14 - 16 April 2014
Prince Alfred College, Adelaide, SA

18th National Outdoor Education Conference

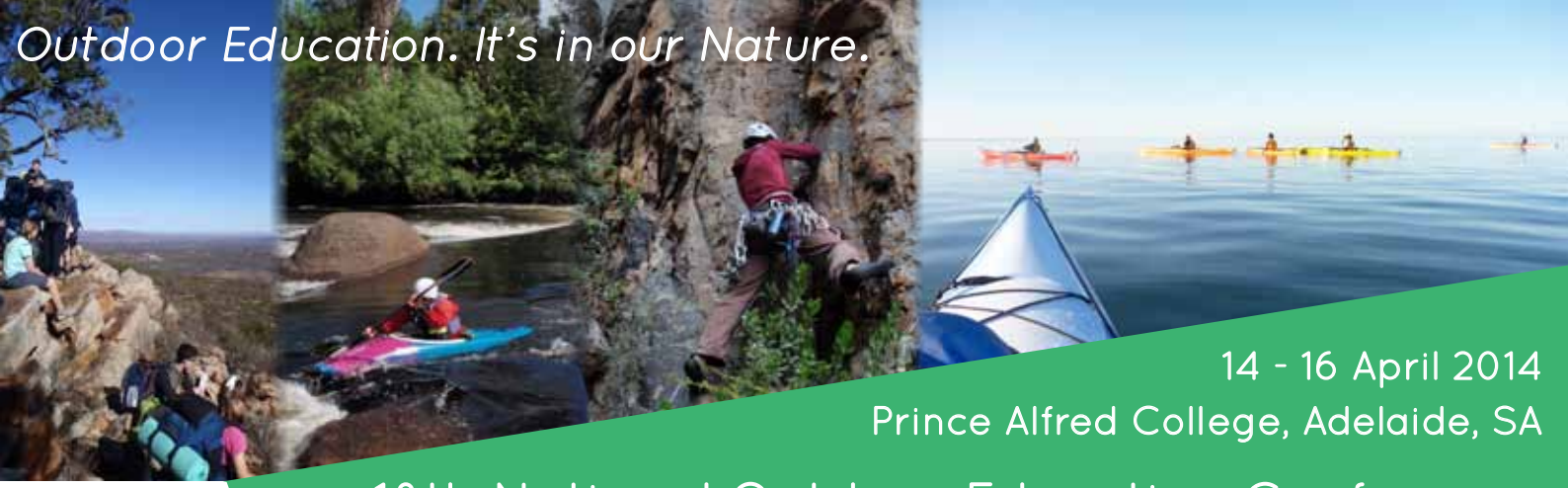
Proceedings (Draft)

Presented by Outdoor Education Australia

outdoor australia education

In assocation with OEASA - The Outdoor Educator's Association of South Australia

OEASA
THE OUTDOOR EDUCATOR'S ASSOCIATION OF SOUTH AUSTRALIA



14 - 16 April 2014
Prince Alfred College, Adelaide, SA

18th National Outdoor Education Conference

Welcome

Ngai wangandi marni nabudni Kaurna yertaanna

First let me welcome you all to Kaurna country...

Welcome to the 18th Australian National Outdoor Education Conference Program.

This conference presents a great opportunity to celebrate your role as part of a diverse community of Outdoor Education leaders, teachers, scholars, managers and directors from around the country to engage, share and be challenged.

The conference explores what it means to be Outdoor Educated, what is our place in society, what is our contribution to our communities, and how we can be part of solutions to the pressures faced by our citizens and planet?

The conference is brought to you by the Outdoor Educators' Association of South Australia and Outdoor Education Australia. Any profits or losses from the conference are shared equally, with any profits being used to further develop Outdoor Education. The committee have worked hard to provide a professional, accessible and enjoyable conference celebrates your decision to take on the challenge of being an Outdoor Educator.

To find out more about Outdoor Education Australia you can visit: www.outdooreducationaustralia.org.au

James McIntosh
Outdoor Education Australia Chair

Mike Meredith
Outdoor Educators Association of South Australia Chair

Scott Polley
OEA Secretariat, Conference Chair

This program includes papers submitted prior to the conference and should be considered version 1. A final version will be released and available on the Outdoor Education Australia website following the conference. Additional papers supplied after the submission date will be added.

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O E A S A
THE OUTDOOR EDUCATOR'S ASSOCIATION OF SOUTH AUSTRALIA

Outdoor Education. It's in our Nature.

Australian Outdoor Education Conferences

1978 1st Noojee, Victoria
1979 2nd Hobart, Tasmania
1981 3rd Pushing Back Frontiers. Maroon, Queensland
1984 4th Our Place in Nature . Adelaide, SA
1987 5th Woodman Point, Perth, WA
1989 6th Narrabeen Lakes, NSW
1991 7th Outdoor Education - The Quest for Quality. Frankston, Vic
1993 8th Batchelor, NT
1995 9th Putting the Outdoors Back into Education. Southport, Qld
1997 10th Catalysts for Change. Colloroy, NSW
1999 11th The Human Face of Outdoor Education. Perth, WA
2001 12th Education Outdoors - Our Sense of Place. Bendigo, Vic
2003 13th Relevance: Making it Happen. Adelaide, SA
2005 14th The Challenges We Face. Gold Coast, Qld
2007 15th Ballarat, Victoria
2010 16th Fremantle, WA
2012 17th Leading the Next Step in Outdoor Education. Canberra, ACT

Conference Organising Committee

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Mike Meredith (Chair OEASA)
Chris Hodgson (Vice Chair OEASA)
Phil Noble (Treasurer OEASA)
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About OEASA

The Outdoor Educators' Association of South Australia was formed in 1980 to better support the professional practice of Outdoor Education in South Australian Schools. It followed the formation of similar organisations in other states. It is not for profit organisation that is fully funded by memberships and is a member of Outdoor Education Australia and Outdoors SA. It produces a quarterly newsletter 'Outdoor News', and maintains a website for information **www.oeasa.on.net** with members receiving regular email updates on professional development and other activities.

About Outdoor Education Australia:

Outdoor Education Australia (OEA) was established in 2006 as a national network of outdoor education associations. OEA follows on the good work conducted by on the antecedent organisation of the Australian Outdoor Education Council. Its member associations represent thousands of practising outdoor educators, teachers and organisations across Australia. The primary purpose of Outdoor Education Australia is to facilitate communication between state and territory outdoor education associations about the practice and delivery of outdoor education throughout Australia.

Outdoor Education is understood by member associations to be defined as 'educating for healthy relationships through sustainable outdoor experiences'.

Outdoor Education Australia is a member of the Outdoor Council of Australia.

The following Associations are current financial members of OEA:

- ACT Outdoor Education Association (ACTOEA): **www.actoea.org.au**
- Outdoor Educators' Association of South Australia (OEASA): **www.oeasa.on.net**
- Outdoor Educators' Association of Queensland (OEAQ): **www.oeaq.org.au**
- Victorian Outdoor Education Association (VOEA): **www.voea.vic.edu.au**
- Outdoor Recreation Industry Council (NSW): **www.oric.org.au**

The following organisations are non-financial members of OEA:

- Outdoors WA: **www.outdoorswa.org**
- Tasmanian Outdoor Education Teachers' Association (TOETA) (no current website)

Each state organisation elects two persons to be representatives to OEA.

Pre-Conference Activities

Saturday - 12 April

A2 Kangaroo Island Weekend Tour Option

Sunday - 13 April

A1 Permangk Indigenous Interpretive Tour - 9.00am - 1.30pm

A2 Kangaroo Island Weekend Tour - 12-13 April

A3 AKSA Dolphin Sanctuary Tour - 9.00am - 12.30pm

A4 Managing Risks on Water in Kayaking - 1.30pm - 4.30pm

A5 Top Rope Climbing Rescue Workshop - 9.00am - 2.00pm

A6 Outdoor Education Australia meeting - 2.00pm - 5.00pm

A7 Registration, drinks and finger food - 5.00pm - 6.30pm

A8 Presenter Meeting - 5.30pm - 6.00pm

A9 Small group meals (SA committee to facilitate. Pay own way) - 6.30pm onwards

More information on these activities is available on page 37

Outdoor Education. It's in our Nature.

Conference Sponsors

We would like to acknowledge the following sponsors and supporters for their contribution towards the 18th National Outdoor Education Conference

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Program Overview - Monday 14 April

8.15am	Registration				
9.15am	Conference Welcome Welcome to Country, *Uncle Lewis O'Brien*				
9.30am	**Keynote Presentation** Outdoor Education, Health and the Curriculum *Phil Weinstein and Graham Slaney*				
10.30am	Morning Tea				
	Room A	*Room B*	*Room C*	*Room D*	*Room E*
11.00am Session 2	*Paul Barber* What is the Outdoor Education curriculum in years 7-10 in secondary school? A Case study	*Kylie Agnew-Pointon* Around the World with Adventure Therapy	*Darren Smith* Following in our Footsteps - inspiring students to consider a career in the outdoors	*Ron Nicholls* Engaging students in Indigenous issues through Camp Coorong	*Jane Townsend* "Ko au te whenua, te whenua ko au - I am the land, the land is me" *CANCELLED*
12.00pm Session 3	*David Atkins* Current Outdoor Education from the Centre of Australia	*Nicholas Glover* Outdoor recreation for health and well-being: it's called Green Exercise	*Brian Wattchow* The missing link: The role of representation of experiences in outdoor experiential learning	*Lucas Bester* Those who Teach Learn: Peer Teaching in Tertiary Outdoor Education	
1.00pm	Lunch				
2.00pm Session 4	*Tony Robinson and David Low* The notion of flow and engagement in learning	*Will Dobud* Speaking Their Language: Matching Therapeutic Interventions to Client Strengths	*Tony Keeble & Roger Blackwell* Magic Weavers - Curriculum Journey	*Peter Holmes* An investigation into the relationship between vocational and higher education; using outdoor education as the lens.	
3.00pm Session 5	*Erica Gurner* Embedding the 'spirit' of nature experiences across the curriculum.	*Murray Henstock* All I Need is a Student, a Teacher, a Tall Ship and a Star to Steer Them By	*Tony Keeble & Roger Blackwell* Future Makers and the Tree of Life – Unpacking our curriculum using the Australian Curriculum website	*Glyn Thomas* Signature pedagogies matter in tertiary outdoor education courses	*Alistair McArthur* 50 years of passion in Outdoor Education but what does the future hold?
4.00pm	Afternoon Tea				

Program Overview - Monday 14 April

4.30pm Session 6	*Brendon Munge* You want to study what? Students motivations for studying an Outdoor Education degree	*Adrienne Forsyth* Food and nutrition for journey-based outdoor education	*Beau Miles* Expedition Sea Kayaking as Phenomenon: A review of the literature.	*Peter Martin* What role for Tertiary OE providers?	*Anne-Marie Archer* Youth Leadership on a Tall Ship
5.30pm	Finish				
6.30pm	A7 BBQ				

Program Overview - Tuesday 15 April

7.30am	A10 Mindful Movement	A11 Kaurna Walk	A12 Linear Park Cycle (Bike About) *More information available on page 38*		
8.30am	Registration				
9.15am	Welcome				
9.30am	**Keynote Presentation** In search of a narrative for Outdoor Education's contributions to schooling *Peter Martin*				
10.30am	Morning Tea				
	Room A	*Room B*	*Room C*	*Room D*	*Room E*
11.00am Session 2	*Malcolm Nicolson* Aims and Experience in Outdoor Education	*Mike Bezant* Hungry for Change - A New Perspective on Food	*Stephen Carter* Boom and Bust an Outdoor Life in Regional Australia	*Marianne White* Making it relevant: encouraging future stewardship with opportunities to understand, create and nurture local environments	*Marcus Morse* Paying attention to aesthetic experience on a year nine river journey
12.00pm Session 3	*Erica Gurner* What is a 'connection to nature' and what does 'sustainability' actually mean?	*Tim Harley* Catering for diverse dietary needs in wilderness settings	*Hisyam Che Mat* Evaluating the effects of school camp experiences on children and adolescents with intellectual disabilities, their teachers and parents	*Janice Atkin and Scott Polley* Outdoor Education in the Australian Curriculum	*Clare Dallat* Communicating Risk with Clients/Parents: What language are you speaking?

Program Overview - Tuesday 15 April

More information on Site Visits is available on page 38 - 40

1.00pm	Lunch						
2.00pm Site Visits & Workshops	A13 Arbury Park Site Visit *2.00pm - 5.00pm*	A14 Native Garden Site Visit *2.00pm - 4.00pm*	A15 Rolling Workshop (Teaching) *2.00pm - 3.30pm*	A16 MTB Introductory Safety Workshop (Wilderness Escape) *2.00pm - 5.00pm*	A17 MTB Cleland Ride (Bike About) *2.00pm - 5.00pm*	A18 Australian Tertiary Outdoor Education Network *2.00pm - 5.00pm*	A24 Indoor Rock Climbing Wall (Vertical Reality) *2.00pm - 5.00pm*
3.30pm			A15 Rolling workshop (Learning) *3.30pm - 5.00pm*				
Self-organised forums, groups and activities (optional)		A19 Australian Curriculum Forum *5.00pm - 6.00pm*	Linear Park Walk	Morialta Walk	Swim at Aquatic Centre	Coffee	
6.30pm	A19 Conference Dinner						

Program Overview - Wednesday 16 April

7.30am	A20 Mindfulness	A11 Kaurna Walk	A12 Linear Park Cycle (Wilderness Escape) *More information available on page 38*		
8.30am	Registration				
9.15am	Welcome				
9.30am	**Keynote Presentation** What outdoor educators do is educationally valuable – a way of understanding and expressing this in the school context *John Quay*				
10.30am	Morning Tea				
	Room A	*Room B*	*Room C*	*Room D*	*Room E*
11.00am Session 2	*Jason Tyndall* The nature of play: the developmental benefits and practical components associated with nature play in an education setting	*Andrew Brookes* Catastrophe, the unwelcome tutor, and its lessons for contemporary Australian OE	*Heather Grenon* Missing resilience: Psychology's contribution to resilience in outdoor education	*Simon Wilson* Introduction to the New International Standards for Adventure Activities	

Program Overview - Wednesday 16 April

12.00pm Session 3	*Russell Shem* The Alpine School - The benefits and outcomes of a residential program for Year 9 students focused on Student Leadership	*Natassia Goode* Trial of a new incident reporting system for the outdoor sector (UPLOADS): initial data and lessons learnt	*Mark Munnings, Rob Lans & Brett Stanford* Teamwork, Resilience and Leadership	*Roger Blackwell* Concept Mapping: A tool for measuring student learning outcomes in residential outdoor schools	
1.00pm	Lunch				
2.00pm Session 4	*Alistair Stewart* The River Murray and outdoor environmental education: developing place responsive pedagogy	*Brendon Munge* Lost again: Analysis of school groups requiring search and rescue when bushwalking	*Sandy Allen-Craig & Val Nicholls* Outdoor Environments and Therapeutic Interventions	*Maarten Immink* Recreation of the natural mind: Mindfulness in outdoor education	*Johne Westersjo* Friluftsliv - Outdoor Life Education in the Norwegian Curriculum *CANCELLED*
3.00pm Session 5	*Amanda Lloyd & Marian Crossley* Place-based outdoor learning; enriching Australian primary school curriculum	*Lucas Bester* 'Safety Limited: the social and cultural restraints to safety in outdoor education'	*Geoff Adams* Transfer of learning - are we really making a difference?	*Tony Keeble* Exploring the concepts of Social Capital and its linkages to Outdoor Education Outcomes: A possible solution for community building	
4.00pm	Afternoon Tea				
4.30pm	Conference Conclusion				
5.00pm	Finish				

Keynote Speaker Presentations

Outdoor Education, Health and the Curriculum

Phil Weinstein and Graham Slaney

Outdoor education is a vital component of developing a healthy mind and body. The benefits from incorporating activities in a natural environment into the school curriculum include giving students skills such as leadership, fitness, and an understanding of natural processes as well as the consequences of overconsumption. Many barriers exist however in the implementation of school curricular activities based around the outdoors. Cost, organisation, and the risks to participants associated with the activities are all barriers to program development and implementation. To overcome such barriers, it is important to be able to quantify the benefits so that trade-offs can be considered scientifically rather than being simply viewed through the lens of economic rationalisation since the GFC.

We present examples of research studies where results can be translated into action to improve outcomes and support health benefits of outdoor activities. In one study, we showed that snowboarders who wear wrist guards had a reduced risk of wrist fracture of approximately 42%, and that school-age children account for most wrist fractures. As a consequence we were able to work with the local school to implement a "no wrist guard no snowboard" policy. Subsequent review of injuries through the local school demonstrated a halving in wrist fractures over a 6 year period.

In another study, we worked with a school that runs a live-in outdoor programme as an intensive learning and living experience in the natural environment of the Victorian Alps. Year 9 students were "exposed to intellectual, physical and emotional challenges under demanding environmental conditions". We found that the 10-month live-in school programme reduced Body Mass Index (BMI) in overweight and obese 15-year old boys by up to 2.5 BMI points, with the greatest effect in the most overweight boys.

We use these examples to support our argument that not only are outdoor activities central to the future health and well-being of the next generation, but that academic research also has a practical role to play in supporting the inclusion of outdoor programmes in the school curriculum.

In search of a narrative for Outdoor Education's contributions to schooling

Peter Martin

With elements of Outdoor Education theory and practice becoming imbedded in the new national Health and Physical Education curriculum it may seem like back to the future for some. Over the past 20 or more years I have contributed to justifications for OE to be separate from Physical Education, yet ultimately contributed to the re-unification with Health and PE. How the new HPE curriculum unfolds and its relationship to Outdoor Education, will in my view, depend upon a simple narrative from outdoor educators that informs Principals, teachers, students and the wider community, about Outdoor Education's educational mission. Such a narrative is needed to guide future practice and politics.

This session will review research into what OE teachers say are important educational outcomes for outdoor education as a means to open discussion on what a future could be. I will reflect briefly upon historical change in OE in Australia. The aim is to provide opportunity to contribute to the evolution of a 'simple narrative for Outdoor Education'.

What outdoor educators do is educationally valuable – a way of understanding and expressing this in the school context

John Quay

Many of us will have experienced moments of frustration and perhaps disappointment when involved in school based conversations concerning the relative educational significance of outdoor education. We know that what we do has educational value, yet in curriculum discussions our work usually takes up a lowly position along a continuum which has mathematics, science and English at the more important end. When we try to articulate what it is that we are doing with students, our achievements and theirs often appear to have little educational meaning, especially when it is academic knowledge which has the highest worth. One response to this situation is the attempt to identify a body of such knowledge that outdoor education can call its own – an attempt to play the game of the academic subjects. But playing this game has consequences, not the least of which is to adopt the difficulties that academic subjects often confront (classroom based, content focused,

Keynote Speaker Presentations

lack of student engagement) while perhaps not reaping the benefits because we can't really compete on this playing field. The result is sometimes a changed outdoor education, with pressure applied to reduce the amount of time spent outdoors.

Is there another way to approach this dilemma? My suggestion is that we need to change the way we understand the problem. Currently we speak of it as a problem for outdoor education specifically, but we rarely open the discussion to one which questions education itself. How do we understand the place of outdoor education within education? An investigation of this question led me to examine the ways in which outdoor education has developed, informed by a philosophical understanding of education which embraces the notion that education is a human endeavour (meaning that our understandings of education cannot be separated from our understandings of human being). In this address I shall present a way forward which adopts a term that is usually reserved for career education teachers: occupation. We normally think of occupations as adult jobs or careers. But there is another way of thinking about them: they are the ways of being, doing and knowing that help to frame our lives. At any time we are involved in some occupation, able to be roughly captured by labels that we normally reserve for activities: canoeing, bushwalking, climbing, cooking, etc. (outdoor education examples). These activities, which we use to structure our programs, are more than just activities. While they are ways of doing, they are at the same time ways of being a person – and at the same time they are ways of knowing. We intuitively recognize that if we alter a program activity (e.g., different group sizes) this will change the experience for participants – which is a change in the way of being, doing and knowing. School based activities can be looked at in the same way. Such an understanding allows us to comprehend what we are doing educationally, as this compares and contrasts with other areas of school.

