of connection, especially when it’s your family’s history.’*

Scientific frame

Most participants agreed that a scientific frame (which usually involved experiencing the place through identifying things) helped them look more closely and carefully and notice different characteristics, for example: Sarah – *‘Looking at this place from a scientific frame really made me think about the smaller characteristics of the trees and shrubs.’* However, participants who experienced difficulties with the identification process recorded frustration and others noted the problematic nature of classifying and categorising:

Jordon – *‘As I have a Science degree I have been trained to look, touch, study and dissect with little thought of history, cycles or whole natural environments. My focus was often on the specifics rather than the environment as a whole complex, delicately balanced ecosystem.’*

Here Jordan is critical of the rationalist tendency to break things up into parts, to name and to categorize and she highlights the importance of seeing the place through different and multiple lenses that give a more holistic and integrated picture.

Other frames

Most participants chose an artistic perspective to frame their fourth visit and this usually involved attempting to sketch or paint part of the landscape, take photographs and/or writing poetry. What was apparent was participants’ perceived lack of their own skills in this area. This lack of confidence may be attributable perhaps to less opportunity in adult lives to practice creative expression. Nevertheless, participants did acknowledge the usefulness of this frame in seeing things from a different perspective:

Sarah – *‘I think attempting to draw my place did again help me to get to know my place as again it helped me to see things I wouldn’t normally notice. It also gave me time just to sit and listen and watch and feel what was around me.’*

The artistic way of knowing place provided some participants with the means of communicating what their oral and written language struggled to articulate. It provided a language to describe the sensual and emotional experience with nature making conscious an embodied knowledge. Riley, for example, allowed the land to communicate to her

through photography:

'I was after a different perspective and this helped me ... here I began to 'see'. Instead of just seeing dead and brown, I saw many shades and variations ... I didn't just see death I thought of life they had and how they contribute to life and cycles.'

Analysis of findings

Success or just what we wanted to hear?

Most participants completed just four visits of two hours or longer, the minimum number of visits to satisfy the unit requirements. Yet, even with this limited experience in a natural place, the effect was quite surprising. Almost without exception, participants noted some change in the way they connected with or perceived the chosen place. Many reported a deepening of connections (particularly those who had an already established connection), and, while some relayed a disappointment in not connecting more deeply, they conceded that their perception of the place had changed in a positive way. On the surface, our study seems to confirm Cameron's (2001) findings on the transformative effect of spending regular time at a place whilst also engaging in reading and reflecting on person-place relationship.

Before claiming boundless success however, it is important to recognize some of the methodological limitations of our research. The tensions and contradictions inherent in completing collaborative action research within a graded unit in a tertiary course were frequently highlighted to us as the primary researchers. Power relations and inequalities were apparent and, while we sought to address these issues, their influence should be acknowledged. The journal writing, participation in collaborative discussion, facilitation of a connection journey, and a final summary and presentation of findings formed a major aspect of assessment of the unit. While we continually stressed that assessment in no way correlated with the level of connection that was achieved with place, we would be naïve to assume that these objectives had no affect on what people wrote and said. As Kehily (1995) discusses in her work on identity construction, people may wish to present a version of their identity which has resonance with the perceived identity of the audience. Given that the audience, in this case, included a lecturer who was assessing them, it would be simplistic to think that elements of the experience might not unconsciously be "omitted, embellished, reframed and adapted ..." (Kehily, 1995, p. 24). Having said that, students did seem prepared to openly discuss concerns and issues with the process and their experiences. Those who had difficulty connecting with a place frankly admitted it and the initial negative response by some was recorded in journals, for example:

Emily – 'At the beginning of this unit I was hesitant with my thoughts on truly being able to connect with nature. When I read over the unit content I thought that it was silly and something that could not be possible as the environment was not living and you can't develop a relationship with something that can't give anything back. How wrong I was!'

Pedagogical processes

While we may be sceptical or cautious about the truth of participants' journal entries, we have been encouraged by the success of the unit in terms of the processes and learning opportunities it afforded. The unit seemed to engage the participants in a meaningful way and we were gratified by the preparedness of students to direct their own research and learning and their resourcefulness in gathering information and facilitating different experiences in a natural place. Students also acknowledged the success of the learner-centred approach, for example: Leslie – *'I thought it was interesting that I could learn so much without a teacher around directing my learning.'*

The study also revealed the development of participants' reflective skills through journaling and collaborative discussion. As the unit progressed, participants seemed better able, or prepared, to share their experiences and opinions. This is not to say that participants found the task easy. Many found expressing themselves and their very personal experiences challenging. Students who are normally confident presenters expressed nervousness and, when probed, revealed that, while presenting in front of others is common in university settings, seldom are they expected to express their own thoughts and feelings. Students also aired annoyance at the demands of journaling and the burden of making continuous reflections on their experiences, thoughts, theory, etc. Some also reported the intrusive effect of writing in journals while visiting a place and deliberately chose to recount thoughts and observations away from the site.