Concurrent Presentations

Monday, 14 April - 11.00am

Room A

Paul Barber

What is the Outdoor Education curriculum in years 7-10 in secondary school? A Case study

Where does Outdoor Education fit in the curriculum of junior/middle secondary school? Formally it is recognised as a sub-set of Physical Education although in practice Outdoor Education provides a platform for practical holistic learning well beyond the realm of the Physical Education learning area. With the evolution of educational theory and practice toward a more holistic approach to learning, pigeonholing Outdoor Education as a branch of Physical Education is to neglect potential learning opportunities and restrict facilitators from utilising Outdoor Education to its full potential as a learning area. As a Masters' Degree research project, a case study has been undertaken, exploring Outdoor Education curriculum in the context of a large inner suburban secondary school which offers a compulsory comprehensive Outdoor Education program from years' seven to ten. A detailed study of outdoor education curriculum in the case study school has been conducted in relation to the new Australian National Curriculum, AUSVELS, Twenty First Century Learning Framework, undocumented curriculum and links with other learning areas. Research included curriculum document analysis, observations and interviews with relevant stakeholders including teachers involved in curriculum development, outdoor education and other related learning areas. The aims of this research project are to increase and consolidate understandings of Outdoor Education by describing the current state of Outdoor Education in a specific context, defining the place of Outdoor Education in junior secondary school curriculum and exploring links between Outdoor Education and other learning areas to support the development of comprehensive holistic learning programs in secondary school curriculum.

Full paper available in proceedings

Concurrent Presentations

Room B

Kylie Agnew-Pointon

Around the World with Adventure Therapy

2012/2013 Winston Churchill Fellow, Kylie Agnew-Pointon, visited adventure therapy programs across the world to learn about best practice in the areas of follow up, family engagement, indigenous perspectives and links with crime prevention. In this session she will share her findings that are relevant with Australian Adventure therapy program and outdoor programs in general.

Jane Townsend - CANCELLED

"Ko au te whenua, te whenua ko au - I am the land, the land is me"

The purpose of this presentation is to discuss how a place responsive approach was implemented into an outdoor education course at a secondary school in Aotearoa New Zealand. The main aim of the course was to place teachers and learners at the centre of developing an outdoor education pedagogy that reflects their needs and aspirations. A place responsive approach also presents an opportunity to meet the needs of Maori and provide students with the opportunity to engage with the unique histories, geographies and cultural understandings associated with their particular places. I will present the changes I have made to my Year 12 Outdoor Education course to reflect a Place Responsive Approach and will challenge traditional views of Outdoor Education that have originated from other places and times. I will discuss the research that informed the changes and how I put the 'theory into practice' through sharing the planning, process, and outcomes for students of a Place Responsive journey/Hikoi. I will also explain how a Place Responsive Approach fits within the new aligned Achievement Standards and how the approach improved educational achievement for Outdoor Education at our school.

Room D

Darren Smith

Following in our Footsteps - inspiring students to consider a career in the outdoors.

"Who is following in your footsteps? Who are you inspiring to enter into the outdoors industry? Why did you become an outdoor educator? "

Knowing the 'why' is just as significant, if not more important than 'what' you do. People will follow you because of why you do it, not how or what you do. Therefore, how do we effectively communicate the 'why' to students, colleagues and the outdoors industry? This presentation seeks to find ways in which we as outdoor educators can inspire our students to follow in our footsteps. That is, to pursue a career in the great outdoors. Some interesting concepts on leadership will be presented followed by a series of practical resources to help your students explore careers within the sector.

Room E

Ron Nicholls

Engaging students in Indigenous issues through Camp Coorong

Since 2009 students from the Aboriginal Cultures course (HUMS 1035) at the University of South Australia have been involved in field trips to Camp Coorong, the Raukkan Aboriginal Community and the Wilderness Lodge (all governed by Ngarrindjeri peoples) as part of a learning experience of active involvement and mindfulness. The program offers opportunities for experiencing Ngarrindjeri kinship relationships to land and waters (Ruwe) and a range of traditional values and ways of knowing associated with Ngarrindjeri worldviews. Activities include a smoking ceremony, traditional weaving, a bush tucker walk, tours of Camp Coorong's cultural museum, kayaking across the Coorong to the Southern Ocean beach and opportunities for engaging with Ngarrindjeri elders in a number of different locations.

Concurrent Presentations

The field trip focuses on the role of experiential learning and provides students with a culturally mediated embodied experience that accentuates an awareness and involvement of cultural and natural environments. In particular, experiential approaches point to the conterminous nature of apprehension or felt qualities of experience or perception on a direct and immediate level, and comprehension as the capacity of the mind to perceive and understand. This signals a movement away from the dualistic distinction between mind and body with participation as a defining characteristic of perception. In affirming that acts of perception are inherently participatory, we suggest that it always involves experience as an active interchange between the perceiving body and that which it perceives. An approach that offers spaces for ontological and epistemological standpoints such as Indigenous and ecological worldviews, and challenges modernist and postmodern positions which largely privilege rationalism as the only verifiable source of knowledges available to human beings.

Monday, 14 April - 12.00pm

Room A

David Atkins

Current Outdoor Education from the Centre of Australia

The presentation outlines the Outdoor Education Program at St. Philip's College in Alice Springs. St Philip's is an independent school of 650 students. The Outdoor Education program includes trips ranging from overnight through to a 10 day journey based in the West Mac Donnell Ranges. Insight is provided into this long-running program of 20+ years, supported by a photo essay. The presentation concludes by specifically discussing the Year 11 Leadership program that is the culmination of the Outdoor Education program.

Room B

Nicholas Glover

Outdoor recreation for health and well-being: it's called Green Exercise

Physical activity has been shown to provide positive effects on both physical and mental health and well-being. Physical activity interventions based on green exercise (GE), such as outdoor recreation activities, have been shown to further improve mental health outcomes. Green exercise is physical activity in the presence of nature. The author hypothesized that a 40-day GE intervention would be as successful as a previously reported 'usual treatment' (UT) intervention for improving physical and mental health and well-being. In all but two areas, there was no difference detected between the results of the GE intervention and the UT intervention, meaning that the GE intervention resulted in improvements to physical and mental health and well-being of a similar nature to those seen following successful UT interventions. Significant mental health improvements were also reported from the GE intervention for group mean well-being, depression, anxiety and stress. Further, significant relationships were detected between the starting value and the improvement in value for self-efficacy, depression, anxiety and stress. These results support the hypothesis that a GE intervention, based on outdoor recreation activities, can be as effective as a UT intervention for improving physical health and well-being measures, and can further improve measures of mental health and well-being. These findings on green exercise have important implications for policy development in the areas of public health and environmental management.

Full paper available in proceedings

Room C

Brian Wattchow

The missing link: The role of representation of experiences in outdoor experiential learning.

This session will focus on the role of representation of experiences in outdoor experiential learning. Experiential learning is often represented as a cycle where learners experience, reflect, verbalise and generalise, in order that they can transfer learning to other aspects of their lives. I believe that there is a 'missing link' in the cycle, and that learners need to have opportunities to represent their learning through creative writing, visual art, sculpture, and other forms of expression. After examining some theoretical perspectives you will see examples of student's work completed during and after outdoor programs ranging from environmental education camps to advanced expeditions. These works will provide stimulus for thinking about and discussing the possibilities of representative work in your own teaching and leading.

Room D

Lucas Bester

Those who Teach Learn: Peer Teaching in Tertiary Outdoor Education

At La Trobe University, the Outdoor and Environmental Education department operate three undergraduate degrees, and use peer teaching in many subjects throughout these courses. More specifically, near-peer teaching strategies, where a more advanced student - by one or more year levels - teach less advanced students, occur in many of the department's third year to first year subjects. This particular form of peer teaching, also known as cross-year teaching/tutoring or proctoring has been studied extensively in health and medical higher education, and is widely used across the tertiary sector. These studies unpack the strengths and weaknesses of the near-peer teaching model in higher education, and suggest the best way that it can be incorporated into the experiences of both peer teachers and peer students. The findings in these studies, alongside the findings of a particular Outdoor Education case study, can assist in understanding the usefulness of near-peer teaching specifically in context to tertiary Outdoor Education.

Monday, 14 April - 2.00pm

Room A

Tony Robinson and David Low

The notion of flow and engagement in learning

Notions of 'flow' (Csikszentmihalyi, 1988,1990) and the 'Adventure Experience Paradigm' (Priest and Gass, 2005) have a significant and debated tradition in Outdoor and Adventure Education (AEP). While there is some conjecture as to the nature and relationship of flow and the AEP, the concept of flow has more recently been applied to learning engagement (Cavanagh & Kennish, 2009; Fredricks, Blemfeld & Paris, 2004) but not in an extensive way. I too, referred to this notion in the literature review and conclusion of my doctoral thesis (Robinson, 2013). This presentation will include an exploration of flow and learning engagement as a continuum and argue for a context 'trinary' to describe such engagement. Aspects of this 'trinary' to be discussed include: the skills necessary for engagement to occur; the desire to learn or be engaged; and the situation within which the engagement is occurring. The influence of facilitation on this process will also be presented opening up ways to think about and encourage participation in school-based learning and outdoor adventure activities.

Room B

Will Dobud

Speaking Their Language: Matching Therapeutic Interventions to Client Strengths

True North Expeditions, Inc (TNE) provides 14-day adventure therapy programs for adolescents experiencing emotional or behavioural issues. Led by clinical practitioners and outdoor education staff, TNE facilitates an experiential program teaching outdoor survival and effective leadership skills while providing a comprehensive therapeutic intervention for young people and their families. During an expedition, participants work through TNE's 'Expedition Curriculum', a skills-training workbook designed to facilitate the hands on learning that occurs in the bush, while working with clinical practitioners offering a unique and alternative form of counselling, incorporating nature and the outdoors into the service model.

TNE's comprehensive therapeutic model includes a range of client-centred, strengths-based techniques and approaches such as narrative therapy, brief solution focused therapy, motivational interviewing and youth development. Essential to TNE's model is the use of Howard Gardner's Multiple Intelligences Theory. Assessing clients' key intelligences helps build stronger therapeutic alliances and assists in matching interventions in certain situations.

Practitioners and educators working with children, adolescents or families will take part in an inspiring discussion about evidence supporting this innovative treatment milieu before examining practical case examples for using this strengths-based, solution-focused strategy for evoking positive change in families and individuals. Attendees will leave with practical techniques and ideas for working with young people and assessing their key intelligence. This workshop is engaging and fun for those passionate about working with people and learning about becoming experts in utilising each of their client's unique individual strengths.

Concurrent Presentations

Room C

Tony Keeble & Roger Blackwell

Magic Weavers

In this presentation we will outline the process our school took to engage our staff in writing a new outdoor education curriculum. We will go through the parameters, one being that we wanted to develop the curriculum without any outdoor activity focus. Rather we concentrated on what we wanted the students to learn, our Educative Purpose. We will look at the learnings from Sir Ken Robinsons 'Changing the Education Paradigm' and look at the learnings of the 'Green School' in Bali and the lessons learnt from their curriculum design. Finally we look at our curriculum documents in preparedness for the next session on unpacking our curriculum documents with regard to the Australian Curriculum and its linkages to their website.

The word 'Magic Weavers' is borrowed from Sir John Jones an educationalist from Scotland who speaks passionately about how do go about change in your school. We looked at questions like, 'who are', 'why do we live and work the way we do?' and 'what might we become?'. We used his analogies to look at ways of developing Outdoor Curriculum in ways it hasn't been developed before Residential Outdoor Schools.

This presentation is one of four. The first two are on the curriculum design and unpacking the documents. The third presentation is looking at an assessment tool for assessing students understanding of the curriculum presented. Roger Blackwell spent two years as part of his Masters work developing an online concept mapping tool for outdoor education. It is an informative assessment tool. Then the last of the series Tony Keeble presents his PhD work on social capital and linkages to Outdoor Education based on a program developed with the new curriculum, a program called 'Future Makers'.

Full paper available in proceedings

Room D

Peter Holmes

An investigation into the relationship between vocational and higher education; using outdoor education as the lens

Outdoor educators are required to have a multiple layers of skills and knowledge to work in the profession. They are required to demonstrate and have mastery of several physical skills to move through the landscape, in addition they should have the ability to teach these same skills and able to educate students on a broader curriculum (environmental studies). The dilemma is that the workplace demands graduates are work ready, that they have the educational and broad curriculum knowledge of their subject areas (higher education), and on the other hand have the skill (vocational) to travel through the landscape safely and efficiently whilst managing a group of participants.

Fourteen tertiary students participated in a ten-day cross-country skiing trip in Kosciuszko National Park in the winter of 2013. A vocational (the Australian Professional Snowsports Instructor, Nordic level 1 course) and a higher education curriculum were concurrently delivered.

This paper examines the nexus of vocational training and higher education using a case study and action research approach. Students were asked to keep a reflective journal and comment on their learning over the trip.

Students reported that there is merit in a collaborative approach in the delivery of both a vocational and a higher education curriculum. Secondly students reported that the learning of skills (cross country skiing and ski instruction) was emphasized over and above learning about the environment. Lastly, the increased confidence in their ability to teach skiing enabled the students to more readily focus on the environmental aspects of the program.

Full paper available in proceedings

Monday, 14 April - 3.00pm

Room A

Erica Gurner

Embedding the 'spirit' of nature experiences across the curriculum.

A sense of connection to nature is characterised by feelings, emotions, intuition, values and empathy; that is to say it is part of each person's own spirituality. Furthermore, these factors have a critical role in determining a person's attitudes and actions toward the environment. School experiences in and with nature however have typically engaged only the body and mind of students leaving the spirit unattended to and a weak sense of connection to the natural world. This presentation discusses ways in which 'the spirit' that is inherent in nature experiences can be embedded in the curriculum areas of health, sustainability, science and civics whilst equipping students with the ability to imagine a sustainable world through a lens of connection and belonging.

Room B

Murray Henstock

All I Need is a Student, a Teacher, a Tall Ship and a Star to Steer Them By

Young people's engagement with school is critical to developing healthy and productive members of society. As such, it is essential to identify effective strategies to help re-engage students who traditionally may have left school prematurely. Results of recent studies suggest participation in sail training has a positive impact on the development of self-concept, social capital and student motivation as well as higher reports of overall engagement with learning and education. In addition teachers who participate in sail training programs themselves appear to become inspired to create more engaging and meaningful lessons further increasing positive student outcomes. The arena of sail training on both large and small vessels offers a number of unique and memorable learning environments applicable to many different key learning areas within the Australian Curriculum. As such opportunities aboard a number of tall ships around Australia and the world exist to explore how sail training programs can link with national and state curriculum, regardless of subject focus, and in turn promote not only growth of teamwork leadership and self-concept but also facilitate effective and meaningful learning experiences for teachers and students alike. Examples of existing connections between sail training and education can be seen in vessels in Australia such as Leeuwin II in Western Australia, Windeward Bound in Tasmania, One & All in South Australia, South Passage in Queensland as well as international vessels such as Spirit of New Zealand in New Zealand and the Ocean Youth Trust in the United Kingdom to name a few.

Full paper available in proceedings

Room C

Tony Keeble and Roger Blackwell

Future Makers and the Tree of Life

In 2011 our school started its journey towards writing two Outdoor Education curriculum documents. One for our Bogong Campus (Future Makers) and one for our 15Mile Creek Campus (Tree of Life).

This presentation is the second in a series of four and in this presentation we will unpack both documents. The Future Maker Program is a semester long program where our staff work in schools for a series of lessons with other teachers. Then we have a 12 day residential component at the Bogong Campus, which includes a five day journey under canvass. After this our teachers spend more time in the school finishing off the program. The program is essentially targeted towards year nine students and schools that are employing 'Inquiry Based' learning. The Tree of Life Curriculum caters for students from Prep to year 10. Generally though the curriculum is delivered to Primary year students in years 5 and 6. Both Curriculum have the same vision: Educating towards sustainable living, and both curriculum have the same Educative Purpose: Develop future-ready young people.

Both documents will be made available for participants to take with them.

Concurrent Presentations

Room D

Glyn Thomas

Signature pedagogies matter in tertiary outdoor education courses

In a tertiary education program designed to prepare outdoor education professionals, what is regarded as essential content? What must these programs focus on, and what teaching approaches would a participant encounter? In the field of teacher education, Lee Shulman (2005) introduced the term signature pedagogies to describe the fundamental ways in which future practitioners are educated for their new professions. He argued signature pedagogies prepare emerging professionals in to think, perform, and act with integrity. In this session, I will explore the signature pedagogies that seem to be prevalent in the preparation of outdoor education teachers and leaders. I will draw on some recent research on distinctive pedagogies in two extended outdoor education school programs, a review of tertiary outdoor education programs in Australia, and my experience in the higher education sector. The strengths and weaknesses of signature pedagogies for outdoor education will be discussed. It is my contention that being clearer about our specific pedagogical content knowledge is an important step in becoming a more robust profession. The implications for tertiary education providers and the importance of the Australian Journal of Outdoor Education will be discussed.

Room E

Alistair McArthur

50 years of passion in Outdoor Education but what does the future hold?

Alistair McArthur commenced his Outdoor Education career in October 1964. He will reflect on almost 50 years of passionate involvement with Outdoor Education as Instructor, Chief Instructor, Course Director, Program Director, Executive Director, Board Member and Consultant. He has worked in the United Kingdom, USA, Canada and Australia. Managing the aftermath of three separate fatalities while working for Outward Bound in USA and Canada deeply impacted his psyche and his attitude to risk management. After looking back at his international experience he will look forward to the future for Outdoor Education in an increasingly complex world.

Full paper available in proceedings

Monday, 14 April - 4.30pm

Room A

Brendon Munge

You want to study what? Students motivations for studying an Outdoor Education degree.

This presentation focuses on what motivates students to chose to study outdoor education at a tertiary level. The research considers 1st year students and their motivations to commence studying either a full degree in outdoor education or a degree that has outdoor education as a major or minor stream within it. The findings provide a unique insight into what their motivations are, how it varies between: those intent on studying a full course load comparative to a major or minor element, mature age and high school levers, and different genders. Also of interest is the link students have in making a decision to study OE at a tertiary level and the influence to their significant outdoor mentors, profile of the course, or desire to do something linked with the environment and people.

Room B

Adrienne Forsyth

Food and nutrition for journey-based outdoor education

A brief review of the literature revealed no peer-reviewed publications relating to nutrition requirements or evaluation in outdoor education. Developing nutrition guidelines for journey-based outdoor education programs and evaluating menus based on these guidelines has the potential to impact on the enjoyment, safety and performance of students participating in these programs. This is significant as it may further impact on these students' ongoing lifelong participation in sport and recreation pursuits.

Concurrent Presentations

Outdoor education providers were asked to provide detailed descriptions of their journey-based outdoor education programs, corresponding menus, and participant demographic information. Nutrition and hydration requirements were determined using Australia's Nutrient Reference Values and sports nutrition recommendations from the Australian Institute of Sport, and based on the program activities including activity duration, intensity and recovery time as well as anticipated basal metabolic requirements of participants based on the demographic data provided. Based on these findings, general guidelines for the provision of food and beverages on journey-based outdoor education programs were developed.

Menus supplied by outdoor education providers were entered into Foodworks version 7 (Xyris software) and analysed for total energy, macronutrient, micronutrient and water content per participant per day and evaluated against the anticipated nutrition requirements of participants. Menus were also analysed against the Australian Dietary Guidelines and evaluated for food safety. At least 90% of key nutrient requirements including energy and carbohydrate were provided by menus for 'easy' programs, but not by menus for 'hard' programs. Several food and nutrition recommendations for outdoor education providers will be discussed.

Full paper available in proceedings

Room C

Beau Miles

Expedition Sea Kayaking as Phenomenon: A review of the literature

This paper explores the literature relevant to gaining plausible insights into the lived experience of the expeditionary sea kayaker. Whilst wind and water currents dictate the physical movements of this coastal nomad, and unique skills allow departure and return, it is the mindful state of the all day, at sea act that might determine the essential qualities of this secretive, at times shadowy pastime.

How we represent this experience is also in question. Naturally, humans take for granted relationships to land and the places of abode we call home. As home, land is also where we contemplate, grounded in reflection once returned from travel. Where do the experiences of the sea kayaker, had in an environment so different from land- yet reliant on it, fit within this reflective and interpretive space? Does the sea kayaker, an amphibious creature of land and sea, experience and see the world through what Wattchow (2012) would call a sea-gaze, and therefor require a different lens to capture such an experience? This literature review aims to best articulate the sea kayakers experience first, and in light of new ways lived experience can be represented, question how we capture, tell and interpret the lives of the sea kayaker. Taken from the expeditionary experiences of the author, this literature review also questions the role of different boat types and technology in the embodied experience of sea kayaking and how these elements come together in the way sea kayaking is conducted, represented and interpreted as a subcultural act.

Room D

Peter Martin

What role for Tertiary OE providers?

The tertiary sectors are charged with multiple agendas. Universities contribute to professional development through higher education, conduct research, respond and shape community discussions. Vocational Education Training (VET) providers are more specifically focussed upon preparing students for work, but are also actively shaping industry and professions. In the tertiary sector, outdoor education is served by both universities and VET providers. While there are exceptions, more commonly the departments that support OE courses in the tertiary sector tend to be small with few dedicated academic staff. Can tertiary OE be more influential and effective in developing OE in Australia? Is there a role in Australia for a tertiary OE collaboration between providers? Could a co-operative cross institutional and dual sector tertiary OE group help shape the nature and scope of outdoor education provided in Australia in ways more effective than what is possible via individual institutions?

Concurrent Presentations

Room E

Anne-Marie Archer

Youth Leadership on a Tall Ship

The Leeuwin youth development program is based on structured principles of human change that interrupt habitual patterns of behaviour and develop a wider range of social responses with the guidance of watch leaders. The program actively separates family, friends and peers to ensure trainees are able to engage without the need to maintain expected social conduct. The isolation in a new and unfamiliar environment is critical to the success of our program and the trainees quickly learn the law of natural consequences with direct feedback from the ship, wind and sails when they do things incorrectly and that many hands are needed to make things happen.

The very mechanics of sailing and manoeuvring a traditional ship require a considerable amount of effort by everyone involved; this gives people a shared purpose and a feeling of belonging. The practical nature of sailing means it is easy to point out why negative behaviours such as do not work.

Seasickness is built into the program planning. For many it is a natural response to the environment. However it can also contribute to the growth and learning given the physical and mental challenge of overcoming seasickness is unforgettable and the relief and jubilation enhances personal engagement.

The tall ship experience is very real, with real consequences. The situation isn't imagined, the ship has to get from A to B and trainees must commit to see the journey through to its conclusion. This heightens the core ingredients of risk, fear, challenge, hardship and excitement.

The WA School Curriculum and Standards Authority Endorsement of the Leeuwin program afford trainees the opportunity to earn 5 WACE points to contribute to their senior graduation.

Tuesday, 15 April - 11.00am

Room A

Malcolm Nicolson

Aims and Experience in Outdoor Education

This paper explores the lived experience of seven, ten to twelve year old students in the outdoor education programmer at Somers School Camp. It relates teacher expectations as recorded in programmer aims, to the aims of the students as revealed in interviews. Aims in Outdoor Education are examined in the light of a framework developed from Dewey's writings, focussing on his notion of general and immediate aims. It also highlights the importance of he nature of aims, the context in which they operate and the methods they suggest. The aims examined are those developed at the Dartington conference in the UK in 1975, and those of Somers School Camp. The content of those aims is also examined against the background of broad educational expectations in the domains of personal and social development, and environmental education.

Full paper available in proceedings

Room B

Mike Bezant

Hungry for Change - A New Perspective on Food

The purpose of this workshop is to explore the importance and value of food, and the need to change the way we view food consumption on Outdoor Education programs. We will discuss a range of questions including but not limited to the following: What is the importance of food in Outdoor programs? Is food just something we provide for participants so that we can get on with the real experiential learning? Do your groups of young people plan, prepare and cook food for programs? Could food be used as an experiential learning process? What does healthy and nutritious program food actually look like? What's wrong with processed food? Does the food we supply on Outdoor programs have any impact on the participants and the program outcomes? `What does it mean to eat simple food? Does food matter?

Hungry for Change will seek to explore each of these questions, and is designed to be experiential, discussion based, and provides opportunities to make and taste a range of yummy nutritious program foods.

Full paper available in proceedings

Concurrent Presentations

Room C

Stephen Carter

Boom and Bust an Outdoor Life in Regional Australia

The life story component is about how a passionate outdoor person survives in regional South Australia. It's a story that reflects the need to teach, inspire encourage and support other regional people to become involved in Rock climbing, Bushwalking and Kayaking. And the small but tight network of regional people who maintain their passions and support each other. How we survive in the predominate culture of football, netball, cricket and tennis. It follows the boom periods when likeminded city transients move to the regional areas and the subsequent flurry of activity followed by the bust when they move on. Parallels will be drawn between the personal boom and bust and the Impact on Outdoor education at Port Augusta Secondary School. The story will weave to my current role as the Coordinator for the Graham (Polly) Farmer Foundation project in Port Augusta. It will detail how I use my Outdoor philosophies in activities with the young Aboriginal people who are in the program.

Room D

Marianne White

Making it relevant: encouraging future stewardship with opportunities to understand, create and nurture local environments.

How can we instil students with sustainable values? What role can local school environments play in developing a student's respect and understanding of nature, and how can this support a move towards sustainable behaviour change?

As our lifestyles and surrounding environments become increasingly urbanised, students' abilities to understand, relate to, and value local ecosystems are steadily decreasing. Experiential learning in natural environments is fundamental to developing student appreciation and connections to nature, however if restricted to single, idyllic experiences and remotely located outside of their day to day spheres, how effectively does this encourage environmental stewardship at the local level? Will these experiences alone lead to the adoption of sustainable lifestyles?

At a time when the need for environmental stewardship is becoming more apparent, the importance of understanding and actively contributing to local environments is essential. This presentation will explore examples of how South Australian schools and students have harnessed their school environments as spaces to understand, create and nurture habitat and biodiversity relevant to their local area, whilst linking them with broader, school-wide activities and initiatives aimed at encouraging sustainable livelihoods.

Room E

Marcus Morse

Paying attention to aesthetic experience on a year nine river journey

In this presentation I will describe an outdoor education and art experience on the Shoalhaven River in N.S.W. and present findings from a research project that seeks to describe the creative responses and meaningful experiences of students on the river journey. The findings from this study pay particular attention to the pre-reflective and aesthetic qualities of participant experiences. Additionally, I will discuss key components of the river journey that appeared to create opportunities for the meaningful experiences described.

Concurrent Presentations

Tuesday, 15 April - 12.00pm

Room A

Erica Gurner

What is a 'connection to nature' and what does 'sustainability' actually mean?

The depth of connection a person feels towards nature will influence their attitudes and actions towards the natural world and therefore ultimately the health of human beings and the entire planet. It is of no small concern then that human beings appear to be losing their sense of belonging and connection to the natural world. A sense of connection is inherently personal and somewhat abstract to define yet if we can't understand what it means then how can we cultivate it? This hands-on workshop will explore the meaning of the terms: 'connection to nature' and 'sustainability' using a creative method of inquiry, aspects of which may be adapted by teachers and educators for use in the classroom and outdoor field at all levels of education including therapeutic environments.

Room B

Tim Harley

Catering for diverse dietary needs in wilderness settings

The task of providing expedition based menus for large numbers of students (or clients) that are healthy, safe and inclusive in their method of preparation is becoming increasingly complex. The vast array of special dietary needs and allergies (mild to severe) means this task is also an important aspect of your risk matrix analysis process.

Based on input from a number of members of the West Australian Reference Group for Outdoor Education (WARGOE, affiliated with Outdoors WA) representing both school based and commercial programmes this presentation will provide an opportunity to share and discuss some key points in this aspect of outdoor programmes that is common to all -

1. Changing landscape of special dietary needs - what do you know about your students/clients and how to gather this information?
2. Menu Design - how student centred cooking through in-house catering can be a feature of your programme.
3. Changing the focus to hypo-allergenic meals through vegetarianism, raw food meals and other popular camp meals.

Full paper available in proceedings

Room C

Hisyam Che Mat

Evaluating the effects of school camp experiences on children and adolescents with intellectual disabilities, their teachers and parents

The Outdoor Youth Programs Research Alliance (2012) reported limited Australian research was available on the impact of outdoor and camping experiences among young Australians. Recognising the need to grow the evidence base related to outdoor activity and camp experiences, and the almost total absence of any rigorous research on this topic related to people with a disability in general, and Australian children and adolescents with a disability specifically, a project has been designed to investigate the effect of school camps offered by the special schools on children and adolescents with an intellectual disability (CAID), parents and teachers. Twelve focus group interviews were conducted, involving 20 CAID (12-18 years) attending special schools in the northern suburbs of Melbourne, 11 parents and 26 teachers. We identified positive school camp experience themes and difficulties encountered by CAID, parents and teachers associated with school camps. CAID, their parents and teachers reported school camps were successful in promoting positive and social development among CAID, and they held a positive perception of school camp experiences. Parents reported communication before, during and after camp as the main difficulty. These findings are important as they provide insight into the benefits and challenges of school camp experiences undertaken by children and adolescents with intellectual disability. This has not been done in Australia before, and will provide information to assist planning and conduct of these experiences.

Concurrent Presentations

Room D

Janice Atkin and Scott Polley

Outdoor Education in the Australian Curriculum

Recently, the Australian Government has sought to nationalize what was state-based curriculum into 8 learning areas, of which Outdoor Education was not one. Although Outdoor Education is not a learning area, it has been an integral component of many if not most Australian Schools. This presentation reports on progress by Outdoor Education Australia in cooperation with ACARA to provide documentation and support to those schools that wish to utilize OE to teach their curriculum, or how an F-10 Outdoor Education program can deliver aspects of the Australian Curriculum. Although all learning areas will be discussed, there are more opportunities within Health and Physical Education, Science and Geography, and cross-curricular priorities of sustainability and Aboriginal and Torres Strait Islander perspectives. This presentation will focus on draft advice that is to be available via ACARA to teachers and schools, and is the foundation for a later forum.

Room E

Clare Dallat

Communicating Risk with Clients/Parents: What language are you speaking?

This presentation will address the increasingly important area of risk communication as a major component of an school/organisation's overall risk management strategy. The presenter will contend, through offering a comprehensive critical analysis of the risk communication literature as well as the relevant findings and analysis of her own studies, that there is a need to consider a paradigm shift in risk communication processes with parents/clients.

The importance of building strong relationships with our clients has been proven to be of immense value, especially in the event of an incident. It is widely considered to be a crucial factor in how quickly (or slowly) an organisation recovers post incident. Strong relationship building will be advocated as an important risk management strategy.

Clare will argue, with the aid of risk communication theory, that we must also acknowledge and actively engage our parents/clients in the discourses about risk in order for them to be in an appropriate position to make an 'informed' decision about their (or their child's) participation. The presenter will explore the role that risk perception plays in any decision about risk and will advocate that for truly effective communication to occur, 'expert' and 'lay' views about risk must be treated as equally valid. By achieving this, we will be much better placed to form successful relationships with our parents/clients, where there is open dialogue and the benefits, as well as the uncertainties involved in participation are clearly evident to all.

The audience will be asked to actively participate through exploring their own risk language and to analyse their own organisational risk communication processes, and whether this is placed to intentionally and actively involve their parents/clients in the communication process.

The aim of this workshop is to enable participants to leave with some further understanding on the subtleties of communicating risk and, from a practical perspective, immediately implement some strategies upon return to the office.

Wednesday, 16 April - 11.00am

Room A

Jason Tyndall

The nature of play: the developmental benefits and practical components associated with nature play in an education setting

Nature play is emerging as a topic of interest that has arguably existed for millennia. It is beginning to feature prominently in the vocabulary, vision, and planning in primary school settings as a way to enrich childhood learning and development. The importance of nature play for children has been discussed throughout a range of literature pertaining to the disappearance of play. This can be as a result of risk averseness (Gill 2007) and the growing disconnect between children and nature - a phenomenon discussed by Louv who coined the term 'Nature Deficit Disorder' in his book Last Child in the Woods (2005).

Concurrent Presentations

The question explored is what is nature play and how can its principles be translated into an education setting? This hands-on workshop will look at defining nature play, understanding the types of play and what their benefits are, the challenges and ways to overcome them. It will also look at how this translates into a play space where children can develop an adventurous spirit, an authentic experience in nature, and develop deeper relationships with themselves and the world around them. Participants will inform discussion, be encouraged to use their imagination and incorporate their learning into a 3D model.

Room B

Andrew Brookes

Catastrophe, the unwelcome tutor, and its lessons for contemporary Australian OE

This presentation draws on an international study of over 100 catastrophes - incidents having multiple casualties - involving school or youth group camps and excursions, to examine not only what there is to learn about preventing disaster, but also to highlight important changes in society at large which must engage OE and how it is conceived.

Disastrous incidents, mostly accidental, are the rarest of events, and hardly a fair measure of the OE field. Nevertheless when they occur debate almost invariably extends to the nature of OE itself. While the infamous Lyme Bay tragedy in the UK arguably involved a ""cowboy"" operator, more recent incidents have involved apparently exemplary organisations, including the National Outdoor Leader School (NOLS) in Alaska, Taranaki Outdoor Pursuits Centre (TOPEC) in New Zealand, the Outdoor Pursuits Centre (OPC) in New Zealand, and the British Schools Exploration Society (BSES), each of which has had to confront some hard lessons.

Can we learn to prevent catastrophic accidents? What can incidents that occurred long ago and far way have to say about contemporary OE in Australia? While the pattern of incidents examined suggests not much has changed in the nature of catastrophic hazards, changes outside the OE field have the potential to shift the standards OE programs will be held to faster than most programs can change or adjust. Organisations that fail to attend to catastrophe prevention will almost certainly not be visited by a disaster. But when disaster strikes, everyone involved regrets not having discovered earlier what emerges in the inevitable, and painful reviews and court cases. Long forgotten voices have expressed the wish that others, in the future, might learn from their tragedy. This presentation will examine those forgotten lessons and adapt them to the modern world.

Room C

Heather Grenon

Missing resilience: Psychology's contribution to resilience in outdoor education

This session explores the definitions and concepts of resilience in psychology literature, and compares these to the outdoor education literature. Widely researched within the psychology field, differing definitions of resilience can be found ranging from resilience as a trait – biological and inherent within us – to resilience as a social process – built up over time in various situations. More recently, resilience has been proposed as a concept with multilevel protection and cultural factors taken into consideration (Davydov, Stewart, Ritchie, & Chaudieu, 2010). In our experience and supported by outdoor education literature, outdoor educators view resilience as a social process. Through exposure to challenging situations, participants build a tolerance, and then transfer this to 'real life' situations (Ewert, 2008; Gillespie & Allen-Craig, 2009; Ungar, 2005; Wilson & Burnor, 2011). We explore the difference in the perception of resilience between psychology and outdoor education fields and the potential missed opportunities or benefits for expanding our understanding of resilience in outdoor education when programming and in practice.

Room D

Simon Wilson

Introduction to the New International Standards for Adventure Activities

Experts from several countries have been working on two standards and one technical report, aimed at providing guidelines for the safe management of adventure activities.

The standards will be released in Feb 2014 and the technical report was released in September 2013.

This presentation provides an outline of each of the standards and how they could affect the adventure industry in Australia.

Wednesday, 16 April - 12.00pm

Room A

Russell Shem

The Alpine School - The benefits and outcomes of a residential program for Year 9 students focused on Student Leadership

The Alpine School began in 2000 as Victorian State Government initiative whereby 45 students from various government schools across Victoria attend a nine week residential program. The school is co-educational and is located at Dinner Plain in the Victorian alps. The focus has always been on the development of student leadership and this focus remains today. The curriculum is integral to student learning as is the structure and timing of elements within the program. Small group teaching and learning is supported wherever possible, as is peer teaching, positive role modeling, independence, decision making, reflective and experiential learning. Students live in a shared room with a peer from a different school. We intentionally mix up city and urban based students with rural students, again to add to the explorative nature of learning. The outdoor environment of the Alpine National Park and nearby surrounding ski resort of Mt Hotham lend itself to many challenging and rewarding student focused learning opportunities. The program is 'fluid' as it is flexible according to the weather and seasons experienced at different times of the year. Since it's beginning in 2000 a second campus was established in 2007 called the Snowy River Campus, located at Marlo where the mouth of the Snowy River meets to ocean. In 2009 a third campus was established near Terang in Western Victoria, called Gnurad Gundidj (which means place belonging to Noorat, a small nearby town). All three campuses sit under the 'umbrella name' of the School for Student Leadership.

Full paper available in proceedings

Room B

Natassia Goode

Trial of a new incident reporting system for the outdoor sector (UPLOADS): initial data and lessons learnt

The goal of the UPLOADS (Understanding and Preventing Led Outdoor Accidents Data System) project is to develop a standardised, national approach to incident reporting and learning for the outdoor sector in Australia. This presentation summarises the results from the initial 6 month trial of the prototype system, and discusses the lessons that were learnt. Fifteen organisations were involved in the trial, including private schools, universities, not-for-profit outdoor education providers and commercial adventure companies. The trial involved organisations using the UPLOADS software tool to collect in-depth reports on near misses and incidents associated with adverse outcomes (e.g. injuries, illnesses, psychological/behavioural, environmental and equipment damage), and sending de-identified data to USC for inclusion in the aggregate dataset. In addition, organisations provided their activity participation rates on a monthly basis. While the system has the capability to collect data on near misses and a range of adverse outcomes, the majority of incidents recorded were injuries. Injuries were associated with a range of activities; the activities most frequently associated with injury were bushwalking, camping and bush cooking. The participation data indicated that the activities most frequently undertaken were camping, indoor climbing and initiatives. Among many other lessons learnt, the trial indicated that the process for coding the causal factors associated with incidents needs to be streamlined; however, many participants commented that this feature prompted them to think more deeply about the causes of incidents within their organisations and helped them to more easily extract the lessons to be learnt.

This presentation complements the UPLOADS trade stall, which will conduct one-on-one demonstrations of the incident reporting software tool.

Concurrent Presentations

Full paper available in proceedings

Room C

Mark Munnings, Rob Lans & Brett Stanford

Teamwork, Resilience and Leadership

Maroon Outdoor Education Centre was established in 1975 and has developed programs with a clear focus on enhancing student well-being. Teamwork, Resilience and Leadership were identified as the 3 areas that best meet the needs of current adolescents that could be addressed through a short stay residential program.

Maroon OEC has developed materials that assist in the teaching, learning, assessment and evaluation of Teamwork, Resilience and Leadership which includes a pre and post survey that has the capacity to email information to schools, students and parents.

The session will be an exploration of the materials developed, with an insight in to the development process.

Room D

Roger Blackwell

Concept Mapping: A Tool for Measuring Student Learning in Residential Outdoor Schools

This paper explores the possibilities of how concept mapping can be utilised as both a valuable teaching and learning tool, as well as an assessment tool within a residential outdoor school environment.

Both anecdotally and through research there is a case for the premises that residential outdoor schools currently undertake elementary and often crude attempts at collecting and generating data around student learning. As a function of this restricted knowledge around the student learning outcomes in a residential outdoor setting, this paper will offer a possible solution.

The potential solution to developing effective student learning outcomes will be explored via the use of concept maps. Concept maps are not new to the field of education however their application at a residential outdoor school setting has not been extensively written about.

Full paper available in proceedings

Wednesday, 16 April - 2.00pm

Room A

Alistair Stewart

The River Murray and outdoor environmental education: developing place responsive pedagogy

Since the arrival of Europeans the Murray River has undergone a substantial physical, ecological, and cultural change. In the last 170 years the river has been dammed for irrigation and power generation, and little remains of the extensive forest systems that once covered its flood plains. The forest that remains is heavily used for purposes such as timber production, grazing, firewood collection and recreation. The river itself has been transformed from one with intermittent flow, periodically disappearing in dry conditions, to a highly regulated series of dams, weirs, and channels. Over the last 15 years I have developed outdoor education teaching and curricula approaches that respond to the state of the river and community concerns. Through use of examples from practice I will draw attention to the epistemological and ontological differences that may emerge from structuring outdoor and environmental education experiences in particular ways.