The level of personal disclosure varied but the dialogue encouraged honest and open expression generally. Some spoke of the very positive and supportive nature of collaborative discussion groups and it was evident that these forums provided an opportunity to question false assumptions within a safe atmosphere where participants felt trusted and supported. Ashley – *'The collaborative discussions have influenced, questioned my thoughts and allowed me to open up and share my feelings without being judged.'* The importance of hearing and accepting diverse experiences and expressions was discussed in journals and discussion. Listening to and sharing stories and understandings, helped participants find the language to express themselves. Differences in experiences provided an opportunity to dialogue and discussions often highlighted pedagogical issues relevant to teaching connections with nature.

The development of participants' sensory awareness and an improved ability to find the language to illustrate their discoveries and feelings was evidenced in the rich descriptions of place in journal recordings. The following journal entry reveals the use of different senses and diverse feelings; an embodied knowing:

Leslie – *'The unique smells, with wattle blossom in the air and decomposing leaves beneath my feet. The frogs that I have never seen, but have tried to listen and understand their conversations...I walked along the long clear trunk [of a candlebark tree]. I felt the smooth white bark. I felt sad that such a huge thing can topple so easily.'*

Expressions akin to 'relaxed', 'content', 'belonging', and 'familiar' were common descriptions of feelings in concluding journal entries and reflect, as anticipated, participants feeling more comfortable in the natural place over time.

Social and cultural influences and personal revelations

As the research progressed many participants seemed better able to identify the relevance of social and cultural influences in forming connections with natural places. Riley, for example, discusses the problems she had coming to terms with the whole connection process and, in relation to the concept of 'connecting with nature', she recognized '*how society doesn't value or understand this concept.*' By acknowledging the influence of dominant worldviews and societal pressures, she was better able to understand her initial reluctance to participate.

A common discovery was that '*not all things must be big, bright and colorful to be interesting*' (Morgan) and recognition of the unequal value that society places on some flora and fauna and particular landscapes led participants to see and appreciate the smaller, less eye catching, and less spectacular, for example: Lauren – '*I see a vast beauty that I have never noticed before, no longer just a big lake and grass, I notice all the little things...*'

People also spoke of broadening perspectives, personal growth, and the development of values, attitudes and beliefs:

Leslie – '*I have realised that I am stuck in Western ideals. I am finding these hard to break from, because I have followed them for the majority of my life. At least I can see alternatives now, so I can move towards making changes for myself and the life that I would like to lead.*'

Participants frequently pointed to personal revelations, facilitated by their experiences in the place, and suggesting a two-way learning process was occurring:

Emily – '*I've asked myself a few questions during my last visit, but these are the sorts of questions that I cannot answer myself ... I know one thing for sure, I'm finding out more about myself and challenging myself to think and act in different ways that I think will deepen my connection and my relationship with the environment.*'

A collective realization of participants was the negative influence of linear time as experienced within a clock paradigm (Szamosi, 1986) and some participants sought a construction of time embedded in nature. Riley, for example, reflects on a collaborative discussion on the issue: '*Kind of felt like time makes it too structured, too much like work or a chore. Discussed getting rid of time frame – Western society – maybe go there to see something / experience something e.g. sunrise.*' Time pressures and the effect of a cluttered mind were repeatedly expressed and, while some sought assistance through meditation and other means, few seemed able to shed the burden of busyness.

Pedagogical dilemmas

The study, while showing many of the benefits of our approach also raised a number of pedagogical dilemmas. These pertain to our individual teaching practice but also speak more broadly to the issue of how to teach in transformative ways, and in ways that enable the students' insights and new relationships to be sustained beyond their immediate learning experiences. The study revealed, for example, how as teachers we still struggle

to help participants extend their connection to, and care of, a particular natural place to a care for other places. As Cameron (2003, p. 188) notes, some students may take "refuge in their chosen places" acknowledging and enjoying attachment to a place but unable to relate their experience to larger structural issues and/or to make changes in their everyday lives. The contradictions and tensions between developing a "responsiveness" to a natural place (Cameron, 2003) and applying that to everyday life was evident in Morgan's comments:

'In many ways I have kept my experience and connection with place separate from my daily life. While I was there I was intrigued. I wanted to see everything, experience everything and understand everything. But I found that after returning from a visit I was quickly re-consumed with the events of my daily life ... quickly slipped back into my societal role and continue to live as I do.'