Room B

Brendon Munge

Lost again: Analysis of school groups requiring search and rescue when bushwalking

This presentation centres on a study of search and rescue reports related to school orientated bushwalking trips in Australia. The investigation consisted of analysis of search and rescue activities reported in newspapers articles and emergency services' reports. The key focus was to identify trends related to groups requiring external assistance, the mode of assistance required, extenuating circumstances and reported outcomes of the search and rescue operation. The presentation aims to inform and engage participants on the topic of search and rescue related to bushwalking and highlight potential areas for further improvement

in the preparation for trips with school groups.

Room C

Sandy Allen-Craig & Val Nicholls

Outdoor Environments and Therapeutic Interventions

Outdoor environments have long been used as a stage for a variety of therapeutic or alternative health interventions for a variety of different types of 'at risk' groups. In 2011 the Australian Catholic University, Melbourne integrated a new unit: Outdoor Environments and Therapeutic Interventions into the Bachelor of Exercise and Health Sciences curriculum. This unit aims to introduce students to the foundational principles guiding programs that utilise the outdoors for therapeutic interventions with specific populations. It examines the historic development of therapeutic interventions that incorporate outdoors environments and explores the range of applications that are evolving from these emerging alternative health programs. The use of outdoor settings and outdoor pursuits as part of these therapeutic health interventions are investigated. There is an expectation that students work towards developing a positive and supportive relationship with a young person as they participate in a community outdoor adventure therapy program. In this session Sandy and Val will present a brief overview of the rationale and history of the unit and share some of the strengths and challenges experienced in its development and delivery. Student feedback of the program and the outcomes of field placements with local Bush Adventure Therapy providers will also be addressed. Participants in this session will be invited and encouraged to contribute to discussion about the development, direction and relevance of the program.

Full paper available in proceedings

Room D

Maarten Immink

Recreation of the natural mind: Mindfulness in outdoor education

In this talk we explore the concept of mindfulness from psychological science and yoga philosophy perspectives with respect to the benefits of mindfulness training for outdoor education settings and conversely, how outdoor activities lend themselves well to mindfulness training. Current scientific understanding of how mindfulness training changes brain function and behaviour suggests that this unique form of mental training can support the aims of outdoor education including risk management, personal development, sustainability, and understanding nature through life-long direct experience. As part of the lecture, brief mindfulness practices are introduced to participants to promote experiential learning. No previous experience in mindfulness practices is necessary to enjoy and benefit from this talk.

Johne Westersjo - CANCELLED

Friluftsliv - Outdoor Life Education in the Norwegian Curriculum

"Friluftsliv is understood to mean being in the outdoors and partaking in physical activity with the aim of changing ones environment and experiencing nature" (Government.no 1972 - 73, S.9). It includes traditional outdoor life, outdoor education and outdoor activities like hiking, foraging, fishing, hunting, sailing, orienteering and camping - mostly activities linked to survival. Until today the dynamic concept of Friluftsliv has become wider. It includes also hobbies as climbing, skiing, kayaking and similar activities. Important is that the own body is used by doing Friluftsliv activities and that there is nothing used that makes a lot of noise like motor-vehicles. Friluftsliv is connected with protecting the nature. Currently are there some discussions on modern activities: Are they belonging to Friluftsliv/Outdoor Life or don't they?

Concurrent Presentations

Wednesday, 16 April - 3.00pm

Room A

Amanda Lloyd & Marian Crossley

Place-based outdoor learning; enriching Australian primary school curriculum.

The need for children to interact with and learn in the outdoors is becoming increasingly prominent in recent research worldwide. By cultivating a sense of connectedness to the outdoors a relationship with the natural environment can occur for children within our primary school curriculum. By utilising innovative pedagogies teachers can allow for a sense of awe and wonder to develop whilst engaging in educational activities. Pedagogies of place construct knowledge and a deeper understanding of the world that surrounds us.

Outdoor learning in Primary Schools takes seemingly just a moment in a child's life, but the gains last a lifetime. Place-based pedagogies recognises the importance of forming intimate relationships with place through regular visits to the same outdoor environment. The challenge for teachers is to implement outdoor learning into their regular educational programs. Working within the constraints of a crowded curriculum, the pressure of academic testing and timetables this requires some creative thinking by classroom teachers. An integrated curriculum approach utilising the cross-curricula perspectives, allows teaches to use the National Curriculum to their advantage.

This presentation showcases the practical ways in which one school has successfully implemented outdoor learning into its curriculum. Relationships formed with the local Indigenous community ensure that authentic and localised knowledge is central to the teachers programming. By using the school playground and local environment as their classroom, children form empathy for their local natural world. They know their place and they are bonding with it whilst learning the skills to become active global citizens.

Full paper available in proceedings

Room B

Lucas Bester

Safety Limited: the social and cultural restraints to safety in outdoor education

Society's understandings about the processes behind and causes of, accidents, serious incidents, and catastrophes, have significantly developed over the last thirty years. Outdoor Education (OE), however, has been slow to adopt theoretical developments in safety management and harm minimisation of dependant groups in the outdoors. OE has not been slow, though, in adopting notions of risk as central to its identity and, at times, positioning risk as integral to providing learning and wellbeing to participants. Such an approach to curriculum and pedagogy has led to particular safety practices and ideas in the outdoors. As the OE profession increasingly provides alternatives to such risk dominated approaches, so it can re-evaluate theories that underpin attitudes to safety.

As in many elements of post-industrial society, accident understanding and safety management have increasingly become understood in positivistic and reductionist terms. Charles Perrow (1984) in Normal Accidents and Scott Sagan in (1993) The Limits of Safety turned organisational theory against the normative trend with their provocative research on accident theory and accidents in high-risk technologies. Their work highlighted the social and political restraints to safety, of which I briefly introduce and describe. This research then seeks to establish some of the learning and findings of normal accident theory that might be transferred to safety with dependant groups in the field of OE.

Room C

Geoff Adams

Transfer of learning - are we really making a difference?

Most outdoor education in Australia occurs in a context that is external to the participant's regular setting (Martin, 1999). Experiences are usually held in remote locations for short periods, with the learner then returning to continue with their traditional learning back in the classroom. Any links between the two learning environments are not always drawn out or identified by the learners or educators (Brown, 2010).

The links between these experiences and knowledge gained can be explored through the concept of 'transfer of learning'.

Concurrent Presentations

Leberman and Martin (2004) explored the importance of time in enhancing participant reflection, and therefore transfer of learning. They "argue that with increased time and space away from the course deeper reflection can be facilitated, which may enhance transfer of learning" (Leberman & Martin, 2004, p. 174).

This session will explore early results of research being conducted using a journey based program. The research asks whether participants report changes in learning over an extended time period - ie. Does learning change if there is more time given for the participants to process their experience?

Room D

Tony Keeble

Exploring the concepts of Social Capital and its linkages to Outdoor Education Outcomes: A possible solution for community building.

This presentation is the last of four and focuses on my PhD study, examining theories of social capital and how this can be linked to the outcomes of outdoor education. In developing social capital the major themes include building trust, building skills of co-operation, collaboration and 'doing it' for the common good of the group. All these aspects are critical in building our communities and can be taught in an outdoor education curriculum. I will spend the first half of the presentation unpacking the peered reviewed work of Simon Beams and Matthew Atencio in their article titled 'Building Social Capital through Outdoor Education, 2008'. Here we will look at their ideas, especially the notion of 'Bridging and Bonding' in regards to transfer of knowledge from outdoor educational experiences.

The second half of the presentation will look my PhD proposal and the work I intend to complete. In brief, my research will look at behavioural changes in students prior, during and after our new 'Future Maker' program. The behaviours I will be looking at in particular are those stated behaviours that are recognised as behaviours needed to improve social capital in our communities. I will also discuss the linkage between student outcomes in Government schools and the PISA reports and the introduction by PISA of a scale to measure student wellbeing that includes the same outcomes as outdoor education and social capital. One of the purposes of the research is to provide evidence to our staff on the effect our programs have on a cohort of students and to have evidence to inform and improve Government policy in regards to Outdoor Education and Education more broadly.

Full paper available in proceedings



Keynote Speaker Biographies

Peter Martin:

Associate Professor Peter Martin (PhD)is Deputy Dean of Health Sciences at Federation University, Australia. Peter's outdoor education career started as a secondary school teacher in 1979. He has worked in university Outdoor Education since 1985.

John Quay:

John Quay taught outdoor education in Victorian schools for ten years, first with the Outdoor Education Group and then with St Paul's Anglican Grammar School. During part of this time he served as president of the Victorian Outdoor Education Association, completed a Graduate Diploma in Educational Administration, a Postgraduate Diploma in Student Wellbeing and a Master of Education, where he researched student caring as this occurs in both outdoor education and other classes at school. John then began work at the University of Melbourne along with completing his Doctoral studies. His doctoral thesis received the ACHPER (Vic) award for distinction in 2012. It focused on deeper understandings of the connections between experience and education. John continues to work as a senior lecturer at the University of Melbourne, teaching pre-service and in-service teachers as well as researching in a range of areas of interest.

Graham Slaney:

Graham Slaney is a Rural Medical Practitioner and Principal of the Mansfield Medical Clinic in Mansfield Victoria. Graham also works on the ski-fields at the Mt Buller Clinic during the winter – leading him to complete a research project in injury prevention in snowboarders as part of his Masters thesis in Public Health at the University of WA. He has further qualifications in Anaesthetics and Obstetrics, and has been actively involved in medical student and registrar teaching for a number of years. Graham is on the board of the Bogong Regional Training Network and is an enthusiastic partaker of any self-propelled outdoor activity.

Phil Weinstein:

Philip Weinstein is Professor of Ecosystem Health in the Barbara Hardy Institute at the University of South Australia. He holds dual qualifications in ecology (PhD Entomology) and public health medicine (MBBS, FAFPHM). Phil was formerly Professor of Public and Environmental Health at UQ and at UWA, and has over 200 publications on the environmental determinants of health. He was a member of the Board of Review Editors for the Millennium Ecosystem Assessment, served as Co-Chair of the International Medical Geology Association, and remains an enthusiastic teacher.

Concurrent Speaker Biographies

Geoff Adams:

Geoff loves learning and helping others become critical thinkers. Working with other learners and thinkers in Outdoor and Environmental Education at Federation University enables him to explore concepts and processes of learning. In his daily work life, he attempts to bring the outdoors, indoors, using a range of educational settings to encourage people to think differently.

Kylie Agnew-Pointon:

Kylie Agnew-Pointon has been involved in the Outdoor Education field since 1999. Working with Operation Flinders Foundation for the last 5 years has given her the chance to fulfil her passion for Adventure Therapy and develop a follow up program, for young people at risk. Along with her teaching background she has tertiary qualifications in Clinical Rehabilitation and Psychology. Through her studies in psychology Kylie has examined the impact of Adventure Therapy programs on willingness to change behaviour and components of self-forgiveness. in 2012 she was selected for a Winston Churchill Memorial Fellowship to research international best practice in the areas of follow- up, family engagement, indigenous perspectives and links with crime prevention. She is an avid hiker and loves all water sports, especially surfing, kayaking and scuba-diving.

Sandy Allen-Craig & Val Nicholls:

Sandy is the national coordinator of the Outdoor Education Leadership stream for the school of Exercise Science at the Australian Catholic University. Through research and program development she hopes to support outdoor programs that use the outdoors for educational and behaviour change and the development of relationships with the natural world.

Concurrent Speaker Biographies

Val works freelance as a BAT facilitator and educator in Tasmania and Victoria. Her doctorate explored the merit of 'quiet time' within context of a challenged based and activity oriented adventure therapy program.

Anne-Marie Archer:

Anne-Marie Archer - Chief Executive Officer of the Leeuwin Foundation.

Leeuwin II is Western Australia's own Tall Ship, a 3-masted barquentine with over 810 square metres of sail and an overall length of 55 metres. Leeuwin II is a working ship and all participants are expected to be involved in most aspects of ship operations, from sailing, steering and navigating to cleaning the ship and climbing the masts.

Leeuwin operates under the principle of "challenge by choice" - where the level of the challenge is up to each individual. Our 27 years of operation clearly demonstrate that the more each participant is willing to challenge themselves, the more they take away from the experience.

We also run Ultimate Challenge Voyages that are specifically tailored to young people with a disability so they can experience a lifechanging adventure in a safe and supportive environment.

Janice Atkin:

Janice Atkin is the Senior Project Officer, Health and Physical Education at the Ausralian Curriculum, Reporting and Assessment Authority (ACARA). She has been responsible for project managing the writing of the Australian Curriculum for Health and Physical Education. She has previously worked for the Inspire Foundation and the NSW Department of Education and Training, and is a winner of the Doug Scholz Award for outstanding contribution to the Health and Physical Education Profession.

David Atkins:

David Atkins B.A. (Outdoor Education), Dip. Ed (Sec). Completed studies in 2001 at La Trobe Uni - Bendigo. Head of Outdoor Education at Loyola College 2003, De La Salle College 2005-2007, St Philip's College 2010 to Present. Spent 2009.10 season as Field Training Officer in Antarctica with Australian Antarctic Division. Volunteer Ski Patrol at Mt Buller six seasons although a bit hard from Alice Springs!

Paul Barber:

With a passion for the environment and adventure, I completed an Associate Diploma in Natural Resource Management in Ballarat as a platform for a career as a Park Ranger. This lead to employment with Parks Victoria and the completion of a Bachelor of Applied Science in Parks Recreation and Heritage at Charles Sturt University in Albury. Specialising in wildlife ecology and working in many of Victoria's National Parks I developed a passion for teaching people about our natural world, leading to a Bachelor of Teaching – Primary and Secondary at Deakin University and a career change, eventually becoming the Outdoor Education Coordinator of a large school in inner Melbourne in 2003. As part of my ongoing professional development and passion for lifelong learning, I am currently undertaking a Minor Thesis research project as part of a Master of Education Degree at Victoria University, with the intent of improved practice, consolidated understandings and development of holistic learning through Outdoor Education.

Lucas Bester:

Lucas Bester taught outdoor education in primary and secondary schools for more than a decade before joining La Trobe University's Outdoor and Environmental Education department in 2011. He has since been teaching undergraduates various aspects of outdoor education curriculum, particularly focussing on teaching strategies and pedagogies for outdoor educators.

Mike Bezant:

Mike's passion for supporting young people and for experiential education has seen him work in the community and outdoor sectors for the last 13 years. Mike currently works for The Northern Outlook in Far North Queensland, training and supporting youth agencies and their staff to improve their developmental and/or therapeutic programs through small group work and Adventure Based Learning. Mike started his outdoor life in WA, working in a range of private and state schools delivering sequential outdoor education programs, as well as working and volunteering in the community sector supporting young people at-risk. Outside of work Mike loves to travel, camp, share adventures, and eat yummy food with his wife and two children.


Concurrent Speaker Biographies

Roger Blackwell:

I started my journey in Outdoor Education Teaching at Underdale CAE, where I obtained my BEd. From here I taught at Murrayville Secondary College in PE and OE for 5 years. Then I gained a position at Bogong Outdoor Education Centre where I have been for 20 years in either a teaching, leading teacher, assistant principal or campus principal role. I have recently completed my masters in education (school leadership)at Monash university.

Andrew Brookes:

Dr. Andrew Brookes is a research-intensive Associate Professor in the Department of Outdoor and Environmental Education, La Trobe University.

Stephen Carter:

Stephen Carter is currently the Coordinator of the Graham (Polly) Farmer Foundation project(GPFF) in Port Augusta. He has lived all but 18 months of his life regional areas of South Australia and Western Australia.

Lives in The Flinders Ranges at Wilmington where he is able to maintain an active outdoor life Rcok Climbing, Bushwalking and Mountain Biking Through the GPFF project he has strong links to the Port Augusta Secondary School and Stephen assists their Outdoor Education Program in Bushwalking Rock Climbing and Kayaking.

Hisyam Che Mat:

Hisyam Che Mat is a Ph.D candidate in the Faculty of Health Sciences at the RMIT University. His Ph.D research focuses on the effect of school camps offered by the special schools on children and adolescents with intellectual disabilities, their families and teachers. He received a BSc. in Forestry Sc (1998) from University Putra Malaysia, Malaysia and a Master of Outdoor and Environmental Education (2008) from the La Trobe University, Bendigo.

Will Dobud:

Will Dobud is a Clinical Social Worker and program director of True North Expeditions, Inc. (TNE), an organisation providing adventure therapy and clinical services for adolescents and families throughout Australia. Will came to Australia in 2009 after working throughout the United States with various adventure therapy programs in Alaska, Arizona, West Virginia and Washington DC. In this time he co-founded 'Potomac Pathways' outside of Washington DC as America's only recognised follow-up and relapse prevention program for adolescents returning home from adventure-based programs. In starting TNE, Will runs 14-day expeditions with groups of adolescents from all corners of Australia. In between those programs, TNE staff provide individual and family therapy sessions, work with schools to improve school performance and offer collaborative solutions for struggling families. TNE's research supported programs and Will's comprehensive approach to empowering a student's strengths and resources is a revitalising look into early interventions for young people.

Adrienne Forsyth:

Adrienne Forsyth is a dietitian, exercise physiologist, and teacher. She is a lecturer at La Trobe University with teaching and research interests in sports and community nutrition.

Nicholas Glover:

Despite dipping his toes in the waters of outdoor recreation back in 1990 at TAFE, it was over a decade seeking alternate life experiences before Nick professionally pursued his love for the outdoors, graduating with a degree in Human movement (sub-maj. Outdoor Education) in 2006. Since that time Nick has worked extensively on outdoor programs for schools and university, corporate development groups, youth-at-risk and young offenders, and guiding eco-tours. In recent years he has been lecturing foundational Outdoor Education leadership at the University of South Australia. In 2013, Nick undertook an honours degree at UniSA, investigating the health and well-being benefits of Green Exercise. In his spare time Nick love's playing outdoors with his wife and two pre-school children.

Natassia Goode:

Natassia is the manager of the ARC funded UPLOADS project. Natassia has six years of experience in applied and experimental research in domains including workplace safety, defence, road transport and emergency management. Her honours and PhD research at the University of Sydney was concerned with how people learn to solve problems in complex, dynamic and uncertain environments. Since graduating, her research has examined the factors that influence human behaviour and decision-making in safety-critical environments.

Concurrent Speaker Biographies

Heather Grenon:

I'm a lecturer at Federation University Australia (formerly University of Ballarat). My research explores ideas of building resilience through experiences in the outdoors - I'd love to hear your thoughts!

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Erica Gurner:

Erica has worked in the community, outdoor and education sectors for over thirteen years with a focus on facilitating nature based and adventure experiences. For eight of those years she has worked in therapeutic environments with both young people and adults. She now provides professional development to educators and sustainability workers as well as therapeutic outdoor experiences within community mental health through her own business HumaNature Connect.

Tim Harley:

Tim Harley has worked as an outdoor teacher and instructor in Western Australia, Tasmania and New South Wales in a variety of commercial and educational institutions since 1993. He is currently employed at Hale School in the Outdoor Education department (7 yrs) where he manages the in-house catering for boys Yrs 5-12 as a significant component of that programme. Tim's passion for Outdoor Education includes mountain biking, stand up paddle and play boating. In 2010 he co-presented at NOEC conference in Fremantle on the introduction of surf kayaking into schools programmes. Most recently, Tim has become engaged in the pitfalls and planning of expedition catering and convened a gathering of WARGOE representatives on the topic of catering for school camps, allergies and related systems.

Murray Henstock:

Murray Henstock received his Masters of Teaching in 2011 and completed an honours research project in 2013 entitled "The Effects of Sail Training on Engagement with Learning and Education".

Murray is a full time science teacher at Wiley Park Girls High in Sydney's south west but prior to teaching was the Youth Development and Voyage Coordinator for the Young Endeavour Youth Scheme. There he was responsible for enhancing and expanding the current youth development program for STS Young Endeavour.

Murray is a long standing member of the Australian Sail Training Association with his main focus being in the areas of education and youth development.

In addition to his work at the Young Endeavour Youth Scheme Murray has participated as a researcher in the Sail Training International and University of Edinburgh study into the effects and benefits of sail training on individuals (released in 2007), has created the Generic Youth Development Program to be adapted for a wide range of sail training vessels and has developed facilitation tools and techniques for the delivery of these programs at sea.

Murray is an accomplished public speaker and presenter having presented at numerous international conferences including the 2008 Sail Training International and American Sail Training Association's combined conference in Halifax NS, Canada on the "Characteristics of a Successful Youth Development Program". He has also participated as a steering group member for the Sail Training International Self Assessment Toolkit (2009-2011) assisting in the associated presentations at conferences in Istanbul, Turkey (2009) and Stavanger, Norway (2010). Murray presented a background on educational principals and how they relate to trainee learning aboard tall ships entitled "How Trainees Learn" in Toulon, France (2011) and in 2013 Murray presented once again at the Sail Training International conference in Aalborg, Denmark on "Teachers @ Sea: Inspiring teachers to Inspire Students" followed by a presentation of his Master's Honours research at the 6th International Outdoor Education Research Conference in Dunedin, New Zealand.

In his free time Murray is developing a youth development boat building and sailing program to be instigated as a student extra-curricular activity with links to the Australian curriculum.

Concurrent Speaker Biographies

Peter Holmes:

Pete Holmes has been a teaching people to cross country ski, after gaining his level 1 qualification since 1992. He has worked both for Swinburne TAFE and OEG coordinating and delivering the Certificate IV and Diploma of Outdoor Recreation. He now lectures at La Trobe University where he teaches several ideas, and one of those being is " how should we teach skiing?" Pete is an avid climber and back country skier.

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Maarten Immink:

Dr Maarten A. Immink holds a doctorate in motor behaviour from Texas A&M University, U.S.A. and has over 20 years of experience studying, researching and teaching the physiological and psychological basis of human movement learning and performance. Currently, he is Senior Lecturer, Motor Learning and Control within the School of Health Sciences at the University of South Australia. Dr. Immink is an associate researcher with the Sansom Institute for Health Science Research and the Centre for Sleep Research. He is also a research member of the Neuroscience at UniSA and Exercise for Health and Human Performance research groups. Part of his research explores the basic science behind factors that impact skilled movement learning and performance including fatigue, arousal and affective states. He also investigates how mind-body training, including mindfulness meditation, mediates the influence of these factors. His applied research involves investigating the efficacy of yoga and meditation based interventions in the management of neurological motor impairments including stroke and acquired brain injury.

Tony Keeble:

Tony Keeble is the Principal of Bogong Outdoor Education Centre, a Government School in Victoria. Tony has worked in a number of Outdoor Education roles since 1987 including positions abroad, at LaTrobe University, and a variety of educational workplaces including private outdoor providers and Government Schools. More recently Tony has been the Principal of two Indigenous schools in the Kimberley Region of Western Australia before moving back to the Upper Kiewa Valley as Principal of Mount Beauty Primary School. Tony started his current role as Principal at BOEC in June of 2011.

Amanda Lloyd:

Amanda Lloyd is a Primary School teacher actively involved in implementing place- based outdoor learning within the curriculum. Her current PhD research is focused on a case study with Year 1 children completing curriculum based outdoor learning programs. She is the facilitator of the Nature Educators Network for the Australian Association of Environmental Education.

Marian Crossley is an Aboriginal woman working as a Indigenous Education Officer whilst completing her Bachelor of Education. She works with the community to offer the students rich cultural experiences.

Amanda and Marian work with a team at their school to continually get their students educated in the outdoors.

Alistair McArthur:

Alistair McArthur has spent the majority of his working life in the Outdoor Education sector. He has had a strong focus on Adventure Based Experiential Learning (ABEL). He has worked as an Instructor, Chief Instructor, Course Director, Program Director, Consultant and Executive Director at OUTWARD BOUND Schools in the UK, Australia, USA and Canada.

He has had considerable Risk Management experience within Outward Bound Schools and also as Leader of a British Antarctic Survey Expedition for two years where he travelled over 2,500 kilometres by dog sledge.

Alistair is a former President of the Victorian Outdoor Education Association (VOEA). He served on the Board of the Outdoor Education Group (OEG) for nine years and advises Outdoor Education programs throughout Australia.

Concurrent Speaker Biographies

Beau Miles:

Beau's background in outdoor education has led to a critical approach to 'activity histories' within different forms of outdoor life. As an expeditioner and documentary filmmaker, Beau is also interested in the moving image, evolving into research using a mixed methods approach of text and visual ethnography.

As a practitioner, simplifying complex inventories of equipment and logistics through getting back to a simpler, more holistic practice is also very important to Beau's programming and teaching role. Initiating a skills program where students make their own paddles to journey down the Murray River hopes to make more obvious the connections we have with our natural world.

Marcus Morse:

Dr Marcus Morse is a lecturer in Outdoor and Environmental Education at La Trobe University, Australia. He has extensive experience guiding and teaching outdoor and environmental education in Australia and overseas. Marcus' research interests are in the areas of facilitation, meaning making and peoples' experience of nature.

Brendon Munge:

Brendon is a lecturer in the Outdoor & Environmental Education Department at La Trobe University. He teaches introductory bushwalking skills and knowledge to first year students and extend bushwalking skills and knowledge for seconds year students as a component of either their 10 or 20 day walk in the Australia Alps. Brendon is also the current President of the Victorian Outdoor Education Association and board member of Outdoor Education Australia

Mark Munnings, Rob Lans & Brett Stanford:

Mark Munnings is a life-long educator who loves nothing more than taking his own kids for a journey through a wild, natural environment. He's taken this love of sharing wild places into his work in Outdoor Education. He has been working and playing through Outdoor Education for the past 17 years. He's been a freelance Outdoor Ed worker, worked with at risk youth, managed a centre, worked as a Senior Outdoor Education Teacher in the UK and currently at Maroon OEC.

Robert Lans has been a teacher for many years. He trained as a primary teacher and has taught in small schools in remote and regional areas as well as larger schools and international schools. He has been a principal in a small school in NSW as well as an international school in India. He has been an outdoor education teacher for 5 years. During this time he has been involved in curriculum work, including the materials we will look at today.

Brett Stanford is a passionate Outdoor education with over 10 years' experience in working with young people outdoors in both the private and government sector. Brett is always willing to put new ideas into practice. Brett is returning to South Australia after spending the past 10 years based in Queensland. He is looking forward to sharing some stories about his own experience in delivering the MOEC curriculum in the field.

Ron Nicholls:

Ron Nicholls is a Lecturer and Open Universities Coordinator in the David Unaipon College of Indigenous Education and Research at the University of South Australia. His research focuses on global and national Indigenous issues, alternative worldviews, experiential learning, and peace studies. Ron has also worked as a professional musician and from 1980-1995 held the position of Lecturer in Music at the Centre of Aboriginal Studies in Music, University of Adelaide. His recent publications and presentations have focussed on the necessity of forging innovative ways of being and the movement toward a post-enlightenment world.

Malcolm Nicolson:

Malcolm Nicolson has worked as a teacher, curriculum coordinator and Assistant Principal at Somers School Camp (Victoria) for 37 years. He graduated from The University of Melbourne with a Master of Education (research) degree in 2011. He also holds a Bachelor of Arts, Diploma of Primary Teaching, Diploma of Outdoor Recreation and Diploma of Sustainability.

Concurrent Speaker Biographies

Scott Polley, RN, Bed (PE&Sc), Med, PhD candidate

Scott has lectured in Outdoor Education at University of South Australia since 1997. He is the current Program Director of the Bachelor of Applied Science (Human Movement and Health Studies).

Tony Robinson & David Low:

Tony Robinson is a teacher at Gilson College and has recently completed his doctoral studies at La Trobe University on the theme of an experiential education program and its influence on the learning engagement of year 9 students. He is passionate about finding ways to make the learning experience of young adolescents more enjoyable and engaging.

David Low is a lecturer in Outdoor Education and Outdoor Recreation at Avondale College. He completed his Masters degree, focusing on outdoor leadership in Outdoor Education, at Griffith University. Besides full-time teaching he is working on his doctoral studies in the area of facilitation methods for outdoor and adventure participants.

Russell Shem:

Russell Shem has spent the past 18 years working with Year 9 students in residential settings. Russell has been fortunate to have worked at a number of independent schools who have established specific Year 9 residential campuses in Victoria. He spent a year at Lauriston Girls School's Howqua Campus, before working at Geelong Grammar's Timbertop Campus near Mansfield, where he and his family spent 6 years. He achieved one of his personal goals to work as the Head of Outdoor Education at Timbertop which he held for two years. Following this, he worked at Wesley College's Clunes Campus near Ballarat for 3 years, before being appointed to the position of Campus Principal at The Alpine School, a Victorian State Government school in 2006 and has been there ever since. He is now in his 9th year with The Alpine School and remains passionate about his role and position.

Darren Smith:

Darren Smith is a passionate educator who believes disadvantaged young people's lives can be changed through the outdoors. He currently delivers a Certificate II Outdoor Recreation course and teaches work education to Year 11 and 12 Aboriginal students boarding at Wongutha Christian Aboriginal Parent-directed School (Esperance, Western Australia).

Alistair Stewart:

Dr. Alistair Stewart is the current Head of Department, Outdoor & Environmental Education, at La Trobe University. His teaching and research interests include the development of place responsive pedagogy, particularly using canoeing and bushwalking.

Glyn Thomas:

Glyn Thomas has taught and researched in educational contexts for almost 30 years, including 12 years in tertiary outdoor education. His particular interests lie in the areas of experiential education, outdoor leadership, and facilitation.

Jane Townsend:

Jane is the Head of Faculty of Physical Education and Health at Mount Maunganui College. She is also currently studying towards a Masters degree in Sport and Leisure studies at the University of Waikato. Jane's research will examine the impact of a Place-responsive approach on Year Twelve outdoor education students, particularly the impact on Maori students. She is also an active member, Rookies coach and instructor at Omanu Surf Lifesaving club.

Jason Tyndall:

Jason Tyndall, NRM Education, Coordinator Southern Adelaide, Natural Resources Adelaide & Mt Lofty Ranges.

Concurrent Speaker Biographies

Brian Wattchow:

Brian is a Senior Lecturer in Outdoor Education in the Faculty of Education, Monash University. He has worked in Australian outdoor education at secondary and tertiary levels for thirty years and has published extensively on outdoor pedagogy, sense of place and land identity. In 2010 he completed a 2500 km canoe descent of River Murray and published his first collection of poetry titled The song of the wounded river (Ginninderra Press, 2010). He recently co-authored A pedagogy of place: Outdoor education for a changing world (Monash University Publishing, 2011) and has collaborated with colleagues to edit and author a new book titled The socio-ecological educator: A 21st Century renewal of sport, physical, health, environment and outdoor education (Springer, 2014).

Johne Westersjo:

Assistant Professor Johne Westersjo has lectured at the Agder University College, in Kristiansand, at the faculty of Health and Sport Norway for over 22 years. He is the academic supervisor of the Norwegian and International Outdoor Programme at AUC. He teaches Friluftsliv/Outdoors and specialises in winter mountaineering, pedagogy and didactics.

About Adelaide

Adelaide is the 20 minute city, with walking, climbing, kayaking, swimming, snorkeling, mountain biking all within easy access. But for those that are seeking a more mellow time, it is an affordable place to live and visit, with great food and wine for all palates. It has plenty of parks, bikeways, walking trails, gardens and beaches for you and your families green and blue therapy!

The conference venue is on the edge of the East Parklands, within walking or easy biking distance to a range of accommodation choices from ranging from camping, to budget rooms right up to more salubrious abodes.

If you can make some time to escape after the conference, you could be rewarded with the opportunity to explore nearby Adelaide Hills, Fleurieu Peninsula, Barossa Valley and a little bit further away the Limestone Coast and Flinders Ranges to name a few.

Venue

The venue is Prince Alfred College, one of Adelaide's oldest private boys schools. To view a map of the campus please click here.

The College is situated on the edge of the East Parklands, within 5-10 minute walking or easy biking distance the centre of Adelaide, and to a range of accommodation choices from ranging from camping, to budget rooms right up to more salubrious abodes.

Social Program

Casual BBQ

Date: Monday 14th April 2014

Venue: Prince Alfred College

Time: 6pm

Price: included in registration fee

Conference Dinner

Date: Tuesday 15th April 2014

Venue: Prince Alfred College

Time: 6pm

Price: $40.00 inclusive of a 3 course meal, drinks will be an additional cost

Pre-Conference Activities

A2 Kangaroo Island Tour

12 - 13 April 2014

Wilderness Escape Adventures

Presenter: Luke Duncan

To help celebrate the 2014 Australian Outdoor Educators Conference to be held in South Australia, Wilderness Escape in association with OEASA is offering conference attendees a chance to experience one of SA's top tourist icons, Kangaroo Island.

Participants will travel to the island early Saturday morning and spend the day making our way across to the island's west end before returning the following afternoon. Along the way we visit; famous picture

Pre-Conference Activities

perfect beaches, heritage listed sand dunes, Rustic Blue Café Gallery for afternoon tea. Here you can sample some local hospitality, observe local wildlife from the protected deck off of the modern/rustic gallery. Inside you will able to see and purchase amazing pieces of Australian Fine Art and Objects by unique artists. The following day we walk the Snake Lagoon hike, following Rocky River to its mouth at the Southern Ocean, before returning to visit the other natural wonders within Flinders Chase National Park.

Your Accommodation while on Kangaroo Island will be at Flinders Chase Farm. Set in a picturesque Australian bush setting, and located at the remote west end of Kangaroo Island, the property is a working farm, running sheep, cattle and cropping potatoes. The accommodation is surrounded by well-maintained gardens featuring Australian native plants, creating a relaxed enjoyable ambience. After settling in, we will enjoy a gourmet BBQ and spend the evening relaxing around the camp fire. The night time also provides the opportunity to spot some of the farm's native inhabitants, including wallabies, owls and echidnas.

The Kangaroo Island show case tour will involve visiting some of the island's natural wonders as well as experiencing and sampling some of the island's world class produce. From the perfect sands of iconic Vivonne Bay, to the untouched ancient wilderness of Flinders Chase NP. The tour will showcase some of the best the island has to offer, guaranteed to leave every participant wanting more!

Small dorm accommodation will be provided. This tour can only accommodate 22 passengers, so places are limited.

To register: Contact Tegan McClean - noec14@achpersa.com.au or +61 8 8363 5700

Cost: $450 + GST

Please note: This tour is based on a minimum of 12 paying passengers. If this minimum is not reached this tour may be cancelled and any payments will be refunded.

A3 Mangrove and Dolphin Sanctuary Ecotour

Sunday, 13 April - 9.30am - 12.30pm

Adventure Kayaking

Presenter: Phil Doddridge

Tour departs from Garden Island Reserve, Garden Island Road, Gillman. This is 30 minutes from the Adelaide CBD. Transport from CBD available.

The tour takes in the mangrove forests, creeks and ships graveyard of the area, with a strong likelihood of meeting some of the areas 30 resident bottle nose dolphins.

The tour will be conducted by the owner of AdventureKayaking.com Phil Doddridge, an ex Outdoor Education teacher who has over 30 years experience in the area. A must for those looking for a great morning paddle.

"The Adelaide Dolphin Sanctuary is part of the Port River Estuary and is one of Adelaide's "secret spots". It is an area of incredible beauty, a "wetland of national significance", best explored by kayak! The sheltered, mangrove lined creeks of this area are home to a fascinating array of marine life, birds and the Port River Dolphins. The Ship's Graveyard is another unique feature of this area with over 20 "ship wrecks" to explore. Our tours are conducted in one and 2 person kayaks are very comfortable and easy to use with rudders for steering. No prior experience of kayaking is required, just a sense of adventure! The tour is of approximately 3 hours duration."

To register: For more details visit www.adventurekayak.com.au - to book please contact: Phillip Doddridge, pdodds59@bigpond.com

Cost: $50 per person (normally $70)

(Note: This tour can be combined with the Canoe SA On Water Risk Management Workshop that will also be held at Garden Island commencing at 1.30pm)

Pre-Conference Activities

A1 Permangk Interpretive Tour

Sunday, 13 April - 9.00am - 2.00pm

Presenter: Ivan Tiwu Copley, OAM

Pick up at Prince Alfred College Red Centre at 9am

Aboriginal perspectives of the Adelaide Hills.

Presented by Permangk man Ivan Tiwu Copley OAM, this workshop takes in significant sites in the Adelaide Hills near Springton and other nearby areas. The workshop will include a discussion of the significance of the Adelaide Hills to the Permangk, visits to significant art sites and general discussion of the role of Aboriginal culture in taking care of Country.

What: A moving workshop, starting at Cudlee Creek, and going by bus to various sites near Springton. A pick up and drop off to Adelaide can also be arranged.

What you need to bring: Clothing appropriate for the day, comfortable walking shoes, hat, sunscreen, drink and snacks. Lunch is provided.

To register: Contact Tegan McClean - noec14@achpersa.com.au or +61 8 8363 5700.

Cost: $50 to cover lunch, transport and donation to Indigenous charity.

A4 Australian Canoeing Teaching and Learning Instructor Workshop

Sunday, 13 April - 1.30pm - 5.00pm

Canoe South Australia

Presenter: Jim Townsend

Held at Garden Island, 30 minutes from the Adelaide CBD.

Managing risks on water for kayaking

This is a workshop using scenarios to explore incident response on water. The workshop is geared towards current instructors, but trainee instructors welcome. Kayaks and equipment are available, or you can bring your own.

The workshop takes place at Garden Island, near Port Adelaide. You will need clothing suitable for getting wet and kayaking on the day.

This workshop can follow on from the Dolphin Sanctuary tour, with a quick visit to nearby Bakery in between!

To register: contact Ian at Canoe SA - canoesa1@canoesa.asn.au

Cost: N/A

Pre-Conference Activities

A5 Top Rope Climbing Rescue Workshop

Sunday, 13 April - 9.00am - 2.00pm

SAREA

Presenters: Duncan Henderson and Chris Hodgson

Meet at the Red Centre Prince Alfred College at 8.30 am or at 'Top Gate' at Morialta at 9am.

A workshop examining recovery solutions for a range of possible scenarios in a top rope climbing situation. Will be held at Nearby Morialta Conservation Park, approximately 15 minutes drive from Prince Alfred College.

This workshop is not designed to introduce people to climbing, but is designed for those teaching and instructing to share, develop and practice strategies in a top rope setting to manage rope related incidents.

All climbing gear supplied/available. Participants are welcome to bring their own provided meets standard safety guidelines. Participants will need to bring enclosed footwear, clothing suitable for activities, water and snacks.

Due to ratios and equipment availability, places are strictly limited to 8.

To register: Contact Tegan McClean - noec14@achpersa.com.au or +61 8 8363 5700.

Cost: N/A

A6 Outdoor Education Australia Meeting

Sunday, 13 April - 2.00pm - 5.00pm

Prince Alfred College

This meeting is for representatives to Outdoor Education Australia, but all are welcome.

To register: Contact Tegan McClean - noec14@achpersa.com.au or +61 8 8363 5700.

A7 Registration and drinks

Sunday, 13 April - 5.00pm - 6.30pm

Prince Alfred College

A chance to register early, share a pre-dinner wine or softie and catch up with old and new friends.

To register: via the online registration or contact Tegan McClean - noec14@achpersa.com.au

A8 Presenter Meeting

Sunday, 13 April - 5.30pm - 6.00pm

Prince Alfred College

A brief meeting with presenters to orientate to facilities, outline OHS&W issues, introduce to support team and meet other presenters. Presentations can be loaded to the laptop for download by conference participants at this time.

A9 Small Group Meals

Sunday, 13 April - 6.30pm

Meet at PAC

A range of meal options within easy walking distance have been canvassed by OEASA committee, with members meeting and greeting, walking and sharing with those that would like to go one of the nominated casual dining venues. Although deals have been organised where possible, the cost of the meal is met by participants and not included in the conference fee. Neat casual attire applies for most venues.