Payne (2000) has suggested that too often we presume "a somewhat simplistic 'unified' self or identity and his/her appreciations, understandings and interactions with an equally simplified environment/nature" (p. 69). Our study supported the idea that in "the complexity of being human, identities are increasingly uncertain, fluid and often destabilized" (Payne, 2000, p. 70). Riley, for example, struggles with her identity as an outdoor and environmental educator and discloses her anguish over what she believes this role entails: *'I read and hear of all the things others are going to do ... and I just feel so inadequate.'* Similarly, Olivia feels the pressure of conforming to the supposed outdoor and environmental standards: *'There was an instance on the Borhoneyghurk trip where I was challenged by another group member for excess packaging for my meal. It is as though you have to think everything you do through very carefully ...'*

These feelings of inadequacy reflect in part our limitations as teachers to create links between the connection experience and environmental and/or social action and highlighted to us a need to teach political literacy. Journal entries related to taking action were often accompanied by reports of feelings of perceived lack of authority and/or the political or social knowledge and skills to initiate action, for example:

Leslie – *'... I don't know how to make some of these changes. I need to learn more about who makes decisions and how I can influence these decisions. I want to be more informed so I can move into the action stage.'*

Some participants relayed the challenge of taking the new found knowledge and understanding to the 'outside world':

Morgan – *'Attempting to explain my elation to those not involved in this class was difficult and often left me frustrated, as they just couldn't understand why I would want to connect with something other than humans in the first place.'*

These feelings of disillusionment might also reflect the limitations of conducting CAR within a university context and the difficulty of including community members who could provide links to local perspectives, issues and resolutions.

A further pedagogical dilemma for us was raised by many participants focusing on the more objective ways of knowing and traditional means of recording experiences and reflections. While the unit readings described indigenous and spiritual ways of knowing

and gave examples of creative ways to journal experiences, there seemed a reluctance or lack of confidence in participants to imitate these more subjective means in their own explorations of a place. Even when participants came to capture their place and know it through artistic means, typically they took a realist approach trying to reproduce the landscape in its every detail. More encouragement and guidance in promoting the more subjective will be a future focus and as teachers we will aim to increase our own knowledge, confidence and effectiveness in presenting this material.

Relevance to Teaching Practice

‘Action research is concerned about improvements in the ‘action’ (professional practice)’ (Grundy, 1995, p.10).

Nearly all participants reported the benefits and application of the connection experience to future teaching practice in outdoor and environmental education. The following quotes indicate that participants were more critical of outdoor education practice and had reflected on how the connection process experienced was relevant to their future teaching:

Bailey – *‘When taking students on trips you can’t just go there, walk through, then go home and expect them to have connected. You need to be doing things to help them before, during and after the trip to hopefully start and continue developing a connection after leaving the place visited ... ’*

Leslie – *‘As a teacher I don’t want to be up the front of the group talking the whole time. I want the students to be able to notice things that interest them in their own time ... ’*

Providing skills to unearth stories in a landscape was an objective of the unit and participants saw the significance of making *‘... use of anecdotal stories rather than just information’* (Riley) in outdoor education. The power of these narratives to link community, participant and the local place was highlighted in many journals. To build these associations, participants also acknowledged the importance of programming intentional multiple trips to the same place.

Conclusion

Purposeful and repeated experiences that encourage different ways of knowing a natural place seemed significant in deepening connections. However, the change in people’s perceptions and understanding of place cannot be attributed to this single factor and recognition must be given to a multi-pronged teaching approach. The process, in terms of expressing feelings and thoughts through developing journaling, collaborative discussion skills, and so on, cannot be separated from the influence of the framed visits, research, facilitation experience and readings. We make no attempt to differentiate the impact of different influences but instead emphasise the importance of the intensity of the experience and the value of using a combination of different teaching modes and methods.

In many respects we have achieved our pedagogical goals. We have fore-grounded connections with the natural environment as an explicit focus in an outdoor and

environmental education program and have made some in-roads in fostering human-nature connections among students. But, we remain ambivalent about the durability of the connection once the influence of this intense experience recedes. We are uncertain about the relationship between connecting to a particular place and taking action for other places; further research in this area is required.

Through the methodological process of collaborative action research, we have come to a deeper understanding of the associated pedagogical dilemmas, both in relation to our own teaching practices and pedagogical innovation more broadly. In line with CAR methodology the spiral of research and reflections continues with actions being taken to improve our pedagogical practice. Action research not only provided us with a means of critiquing our practice but also a form of effective pedagogy, which was inclusive and, as we have suggested, empowering for students. Although the project findings are specific to a local context, the intertwining of pedagogy and CAR methodology, is relevant to the Australian and international outdoor education community. Such a combination can provide a framework for a pedagogical intervention that promotes critique, change and meaningful teaching and learning experiences.

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