Conference Activities & Site Visits

A10 Mindful Movement

Tuesday, 15 April - 7.30am - 8.30 am at Prince Alfred College

Presenter: Fiona Glover

A light movement session to stretch and mentally get ready for the day. Yoga mats supplied, but you are welcome to bring your own.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions) or at the Registration Desk

A11 Kaurna Walk

Tuesday 15 April, 7.30am - 8.30 am at Prince Alfred College

Presenter: David Edwards, Aberfoyle Park High School

A brisk walk along linear park to parts of the Kaurna walking trail that takes in significant sites to Aboriginal people of the Adelaide central area. Participants will need walking clothing suitable for the day and bring own snacks and water.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions) or at the Registration Desk

A12 Linear Park Cycle

Tuesday 15 April, 7.30am - 8.30 am at Prince Alfred College

Presenter: Jack Young, Bike About

A leisurely social ride along Linear Park at the nearby Torrens River. After negotiating a small amount of city traffic Linear Park is a walking and cycling trail that follows the Torrens River from the hills to the beach. A small section of this trail will be ridden. Bikes and helmets supplied.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions) or at the Registration Desk

A13 Arbury Park Visit

Tuesday, 15 April - 2.00pm - 5.00pm

Presenter: David Doherty, Arbury Park School

Meet at Prince Alfred College

A short drive to nearby Arbury Park Outdoor School at Bridgewater. This state school hosts mainly primary aged students from the state for 2.5 days. The current Principal, David Doherty will take the group for a short walk around the property and highlight how they teach aspects of the current state and future National Curriculum. A light snack and coffee will be provided from the kitchen.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

Conference Activities & Site Visits

A14 Native Gardens Visit

Tuesday, 15 April - 2.00pm - 4.00pm

Presenter: Loreto College

Meet at Prince Alfred College

A short drive to nearby Loretto College where staff and students from the school will share their efforts to engage students in propagating and maintaining a native garden on school grounds. Participants will need to wear clothing suitable for the conditions and a short walk.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A15 Part A Teaching Rolling Workshop

Tuesday, 15 April - 2.00pm - 3.30pm at PAC pool

Presenter: Phil Doddridge, Canoe South Australia

A free 1.5 hour workshop for those that are teaching or are planning to teach rolling. A range of models are presented, along with coaching tips and modifications to suit different clients. It will be an opportunity to share ideas as well as gain new knowledge.

The workshop is held indoors at the Prince Alfred College pool, and participants will require suitable swimming attire. Kayaks and equipment provided by UniSA.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A15 Part B Learn to Roll workshop

Tuesday, 15 April - 3.30pm - 5.00pm at PAC pool

Presenter: Phil Doddridge, Canoe South Australia

For those that would like to get their kayak roll going, a free 1.5 hour fun workshop in the pool with Phil and others to develop foundational skills and motor patterns for the roll.

The workshop is held indoors at the Prince Alfred College pool, and participants will require suitable swimming attire. Kayaks and equipment provided by UniSA.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A16 Mountain Bike Introductory Skills and Safety Workshop

Tuesday, 15 April - 2.00pm - 5.00pm

Presenter: Wilderness Escape

Suitable for novices and experienced riders looking to manage young people safely on bikes. A workshop exploring essential knowledge and ideas for leaders of young people engaging in Mountain Bike journeys. Wilderness Escape will share their experience of many year of working with young people and bikes. The workshop focuses on leadership and group management strategies and skills, and methods of teaching young people to develop foundational safety skills for Mountain Biking. Bikes and helmets supplied. Will be accompanied by a short ride to nearby Linear Park.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

Conference Activities & Site Visits

A17 Mountain Bike Cleland Ride

Tuesday, 15 April - 2.00pm - 5.00pm

Presenter: Jack Young, Bike About

Meet at Prince Alfred College

Suitable for more experienced riders a fun filled ride through nearby Cleland National Park. Participants will be transported up the hill, and ride down through Cleland National Park's newly opened trails for a brief stop, and the continue through other hills trails back to Prince Alfred College. High quality bikes and helmets supplied. Wear clothing suitable for the activity, and bring a drink and snack.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A18 Australian Tertiary Outdoor Education Network Meeting

Tuesday, 15 April - 2.00pm - 5.00pm

Facilitator: Scott Polley

Meet at Prince Alfred College. Teleconference facilities available.

A meeting of Australian Tertiary Outdoor Educators to discuss common issues and strategies to move forward. Agenda includes NOLRS, Australian Journal, Communication and other business. All welcome.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A24 Vertical Reality Indoor Climbing Session

Tuesday, 15 April - 2.00pm - 5.00pm. Meet at Prince Alfred College.

Presenters: Mike Meredith and Patrick Heppner

A short drive to the Vertical Reality climbing Gym at Holden Hill for those that are seeking a less cerebral workout!

A19 Australian Curriculum Forum

Tuesday, 15 April - 5.00pm - 6.00pm at Prince Alfred College

Facilitator: Janice Atkin with the Outdoor Education Australia writing team

The purpose of the forum is to gather initial feedback on the draft curriculum guides to deliver Outdoor Education within the Australian National Curriculum. Members of the writing team will be there to hear from the audience their thoughts and ideas.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

Conference Activities & Site Visits

A20 Mindfulness Practical

Wednesday, 16 April - 7.30am - 8.30 am at Prince Alfred College

Presenter: Doctor Maarten Immink, University of South Australia

A practical activity that introduces participants to the concept of mindfulness as an approach to support learning, engagement and wellness. Yoga mats will be supplied or bring your own.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A21 Kaurna Walk

Wednesday, 16 April - 7.30am - 8.30am at Prince Alfred College

Presenter: David Edwards, Aberfoyle Park High School

A brisk walk along linear park to parts of the Kaurna walking trail that takes in significant sites to Aboriginal people of the Adelaide central area. Participants will need walking clothing suitable for the day and bring own snacks and water. Register with conference organisers.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

A22 Linear Park Cycle

Wednesday, 16 April - 7.30am - 8.30am at Prince Alfred College

Presenter: Wilderness Escape Adventures

A leisurely social ride along Linear Park at the nearby Torrens River. After negotiating a small amount of city traffic Linear Park is a walking and cycling trail that follows the Torrens River from the hills to the beach. A small section of this trail will be ridden. Bikes and helmets supplied. Booking with conference organisers.

To register: via the online registration - session choices section (if you have already registered a link will be sent for you to select your sessions)

Outdoor Education. It's in our Nature.

Welcome to the 18th National Outdoor Education Conference Proceedings.

It is with a great deal of gratitude that the Outdoor Education community of Australia thanks the authors for their time, inspiration and hard work in writing these documents. They help to provide a space for presenters to provide additional detail not possible in a 50 minute presentation, a resource for all, a stimulus for improvement and change in practice, and a historical record of changing ideas in the Australian Outdoor Education landscape.

These proceedings are not peer reviewed. They have been checked that the content contributes to the field of Outdoor Education, and that any claims made have a reasoned argument. Minor corrections may have been made to the author's orginal submission for consistency in presentation. References, referencing style and originality of content have not been checked. Peer reviewed articles can be found in Journals such as the Australian Journal of Outdoor Education, the Journal of Outdoor and Adventure Learning and the Journal of Experiential Education among others. Some of these articles will be preliminary versions of papers that will end up in such journals.

These papers are reproduced here in good faith, but Outdoor Education Australia does not take any responsibility for the opinions or the authenticity of the content.

What is the Outdoor Education curriculum in years 7-10 in secondary school?

Paul Barber

Introduction.

The purpose of this paper is to describe research into the Outdoor Education curriculum in years' seven to ten in a secondary school, to explore links between Outdoor Education and other learning areas, and to increase understandings of Outdoor Education and how it fits within the curriculum context of a secondary school.

Context.

The participating school is a large independent school in the inner Western suburbs of Melbourne. It is an inclusive school with high cultural diversity and fifty eight languages spoken. At the participating school, Outdoor Education existed in some form or another for approximately thirty years and has evolved over this time to become is a sequential program for all students from year seven through to year ten. The program is viewed as part of the core curriculum and there are many links with other learning areas although they are not explicit or documented.

Historically Outdoor Education has been regarded as a branch of the Physical Education learning area although as a learning area, Outdoor Education has a unique body of knowledge. In Victoria, Outdoor Education is offered in years eleven and twelve as a VCE subject under the title of Outdoor and Environmental studies although there is no formally recognised curriculum for years seven to ten in secondary school. This means that senior students are coming to the subject with differing understandings and expectations of Outdoor Education. Preston and Griffiths (2004) along with Brookes (2002) acknowledge that although generally regarded as a branch of sports based Physical Education, Outdoor Education, with its focus on experiential learning, is well placed to incorporate other learning areas, environmental science being an obvious direction. This relationship is often referred to in theory but its inclusion in practice has never really been made explicit (Bucknell & Mannion 2006) (Martin 2008) (Parkin 1998) (Preston & Griffiths 2004).

The role of curriculum in schools.

Curriculum in schools should provide guidelines for educational content and a framework for the sequencing of learning programs. 'Every pedagogic practice must have sequencing rules, and these sequencing rules will imply pacing rules. Pacing is the rate of expected acquisition of the sequencing rules, that is, how much you have to learn in a given time' (Bernstein 2003).

The object of curriculum is thought of as a thing to be taught, learned or transferred. The action of curriculum is a broader process of enacting what is mandated or planned, in light of the contingencies of practice. That is, the learners matter, the teacher matters, the context matters. These things combined form the curriculum (Churchill et.al 2011).

Holistic learning.

Holistic education is a form of transformative learning, based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to humanitarian values such as compassion and peace. What distinguishes holistic education from other forms of education are its goals, its attention to experiential learning, and the significance that it places on relationships and primary human values within the learning environment. The philosophy of holistic learning emerged as a response to fragmented and disconnected learning as well as challenges related to globalisation, cultural disintegration and ecological decline (Miller 2005).

Holistic education aims to make interdisciplinary connections in learning as opposed to the fragmented forms of learning offered by traditional disciplinary practices. Holistic educators argue that who the learners are, what they know, how they know it, and how they act in the world are not separate elements, but reflect the complex integration of life and the world beyond school (Forbes & Martin 2003). Life experience is holistic therefore learning should be holistic. Holistic learning processes promote and support *reflection, expression, experience, discovery, active participation, imagination, communication, alternative perspectives* and *social and emotional learning.* A typical holistic learning sequence consists of self-reflection, self-respect, self-esteem, resilience, social literacy, relationships, challenge, aesthetics and an appreciation of life and environments. This is in contrast with traditional approaches to curriculum where disciplinary knowledge drives the curriculum and lessons are sequenced in ways that allow students to develop conceptual understanding in a highly structured and cumulative manner.

Outdoor Education as a branch of the Health and Physical Education learning area.

Historically, the field of Outdoor Education has been generally recognized as a branch of Physical Education (Martin 2008). The Australian Council of Health, Physical Education and Recreation (ACHPER)'s view of outdoor education frames Outdoor Education as a minor activity subset of Health and Physical Education curriculum rather than something more diverse and alternatively focussed (Martin 2008a).This is a narrow view of Outdoor Education as there is so much more incorporated in Outdoor Education than simply the Health and Physical Education component. The practical nature and natural settings for many Outdoor Education programs are well positioned to offer opportunities for personal learning, life-skills, social and emotional learning as well as sustainability, indigenous education and environmental studies.

What is Outdoor Education in the modern school?

One of the major roles of Outdoor Education should be to provide all school students with formative direct experiences outdoors (Martin 2008). This idea from Peter Martin is a common conception among Outdoor Education facilitators and is well supported by Andrews Brookes' paper *Lost in the Australian Bush: Outdoor Education as curriculum*, with statements such as 'school-based knowledge of the bush is not equivalent to personal experience' (Brookes 2002).

Danny Parkin (1998) provides a holistic interpretation of Outdoor Education, identifying and describing what he believes to be its six essential characteristics.

1- It occurs in the out-of-doors;

2- It has participants directly involved in the activity;

3- It involves the interpretation of original objects;

4- It defines relationships rather than reciting individual, apparently isolated facts;

5- It involves as many senses as possible;

6- and it invites participation because the activity is perceived as being interesting, challenging or even fun (Parkin 1998).

This perceives Outdoor Education as being experiential, engaging and beyond the realm of the classroom which are characteristics of holistic learning.

The Victorian Curriculum and Assessment Authority (VCAA) , who is governing body of VCE-Outdoor and Environmental Studies in Victoria state that 'knowing, caring and practical competence, when related to human/nature relationships is exactly the province of outdoor education, particularly as it has been articulated in outdoor education curriculum documents at the senior school level in Victoria' (VCAA 2011). This implies that there is a critical thinking aspect to participating in outdoor activities within this context. Students are not just conducting the activities for the sake of the activities themselves, or for physical education purposes, they are required to reflect and analyse their interactions with the activity as well as the environment they are conducting the activity (experiencing) in. Whilst it can be seen that outdoor education aims to facilitate change in the individual, the learner centred, experiential nature of Outdoor Education offers more than the traditional lecture approach to learning, where the flow of information is unidirectional and controlled by the instructor (Parkin 1998).

"*As a process of learning, outdoor education is mostly personal development education*" (Martin 2008a). Although personal development is a reasonable base for Outdoor Education, a deeper understanding of outdoor/natural environments should be sought for more comprehensive, authentic and meaningful learning to occur. The integration of ecoliteracy and traditional ecological knowledge is a suitable way to initiate this type of understanding of the environments which learners are experiencing. Outdoor education is evolving, with many teachers, if not applying eco-literacy, at least being conscious of the need and suitability of environmental content and the integration of the two "subjects". The difference between this integration being successful or not lies with the individual teachers' practices and application of the content/experience.

Research approach:

The central question this research investigated was: What is the Outdoor Education curriculum in years 7-10 in a secondary school? The school was pre-determined by the fact the study was located in the

school I am employed within and had been involved in developing the outdoor education curriculum for more than ten years. The development of three guiding questions assisted in framing the research more clearly.

1. Where does Outdoor Education fit within the schools' curriculum framework?
2. How does Outdoor Education link with other learning areas outside the Health and Physical Education curriculum framework?
3. How can Outdoor Education curriculum be formalised and made explicit within a specific context?

The research has been undertaken as a case study due to the small number of participants and the search for in-depth specific knowledge of a single case. The case study is also appropriate due to the intention of explaining the present circumstance of Outdoor Education curriculum in years seven to ten in secondary school without manipulating it (Yin 2009) or controlling events (Cohen et.al 2007). The suitability of a case study is also supported by Yin (2009) in relation to the full variety of evidence being examined for this research including observations, documents and interviews (Ary et.al 2009) as the process is exploring how events processes and activities are perceived by participants.

There are three data collection components to the research:

1. Ongoing participant observation
2. Document analysis
3. Interviews with relevant stakeholders

Taking the role of participant observation within my workplace provided the opportunity for reflective practice and allowed me to observe and document processes and activities from a new perspective. By analysing the current Outdoor Education program, a deeper understanding and more detailed description of the current state of affairs is being developed. This may provide direction for the integration of other learning areas as well as a base line for the improvement of practice. Document analysis highlights explicit factors relating to the program whereas observation documents the subtleties and less explicit features of the program and interviews providing deep understandings of perceptions of Outdoor Education.

A thematic approach has been taken with data analysis. Observational data has been compared and contrasted with data from curriculum documents as well as interview data. Year level programs and activities have been analysed in relation to the Australian National Curriculum, 21st Century learning objectives and existing curriculum. In the National Curriculum, relationships have been explored in the areas of General Capabilities and AUSVELS. Outdoor Education links with existing curriculum have been analysed in the Humanities, Geography, Civics and Citizenship, Life Skills, Religious Education, Science and Environmental Education learning areas.

Findings.

The Outdoor Education program at this school is viewed as part of the curriculum as an individual learning area. The current Outdoor Education program contains components which are not only valued in Outdoor Education, but the school as a whole. These include community, collaboration, inclusion, and opportunity. In this particular context, Outdoor Education is viewed as a holistic learning experience as a component of not only the schools' curriculum but also the student wellbeing area of the school.

Outdoor Education contains a large range of learning outcomes which are not documented in within the formal curriculum framework. Outdoor Education in this context is an embedded experience which facilitated in situ, providing a challenging and immersive process of learning. Outdoor Education is a field based subject rather than a school based subject, potentially acting as a vehicle to fulfil practical requirements of some learning areas such as Geography and Civics and Citizenship. The Directions 9 component of the schools' Life Skills learning area is undertaken while on school camp as part of the Outdoor Education program. Directions 9 covers seventeen learning areas and through the enrichment program it reaches all areas of the schools' curriculum.

Outdoor Education encompasses a diverse range of learning areas outside the Health and Physical Education curriculum. As a holistic life skills program, the collaborative practical nature of Outdoor Education provides a solid platform to develop pastoral relationships particularly between the students and home room teachers as well as students with other students. These relationships lead to the development of leadership, a sense of community, care and compassion. It also becomes a form of values education that doesn't necessarily get taught in the classroom. These types of social and emotional learning have strong links with Life Skills curriculum, reaching far beyond the scope of Health and Physical Education learning area. At year nine, the Outdoor Education program is holistic and interdisciplinary, balancing physical outdoor recreation activities, sustainability theory and practical environmental action.

How OE curriculum meets the needs of the National Curriculum

Outdoor Education addresses Australian National Curriculum requirements most significantly in areas of General Capabilities, and AUSVELS. As a holistic learning program, it meets the needs of a number of different discipline areas in all year levels.

In relation to general capabilities, Outdoor Education supports literacy through subject specific language, instructions, safety and signage. Information and communication technology capability is addressed through the use of staff and student blogs, mobile phone applications and the internet for research, digital photography as well as the transcription and presentation of Outdoor Education journals at year nine. Critical and creative thinking is facilitated on a number of levels with individual and collaborative activities being undertaken by all students in a diverse range of learning situations. In relation to students reflecting on thinking and processes, Outdoor Education facilitates this with camp reflections across all year levels. The immersive nature of the Outdoor Education program ensures that students experience a development in their personal and social capability by having to communicate

effectively, work collaboratively, make decisions, negotiate and resolve conflict and develop leadership skills in a socially and emotionally intense environment. Building positive relationships by living in a communal situation fosters the development of personal values and attributes such as honesty, resilience, empathy and respect for others and helps to develop students' ethical understanding. In relation to intercultural understanding, students are encouraged to focus on sharing, creating and contesting different cultural perceptions and practices, and develop a critical awareness of the processes of socialisation and representation that shape and maintain cultural differences.

Outdoor Education promotes learning in the AUSVELS cross curriculum priorities; Aboriginal and Torres Strait Islander histories and cultures and Sustainability. Students relate to Aboriginal relationships with wildlife through nature navigation by identifying wildlife with indigenous language. During the Directions 9 Environmental Action Project, students examine indigenous land use and resources and traditional ecological knowledge as well as spirituality and connection with land. This project also incorporates the construction of a bush tucker garden which provides an authentic experience as well as authentic cultural respect. Through an ethic of minimal impact, students at all year levels demonstrate sustainable patterns of living, undertaking actions of recycling, composting and water conservation through the use of tank water and recycled waste water. At year nine, students undertake an environmental action project focusing on sustainability through land management, water conservation, biodiversity and indigenous practices. The practical component of this project is authentic and permanent, requiring the implementation of an actual positive environmental action. This provides student with experience in making decisions about sustainability to help shape a better future. In a holistic sense, Outdoor Education program has great potential to address sustainability and if delivered explicitly at each year level has potential to fulfil sustainability curriculum requirements as part of a whole school vision. Sustainability education through Outdoor education should be a key component of scaffolding for VCE Outdoor and Environmental Studies.

Positive connections between Outdoor Education and the Physical, Personal and Social Learning area have been observed in Civics and Citizenship, Health and Physical Education, Interpersonal Development, Personal Learning, Personal Learning, Communication, Design, Creativity and Technology, Information and Communications Technology and Thinking Processes.

Undertaking outdoor recreational activities students must apply legislative requirement relating to safety as well as implementing teacher-selected methodologies in a curriculum context. At year nine, students explain the different perspectives on some contemporary issues and propose possible solutions to problems. While engaging in research for their Environmental Action Projects, students draw on a range of resources, to articulate and defend their own opinions about political, social and environmental issues in national and global contexts. At all year levels, they use democratic processes when working in groups on class projects and participate in activities to contribute to environmental sustainability and they develop an action plan which demonstrates their knowledge of an environmental issue. Global communities link with community building while on camp. Communal living causes students to develop a knowledge of peer influence and its positive and negative consequences as well as

exploring of a range of strategies for maintaining peer relationships. These factors as well as stewardship for the environment and social justice address civics and citizenship requirements.

Outdoor Education fulfils Health and Physical Education learning outcomes in movement and physical activity curriculum through recreation and adventure activities. Students assume responsibility for their conduct during these activities in which roles are shared and appropriate behaviour displayed. In relation to Health Knowledge and Promotion, all students identify outcomes of risk-taking behaviours and compare and evaluate perceptions of challenge, risk and safety. As the students' progress through their Outdoor Education experiences, they begin to develop understandings of appropriate assertiveness and resilience strategies and the rights and responsibilities associated with developing greater independence.

In relation to Outdoor Education existing as a small sub-set of Health and Physical Education all interview participants expressed that the scope of Outdoor Education encompasses a large and diverse range of learning areas outside Health and Physical Education. Although still closely aligned with principles of the Health and Physical Education an analysis of Outdoor Education curriculum has demonstrated that the scope of Outdoor Education extends well beyond the limitations of the Health and Physical Education learning area.

Spending extended amounts if time with a large group of people in a challenging environment, students demonstrate awareness of complex social conventions, behaving appropriately when interacting with others, they demonstrate respect for the individuality of others and empathise with others in local, national and global contexts, acknowledging the diversity of individuals while recognising and managing peer influence on their behaviour. Students reflect on their own behaviour in relationships, identify potential conflict and employ strategies to avoid and/or resolve it. This occurs at all year levels and across all activities. These behaviours address Interpersonal Development learning standards related to building social relationships.

One of the values of Outdoor Education in this context is that Outdoor Education is self-competitive rather than peer competitive, this creates learning situations where students make a choice to undertake challenging activities which provides opportunities for reflection, motivation and initiative, encouraging students not only to recognise their own learning but to be accountable and take ownership of it as well. Feedback regarding personal learning has shown that students are acknowledging their own learning in Outdoor Education as observed by one interview participant observing students making the realisation that "*This is a new experience, but it's also an experience that provides a different type of learning*", recognising the different types of learning in different types of learning environments.

Outdoor Education in this context may be viewed as holistic interdisciplinary learning. As an interdisciplinary subject, Outdoor Education lends itself to inquiry based learning, incorporating skills and knowledge from a diverse range of discipline based learning areas. In this context, Outdoor Education is integrated with the existing curriculum of Geography and Civics and citizenship in the

Humanities learning area, Life skills, Environmental Education, Religious education and Science although this is not explicit or documented.

Being immersed in a communal environment for an extended period of time, students are placed in a situation where they have to consider their own and others' points of view, often challenging assumptions and justifying their own positions and interpretations. Due to the tactile nature of Outdoor Education and the intense environment where many of the activities occur, the use of a diverse range of communication types is required. This engages students in the use of complex verbal and non-verbal cues, subject-specific language, and a wide range of communication forms, particularly relevant to safety in a noisy active outdoor environment.

In year nine students undertake an environmental action project requiring them to design, plan and implement a positive environmental action. They start with an environmental issue then follow the process of research, analysis, planning, facilitation and presentation. The practical component of this project requires students to undertake research relevant to the design brief for their project. They effectively use information and communications technology equipment, techniques and procedures to support the development of their design and planning and then implement a range of production processes.

In relation to thinking processes, reflection, evaluation and metacognition, significant changes have been observed in students where they modify and evaluate their thinking strategies at years' seven eight and nine as a result of the overall extended Outdoor Education experience. Camp reflections and journals provide students with opportunities to describe and explain changes that may occur in their ideas and beliefs over time. This is also particularly effective in the extended multi-day camps experienced in years seven eight and nine.

Within a single Outdoor Education experience a large and diverse range of learning occurs. Mapping curriculum and making all learning explicit provides opportunities for leadership teams to articulate where learning occurs as well as fulfilling numerous National Curriculum requirements over a diversity of learning areas. This provides relief to what is generally perceived to be an already over-crowded curriculum. Outdoor Education as holistic learning facilitates this when delivered as an explicit, interdisciplinary learning program.

How 21st Century Learning principles are represented in OE.

Outdoor Education addresses numerous principles of 21st century learning skills, specifically 21st century standards; learning environments; curriculum and instruction; interdisciplinary themes; learning and innovation skills; creativity and innovation; critical thinking; problem solving and reasoning.

Outdoor Education focuses on 21st century skills, content knowledge and expertise, building understanding across core subjects as well as 21st century interdisciplinary themes. Facilitation of the entire Outdoor Education program occurs in various off-site locations, with the students experiencing a large range of learning environments and resources beyond the walls of the school. Collaborative

inquiry and analysis as displayed in the year nine environmental action project, has an emphasis on deep understanding rather than shallow knowledge and the diversity of learning types undertaken in this project allows for multiple measures of mastery.

The Outdoor Education program promotes a competency based approach to learning through experiential and practical learning, providing both subject specific and interdisciplinary knowledge and skills. The program has scope for innovative learning methods that integrate the use of supportive technologies, inquiry and problem based approaches and higher order thinking skills through both theory and practical application of knowledge. As a resource, the Outdoor Education specific facility allows equitable access to quality learning tools, technologies and resources and provides 21st century learning space designs for group, team and individual learning. This enables students to learn in relevant, real world 21st century contexts through inquiry, project-based and/or other types of applied learning.

The twenty first century interdisciplinary theme of flexibility and adaptability is related to students adapting to life outside the four walls, in real life settings which is at the core of Outdoor Education in this context. By being immersed in a variety of not only learning but life environments, students must be flexible and adapt to a diverse range of variable and changing factors in their experience. Empowering students with responsibility, accountability and challenge builds confidence. This encourages students to be independent, creating a culture of self-motivation and initiative. Throughout all year levels, students are encouraged and supported to monitor, define, prioritize and complete tasks without direct oversight, having to utilize time and manage their workload efficiently. Living in a social situation with a number of peers allows students to interact effectively with others. Students begin to understand when it is appropriate to listen and when to speak and conduct themselves in a respectable and respectful manner. Students are expected to be accountable for their words and actions and take responsibility for their decisions. As active members of not only their class, but as members of smaller teams, student display leadership attributes and are expected to act responsibly. This is reinforced through adherence to a code of ethics for Outdoor Education as well as whole school expectations of behaviour. As leaders and team members, students are required to demonstrate integrity and ethical behaviour in using influence and power.

The 'Challenge by choice' philosophy of the program encourages students to make their own decisions and provides opportunities for reasoning. By participating in a sequential program from year seven to year ten, students gain an understanding of systems thinking. This is demonstrated with scaffolding of activities throughout the year levels, for example, canoeing in year seven becomes kayaking in year eight and rafting in year nine. This gives students the opportunity to apply a designated framework to their actions and use their prior knowledge and skills for the current or future situations. Based on prior knowledge, students can make judgements and decisions and reflect critically on learning experiences and processes.

How OE curriculum is integrated with other curriculum areas within the school curriculum

Integrating different curriculum areas provides opportunities for connections between learning experiences from different curriculum areas as well as collaboration between teachers and students from different learning areas. When linked, a diversity of experiences and learning relationships encourages deeper understandings and richer learning experiences. Integration with existing curriculum has been identified in the Humanities, Geography, Civics and citizenship, Life skills, Religious education, Science and Environmental education learning areas. The integration of these learning areas through Outdoor Education provides a holistic learning experience with a diverse range of learning environments, experiences and outcomes. This provides the framework for authentic, relevant and rich learning in both the areas of curriculum and social and emotional learning (wellbeing).

Outdoor Education is integrated with the Humanities learning area through Geography and Civics and citizenship. Outdoor Education addresses a number of Geography AUSVELS standards related to geographic knowledge and understanding. This is fulfilled through students' awareness of their environment and recognising the difference in ecosystems they encounter throughout their four year experience of Outdoor Education. In the context of this schools' curriculum, Outdoor Education supports the year seven Geography topic *Environments*, year eight topics *Water in the world* and *Landforms and landscapes*, year nine topic *Biomes and food security* and year ten *Geographies of human wellbeing* and *Environmental change and management*. This provides further opportunities for the explicit integration of these two learning areas. Geography and Sustainability both have strong links with each as part of a holistic Outdoor Education program in this context. Geography has field work requirements which Outdoor Education can fulfil if explicitly linked with Geography, in this case the entire program is conducted in the field, supporting the integration of these learning areas as an interdisciplinary program.

Every class in the school takes part in the Life Skills program, a holistic meshing between curriculum and wellbeing. The primary aims of the Life Skills program are to develop teamwork and resilience as well as to develop study skills from year seven to year twelve, not just at senior levels. Through ongoing coaching and reflection activities, Outdoor Education promotes awareness of learning in students throughout all year levels and provides many opportunities for students to apply knowledge from previous experiences in current and future activities, providing support for the development of understanding, knowledge and skills. Outdoor Education and Life Skills have strong connections particularly in relation to the learning goals of both learning areas.

As with the rest of their schooling, students are encouraged to live by a Catholic ethos while on camp. This situates students with many opportunities to assess the extent to which moral character has an impact on the process of making choices, identify the various aspects in the formation of moral values and decisions and appreciate the many influences that affect moral decision-making, Religious Education learning outcomes. Awareness of belonging to the college community is promoted and developed through shared novel experiences and adventure as well as team and group based activities where everyone's inclusion is valued. This supports interpersonal development with the building of

social relationships and the application of social justice and compassion. This fulfils a range of requirements of faith development, wellbeing and Religious Education.

As a holistic program, Outdoor Education supports understandings of Biology curriculum in relation to flora and fauna and the living systems within which they exist. Practical experience in natural areas provides students with tactile learning and direct contact with subject content. Physically exploring a range of different ecosystems gives students a vested interest in what they are learning because it is *their own* personal experience, they own it and therefore they are taking ownership of their learning. This helps students develop a deeper understanding of Biology and Earth Sciences concepts than learning from secondary information sources such as websites or books. The program has a strong environmental ethic which encompasses both Environmental Education and ecoliteracy. Environmental Education through Outdoor Education offers students intimate understandings of the environment and provides opportunities for the development of school culture where everyone has a genuine interest and knowledge in environmental management.

Conclusion

This research has identified that Outdoor Education contains a diverse range of learning and encompasses a number of different learning areas. This research indicates that Outdoor Education should be viewed as holistic and be experiential. Holistic experiential learning programs have a high level of success and develop deep personal understandings, demonstrating the value of Outdoor Education as a unique learning area in the privileged position of being able to deliver integrated holistic learning opportunities. Being facilitated outside the classroom in mostly natural environments Outdoor Education has environmental values at its core as well as recreational and interpersonal elements. Using the elements of Interpersonal development, Recreation and the Environment as a basis for curriculum development, Outdoor Education facilitates educational principles in the areas of not only curriculum but also wellbeing.

Data from interviews revealed that Outdoor Education addresses many requirements of Australias' National Curriculum, particularly in the areas of general capabilities and cross curriculum priorities. Outdoor Education in this context aligns closely with Twenty First century learning principles and is integrated with Humanities, Geography, Civics and citizenship, Life skills, Environmental Education, Religious Education and Science learning areas.

In this case study Outdoor Education curriculum for years seven to ten in secondary school consists of National curriculum general capabilities in Literacy, Information and communication technology (ICT) capability, Critical and creative thinking, Personal and social capability, Ethical understanding and Intercultural understanding. It also includes AUSVELS standards and subject skills in Cross curricular priorities, Physical, Personal and Social Learning and Interdisciplinary Learning.

As a holistic learning program Outdoor Education in this context encompasses Twenty First Century standards, learning environments curriculum and instruction as well as the Twenty First Century interdisciplinary themes of Civic literacy, Global awareness, Environmental literacy, Life and Career

Skills, Initiative and self-direction, Social and cross-cultural skills, Productivity and accountability and Leadership and responsibility. It facilitates learning and innovation skills related to Communication and collaboration. It also addresses critical thinking and problem solving as well as creativity and innovation. This develops Twenty First Century skills encouraging students to think creatively and work creatively with others as well as Implement innovations and reason effectively. This then encourages the use of systems thinking requiring students to make judgements and decisions and solve problems.

Outdoor Education compliments a number of different learning areas and contains elements of Humanities, Geography, Civics & Citizenship, Religious education and Science but seems to be the most closely aligned with Life skills and Environmental Education.

Findings from this research provide evidence which supports the value of holistic Outdoor Education as a unique learning area with its own language and body of knowledge which while it is acknowledged at senior levels still remains inexplicit as part of Health and Physical Education in years seven to ten in secondary school. The Directions 9 program at year nine provides an example of successful integration of different discipline areas which may be used as a model for holistic Outdoor Education at years seven, eight and ten. Data from observations, documents and interviews shows that Outdoor Education is holistic, interdisciplinary and should be part of core curriculum across all year levels. Outdoor Education should exist beyond the immediate experience and should include some pre-and reflective learning activities and learning should be explicit. This is facilitated through explicit curriculum where learning is acknowledged by both facilitators and participants. Open dialogue and collaboration between learning areas supports facilitation of integrated learning programs, with Outdoor Education acting as a vehicle for the facilitation of holistic interdisciplinary learning within school curriculum.

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Hungry for Change – Orientation Paper

Introduction

The purpose of this paper is to provide a basic orientation to the importance and value of food, and the need to change the way we view food consumption on Adventure Based Learning (ABL) programs. The focus of this paper is on Diet-Assisted Learning (i.e. The Food Content); whereas the full orientation paper that will be provided to workshop participants, will also explore the value of utilising food as an experiential learning process.

It's important to note however that this paper explores a range of concepts, factors and principles as suggestions to work toward, but may not be possible to fully adhere to due to a range of program and/or service limitations. The paper is however based on current literature and seeks to outline a best practice model of integrating food effectively into ABL service delivery.

Diet Assisted Learning *(Food Content)*

The factors that are essential in promoting optimal physical and mental health of participants that effectively stimulate learning transfer are:

1. No Processed Foods:

The aim is to design a menu based on whole unprocessed ingredients. There is ample literature (Eady 2011) to suggest that we shouldn't provide processed foods to children and young people, and particularly in the context of ABL programming. Consider briefly some statistics regarding Health in Australia; one in four Australian children are overweight or obese, and childhood obesity is rising faster than adult obesity; 275 Australians develop Diabetes every day and children as young as eight are being diagnosed with type 2 diabetes (or lifestyle diabetes); the prevalence of cancers, autism and asthma is increasing with one in four Australian children suffering from chronic asthma; approximately 20% of all Australians now suffer from depression, an estimated 350 000 Australian children and adolescents have ADHD, with 15% of adolescents having behavioural problems that interfere with learning.

The literature demonstrates that diet and lifestyle are intricately linked to the physical and mental ailments that are prevalent in Australian children and young people. Egger (1985) showed in his studies that 79% of hyperactive children improved when artificial colourings, flavourings and sugar were eliminated from their diet. Adams (2006) states that 80% of so-called ADHD children who are taken off processed foods are cured of ADHD in two weeks. Similarly Schoenthaler (1983 and 1985) demonstrated that 47% of his juvenile delinquent subjects noticeably improved their problem behaviour when artificial colourings, flavourings and sugar were eliminated from their diet.

Saul (2006) outlines the benefits of nutritional dietary programs in a school context:

'outcomes included increased ability to concentrate in the school setting, more on task-behaviour, increased cognitive development, ability to think more clearly, objectively and rationally, grades are up, truancy is no longer a problem, arguments are rare, and teachers are able to spend their time teaching.'

In spite of the research, processed foods are commonly purchased for ABL programs because they are 'quick' and 'easy' to prepare, and are perceived to be the least expensive option. Quick and easy isn't necessarily a better experiential learning process, and the positive effects of eliminating processed foods from program menus are indisputable.

2. Avoid Sugar

Appleton (2005) in her article '*Counting the ways sugar harms your health'* outlines a range of adverse health effects from sugar. The following is a selection from Appleton's listing, sourced from a variety of medical journals and other scientific publications.

- Sugar can suppress your immune system and impair your defenses against infectious disease.[1,2]
- Sugar can cause a rapid rise of adrenaline, hyperactivity, anxiety, difficulty concentrating, and crankiness in children.[3,4]
- Sugar can lead to alcoholism.[5] and contribute to obesity.[6]
- Sugar can cause autoimmune diseases such as: arthritis, asthma, multiple sclerosis.[7,8,9]
- Sugar can cause a decrease in your insulin sensitivity thereby causing an abnormally high insulin levels and eventually diabetes.[10,11,12]
- Sugar can cause drowsiness and decreased activity in children.[13]
- Sugar causes food allergies.[14] and can impair the structure of your DNA.[15]
- Sugar can cause headaches, including migraines.[16] and contribute to eczema in children.[17]
- Sugar can reduce the learning capacity, adversely affect school children's grades and cause learning disorders.[18,19]
- Sugar is an addictive substance.[20] and can cause depression.[21]
- Sugar can lead to dizziness.[22]
- Sugar can be intoxicating, similar to alcohol.[23]
- Decrease in sugar intake can increase emotional stability.[24]
- The rapid absorption of sugar promotes excessive food intake in obese subjects.[25]
- Sugar can worsen the symptoms of children with ADHD. [26]
- High sugar intake can cause epileptic seizures.[27]
- In juvenile rehabilitation camps, when children were put on a low sugar diet, there was a 44 percent drop in antisocial behavior.[28]

In an ABL context where the goal is to effectively stimulate participant growth, development and behavioural change; it is therefore likely to be advantageous to remove sugar from program menus to promote optimal physical and mental alertness and engagement. This is an extremely challenging task, but is worth the time and effort.

Avoid Animal Foods:

In the development of program menus we aim to remove most meat, dairy and egg products, which in an ABL context results in a range of positive implications. On journey based programs it is logistically challenging to keep meat and dairy products from spoiling, and maintain their nutrient value, particularly on extended programs.

Additionally, in order to more effectively promote participant's health and wellbeing; the literature outlines why animal foods should be removed from menus.

A joint report from the World Health Organization and the Food and Agriculture Organization of the United Nations, concluded the following:

> *"Households should select predominantly **plant-based diets** rich in a variety of vegetables and fruits, pulses or legumes, and minimally processed starchy staple foods. The evidence that such diets will prevent or delay a significant proportion of non-communicable chronic diseases is consistent. A predominantly plant-based diet has a low energy density, and may protect against obesity."*

Day (2001) states some additional information regarding the dangers of meat consumption:

- *Meat consumption (indeed any animal protein consumption) creates acidosis in the body on a cumulative basis…and acidic bodies are prone to degeneration, oxygen deprivation and parasites.*
- *Animal proteins require bile acids to digest them, which in the colon are carcinogenic.*
- *Animal proteins cannot be used by humans directly. They have to be broken down into their constituent amino acids and then reconstructed into human proteins.*
- *Meat when cooked loses any amino acid benefit and produces toxic acidic metabolites.*
- *Meat contains high saturated fats, almost no carbohydrate content, no fibre, and is an extremely inefficient protein source.*
- *Excessive meat consumption is being blamed for early sexual development in children.*

With the above context in mind, Anderson (2009) rhetorically asks the following question:

> *'So why eat animals when you can get everything you need directly from plants – without the cholesterol – and in a low-fat package with healthy fibre and cancer-fighting chemicals to boot?'*

So why are program menus traditionally rife with meat, dairy and egg products? There are significant practical and nutritionally beneficial alternatives to animal foods, and we recommend these become more common in ABL programs, to more effectively promote participants growth and development, and achieve the program outcomes.

3. Choose local and organic produce:

This may not always be practical and/or organisationally possible, however ideologically this is our preference for food consumed on ABL programs. There are a number of reasons for this and considerable literature to support the recommendation. Mercola (2012) suggests the following:

> *'going directly to the source you can get amazingly healthy, locally-grown, organic food…giving you optimal freshness, as well as grown without chemicals, genetically modified seeds, and other potential toxins.'*

Purchasing food locally and direct from food cooperatives and farm markets fundamentally makes sense to people. Purchasing Organic food however has conventionally been viewed as expensive, unnecessary, and even 'upmarket'. There is however significant literature to suggest that food items sourced from organic suppliers have significant positive implications for participant's health, wellbeing, alertness and engagement and thus more likely to achieve developmental and behavioural learning outcomes.

An article written by Worthington (2001) examines 41 comparisons of the nutrient quality of organic versus conventional fruits, vegetables and grains. In every case the organic crops had higher nutrient levels – e.g. 27% more vitamin C, 29% more Iron and 14% more phosphorus.

The literature is clear that there are substantial losses in nutrient quality between organic and regular produce and additionally there is a significant risk of exposure to pesticides, heavy metals such as lead and mercury, and solvents like benzene and toluene (The George Mateljan Foundation), when eating conventionally grown foods. This has a significant impact on participant's physical and mental health, and consequently their alertness and capacity to engage in learning experiences in an ABL context. With this in mind it seems hard to believe that more schools, recreation groups, developmental and therapeutic organisations aren't purchasing primarily organic food for their outdoor programs.

5. Raw Food:

We aim to take less on program and live simply, which results in more team work, more time for relationships and less time looking after and relying on expensive equipment. Menu planning is generally based on *simple ingredients* with young people learning how to prepare and/or cook healthy yet simple meals. Further to this and based on research we aim to have a minimum of 60% of the menu prepared raw. Harris (2000) states that:

> *'raw foods should be a major if not sole part of the diet…because the foods that can be eaten raw (mostly vegetables, fruits, nuts and seeds) coincidentally have enormously higher nutrient values than the foods that either have to be, or usually are, cooked.'*

The Australian Natural Health Magazine supports the consumption of predominantly raw food, stating the following;

> *'when the diet is composed of more than 50% cooked foods…the immune system reacts to the overabundance of cooked food as if it is under attack, sparking an increase in the white blood cell count, and as a result we see increased allergic reactions, chronic inflammation and various types of immune system dysfunction.'*

In the context of ABL programs, the desired outcomes for participants are typically associated with growth, development, and/or behavioural change. In order to effectively achieve these outcomes it would be advantageous for participants to be alert, engaged, and ready to learn. If in a school context a *nutrition program* gains teachers an additional 10-15% more teaching time due to the children being calm, alert and focused (Saul 2006); how much more in an ABL context would good nutrition promote growth and development and the effective transfer of learning.

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Concept Mapping: A Tool for Measuring Student Learning in Residential Outdoor Schools.

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Background

Why is it that many parents are happy and willing to send their children on residential outdoor programs without any measured learning outcomes? Australian culture commonly accepts that residential outdoor programs have a positive effect on student learning outcomes, but where is the empirical evidence to support this claim? Student learning in a residential outdoor school environment has often been seen as a difficult component to measure, quantify and articulate. I have personally experienced many examples of this inability to account for the student learning at a student, parent, teacher, administrator, system and ministerial level.

At a basic level I have often asked students, "What did you learn this week?" and quite often the response has been restricted to the technical component of the activity that they were doing rather than the intricacies of a personal development outcome. Hubball provides some commentary on student expectation around learning stating that "they expect to experience meaningful connections between participation in outdoor activities and the development of valuable life skills" (Hubball and West, 2009), but how can the development of valuable life skills be measured?

At the administrative end of the spectrum I have been privy to discussions between Principals of residential outdoor schools and Government Ministers where the Principals could only provide anecdotal evidence of meaningful student learning, with their school level reports having absolutely no data in the student learning section. Taniguchi, Freeman and Richards claim students had a meaningful learning experience in a wilderness environment when "A perception of risk appeared to set in motion the sequence of attributes identified for creating a meaningful learning experience." (Taniguchi et al., 2005). Perhaps risk is the key to residential outdoor programs developing meaningful student learning within programs.

Review of the Current Literature

Picture of a Concept Map

What is a concept map, what does it look like and how do they work? Francis provides a basic yet clear definition, "a concept map presents the relationships among a set of connected concepts and ideas" (Francis, 2006). Francis goes on to say that "a concept map would take on a pictorial look to display the information" (Francis, 2006). This definition coincided with my current understanding of a concept map and will be important for all staff within the school to understand and conceptualise.

Novak, who is a pioneer in concept mapping within a school setting, presents the names and functions of the essential components of a concept map. The four main components of a concept map as described by Novak are concepts, propositions, links and a hierarchy (Novak and Gowin, 1984). A concept is described as "a regularity in events or objects designated by some label" (Novak and Gowin, 1984). "Propositions are two or more concept labels linked by words in a schematic unit" (Novak and Gowin, 1984).

Passmore (2004) provides further clarification as to what defined a concept map as opposed to a mind map by referencing Palmer (2002) and Lanzig (1997), "In the mind map there is a single central idea, and related child

ideas are drawn around it. … Concept maps may contain several central ideas". This comparison of mind maps and concept maps highlights the difference between the two of them and provides more clarity around the construct of a concept map. See figures 1 and 2.

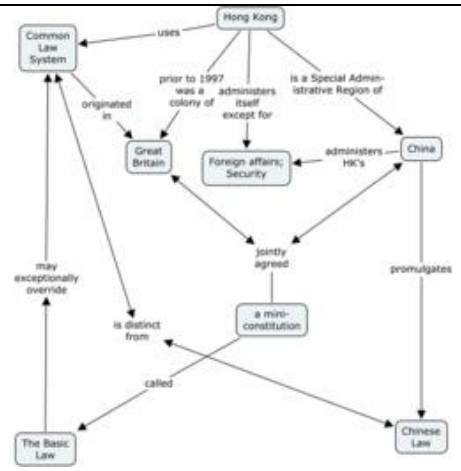

Figure 1: Concept Map
An example of a concept map highlighting the relationships that exist between many different concepts.

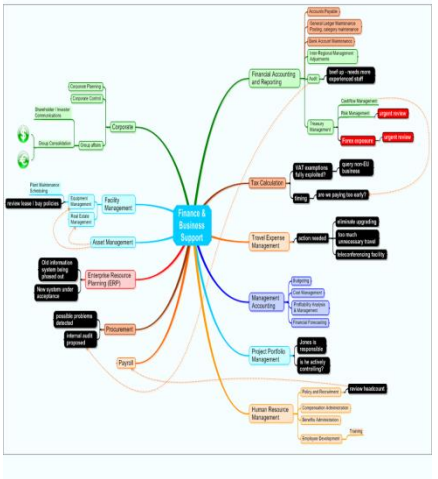

Figure 2: Mind Map
An example of a mind map showing many concepts and no real relationships between them.

From a schools perspective it will be crucial for all staff to have a sound knowledge in the components of a concept map so that they can engage with them and the students effectively when using them within a student learning context. Dedicated professional learning time will be allocated and used to establish staff skill in the use of the concept mapping. Once staff are confident with the anatomy of a concept map, they will then be working through the application of the map to student learning within our residential outdoor school environment.

Hattie specifically makes reference to the effect size of concept mapping on student learning. Through 287 separate studies involving 8,471 participants Hattie finds that concept mapping has an effect size of 0.57 (Hattie, 2009). In layman's terms, concept mapping has a reasonably large effect on student learning.

If we consider the 0.57 effect size of concept mapping with the 0.52 effect size of Outdoor Education there may be potential to generate a powerful learning experience for students. The fact that Hattie provides a quantitative analysis of the effects of concept mapping on student learning leaves a gap in the qualitative aspect. It is this qualitative component that will be of great use to our staff when using concept mapping. The interpretation of the student's concept mapping work will provide our staff with a chance to fill the qualitative void.

Methods of Creating Concept Maps

Oliver's paper explored the different methods of administering the concept map and the advantages and disadvantages of these methods (Oliver, 2008). The study was conducted in a distance education environment rather than an outdoor setting, thus on the surface it appeared that there would be little relevance to Bogong. Upon reading the paper there was scope to link the distance education aspect to the fact that Bogong students come from a range of schools. The action research project will require staff to work with the students in their home school. In 2012 Bogong initiated pre and post program work with students in their home school. This was to improve the student's educational experience whilst at Bogong.

The four methods of administering a concept map referenced by Oliver were:

- Fill in the structure - require students to define and identify existing knowledge as they fill in the blanks on a provided hierarchical structure.
- Pre-selected term - require the student to take a set of given terms, recognise sequences, and deduce relationships from the context of course materials.
- Seeded maps - the student must supplement provided terms with a specified number of additional terms selected on their own.
- Open-ended - providing no terms for the student, only a topic for mapping. (Oliver, 2008).

Reading through the advantages and disadvantages of each delivery method, particularly around content depth versus breadth, has provided a deeper understanding of each method. This understanding will lead to making better choices of the delivery of the maps to different cohorts of students and generate different outcomes if required.

Meaningful Learning

Novak worked closely with Professor David Ausubel and applied Ausubel's findings around meaningful learning to the practice of concept mapping processes to develop an assessment and learning tool.

Novak makes reference to Ausubel's requirements for meaningful learning as being:

- Relevant prior knowledge: That is, the learner must know some information that relates to the new information to be learned in some non-trivial way;
- Meaningful material: That is, the knowledge to be learned must be relevant to other knowledge and must contain significant concepts and propositions;
- The learner must choose to learn meaningfully: That is, the learner must consciously and deliberately choose to relate new knowledge to relevant knowledge the learner already knows in some non-trivial way. (Novak, 2010).

It is the relevant prior knowledge and the connection of this to new information that is critical in the effective use of concept mapping. Again we will ensure that our staff become proficient in the application of this knowledge in a residential outdoor learning environment.

Quantifying Concept Maps

Passmore, who had cited Novak's work, provided a critical addition to the action research project. Novak had outlined a process for quantifying the learning in concept maps using a numerical system.

The scale of the Novak and Gowin (1984) assessment technique is presented below; it takes the validity of linking words into account and the notion of regions.

- Give a score of 1 to all valid intraregional links. Subtract a score of 1 for each invalid intraregional link.
- Give a score of 10 to cross-links that contain examples of creative thinking. Score non-creative cross links as intraregional links.
- Allot a score of 3 to each level of the hierarchy. (Passmore, 2004).

This piece of work provides a base from which to work in a quantitative way with the concept maps. Novak suggests that "The actual numerical value applied to each of the key scoring criteria is arbitrary, and we would encourage educators to experiment with different values." (Novak and Gowin, 1984). I could agree to do this in the initial stages of the research, however once the scoring system was established then I would be reluctant to change it as it would bring about inconsistencies in data.

Concept Maps as Assessment Tools

Oliver's paper also reinforces the fact that concept mapping "has become both a valuable learning and assessment tool" (Oliver, 2008). One of the keys to the assessment of student learning using concept maps is that the student can demonstrate a change over time where it is not just a replacement of information; rather it is a building on prior knowledge. If the student replaces their prior knowledge in large amounts then the work can be considered as rote or superficial. Hay provided strong examples of concept maps where there was little or no integration of new knowledge with prior knowledge, making the bulk of the learning rote in nature. (Hay, 2007).

Novak has offered possible timeframe around rote learning, this will be important to our school when discussion our new curriculum and program length, see figure 3. (Novak, 2010).

Figure 3: Rote V's Meaningful Learning

Figure 3: Early in a learning program, rote learning of information can be faster than meaningful learning of the information. However, as forgetting occurs, interference with new related learning occurs, and learning speed is relatively slower than that for meaningful learning where recall is stronger and no interference, but rather learning facilitation, occurs (Novak, 2010).

Hay's work in the areas of deep learning, surface learning and non-learning provides the knowledge to be able to identify these in concept maps. He provided a methodology that has a quantifiable approach to measuring the level of learning. He also constructed criteria used to derive an assessment of deep, surface and non-learning. These criteria are based around the Ausubel definition of meaningful learning. (Hay, 2007)

The other aspect of Hay's work that is important to note is that he analyses the student concept maps first, provides the teaching intervention, then follows up with a post intervention map analysis. The reason for this approach is to attempt to attribute the learning to the intervention. This process will be important to address in a Bogong setting. Hay used a low number of students in his data set, only 12. This low number of students may

have influenced his results. Bogong will initially start with this number of students but should find it expand quite quickly.

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Adrienne Forsyth

Food and Nutrition for Journey-based Outdoor Education

A brief review of the literature revealed no peer-reviewed publications relating to nutrition requirements or evaluation in outdoor education for school aged participants. Papers reviewing dietary intake on multi-day outdoor pursuits have found that participants usually do not consume enough energy from food to match their energy expenditure (Hill et al., 2008; Ocoback et al., 2011). There is little known about specific nutrient consumption on adventure based activities.

Food provision for outdoor education programs can be difficult with challenges of (1) food safety and quality as food may be unrefrigerated for several days, (2) weight if food is carried in packs, and (3) specific food and nutrient requirements for individual students that impact on the overall menu, such as providing nut-free or other menu provisions for food allergies and intolerances.

Developing nutrition guidelines for journey-based outdoor education programs and evaluating menus based on these guidelines has the potential to impact on the enjoyment, safety and performance of students participating in these programs. This is significant as it may further impact on these students' ongoing lifelong participation in sport and recreation pursuits.

Detailed descriptions of journey-based outdoor education programs, corresponding menus, and participant demographic information was provided by an outdoor education provider for a program designed for a group of year nine students. Nutrition requirements were determined using Australia's Nutrient Reference Values (NHMRC, 2006) and sports nutrition recommendations from the Australian Institute of Sport (AIS), and based on the program activities including activity duration, intensity and recovery time as well as anticipated basal metabolic requirements of participants based on the demographic data provided. Based on these findings, general guidelines for the provision of food and beverages on journey-based outdoor education programs were developed.

For most students, energy expenditure will increase while participating in journey-based outdoor education programs. As a result, they require more energy provided from food to meet their increased energy needs. While short-term energy imbalances are unlikely to impact on long-term weight management, the accompanying hunger and low energy levels may impact on mood, willingness and ability to participate in program activities. Individual energy requirements will vary based on gender, age, body weight, height, physical activity levels, injury or illness. Average requirements for 14 year old girls and boys based on reference body weights and heights are presented in Table 1. Foods containing carbohydrate, protein and/or fat (as described below) will provide a source of energy. The energy density of each of the macronutrients varies: carbohydrate provides 16 kJ/g, protein provides 17 kJ/g and fat provides 37 kJ/g.

Table 1. Estimated daily energy requirements for 14 year old boys and girls

	14 year old boys	14 year old girls
Reference height	1.64 m	1.60 cm
Reference weight	51.0 kg	49.4 kg
Estimated energy requirements for inactive students*	11 098 kJ	9629 kJ
Estimated energy requirements for 'easy' program**	14 059 kJ	12 959 kJ
Estimated energy requirements for 'hard' program**	19 999 kJ	18 712 kJ

**Calculated using the Schofield equation (Schofield, 1984) and an activity factor of 1.7. Adapted from Nutrient Reference Values (NHMRC, 2006).*

***Calculated using the Schofield equation (Schofield, 1984) and the energy cost of activities (Guthrie, 1989).*

Carbohydrate is the body's preferred source of energy. The body is only able to store a limited amount of carbohydrate so it is required frequently in the diet. For good health, carbohydrate intake should account for 45-65% of dietary energy. In athletes and very active people, such as students on intense outdoor education programs, 6-10 g/kg body weight are recommended per day. This may represent a larger proportion of dietary energy intake. Carbohydrate rich foods include sources of starch like bread, cereals, rice, pasta and potatoes, as well as sources of sugar such as fruit, milk, yogurt, cakes, biscuits and muesli bars.

Protein is needed for ongoing tissue maintenance and repair as well as regulating many body functions. Protein is also required to support the growth of muscles and other body tissues. Most Australians consume adequate amounts of protein, but requirements increase with high levels of endurance activities. The recommended dietary intakes for 14 year old boys and girls are 0.99 and 0.77 g/kg/day respectively. The AIS recommends higher levels for endurance athletes with 1.2 g/kg/day for males and 1.0 g/kg/day for females. This is likely to represent 15-25% of dietary energy. Protein rich foods include lean meat, poultry, fish, tofu, legumes, nuts and dairy foods.

Fat also has important functions within the body, such as insulation, shock absorption and structurally forming cell membranes and cell signalling pathways. However, high-fat diets can cause gastrointestinal distress and impair one's ability to perform moderate to high intensity physical activities. It is recommended that fat comprises 20-35% of dietary energy intake. Fat is found in processed meats, full-cream dairy products, packaged cakes and biscuits, nuts, oils, and spreads such as butter and margarine.

Table 2. Macronutrient requirements

	Recommended Dietary Intake*	Australian Institute of Sport Recommendations***	Acceptable Macronutrient Distribution Range**	% energy provided from program menu
Carbohydrate		6-10 g/kg per day	45-65%	47%
Protein	Boys 0.99 g/kg/day Girls 0.77 g/kg/day	Boys 1.2 g/kg/day Girls 1.0 g/kg/day	15-25%	15%
Fat			20-35%	36%

** Recommended Dietary Intakes reported in Nutrient Reference Values (NHMRC, 2006)*

*** Acceptable Macronutrient Distribution Range reported in Nutrient Reference Values (NHMRC, 2006) and expressed as percentage of energy intake.*

**** Australian Institute of Sport recommendations based on Hawley & Burke 1998 and Burke & Deakin, 2005*

Micronutrient requirements will be consistent with recommended Nutrient Reference Values (NHMRC, 2006) for the general population, unless the outdoor education program includes particularly vigorous activities of long duration over an extended period of time. Usual programs of up to one week duration are unlikely to have additional requirements. Providing a menu with adequate serves from each of the core food groups (NHMRC, 2013) is likely to provide adequate amounts of all micronutrients.

Fluid intake is the most important nutritional concern on outdoor education programs. Even low levels of dehydration can result in fatigue, muscle weakness and reduced heat tolerance. Students with insufficient fluid intake may struggle more to complete program activities, and negative experiences in school outdoor education programs may influence future decisions to participate in outdoor activities.

On a practical level, without the support of a dietitian it can be difficult to know whether a program menu provides sufficient energy and macronutrients for the activities planned. The core foods groups included in the Australian Dietary Guidelines (NHMRC, 2013) can be used as a guide; however additional serves of grains and other food groups may be required to meet energy and carbohydrate requirements.

Table 3: Australian Dietary Guidelines five food groups

Food Group	Recommended serves for girls 14-18 years	Recommended serves for boys 14-18 years	Serves provided by program menu
Vegetables	5	5.5	2.8
Fruit	2	2	2.3
Grains	7	7	7.5
Meat and alternatives	2.5	2.5	1.5
Milk and alternatives	3.5	3.5	1.4

From the Australian Dietary Guidelines (NHMRC, 2013)

For information about serving sizes refer to www.eatforhealth.gov.au

The menu supplied was entered into Foodworks version 7 (Xyris software) and analysed for total energy, macronutrient, micronutrient and water content per participant per day and evaluated against the anticipated nutrition requirements of participants. The menu was also analysed against the Australian Dietary Guidelines and evaluated for food safety.

Two activity programs were evaluated. These programs used the same menu, but involved different activities. The easy program included one to six hours per day of cycling or walking at a moderate intensity, and the hard program included two to eight hours per day of cycling or walking at moderate to vigorous intensity. Energy requirements for the easy program were estimated to be 12 959 kJ per day for girls and 14 059 kJ per day for boys based on the energy cost of program activities. Given the greater intensity and duration of the activities on the hard program, estimated energy requirements were 18 712 kJ per day for girls and 19 999 kJ per day for boys.

Mean energy provided met the recommended energy requirements for both male and female students not participating in extracurricular sport (Table 1). It was slightly below the recommendation for boys and girls participating in the easy program, but over 6000 kJ below recommendations for both boys and girls in the hard program. The menu provided carbohydrate, protein and fat in proportions that approximated the Acceptable Macronutrient Distribution Range for both programs (Table 2). To increase the energy content of the diet and maintain an appropriate macronutrient distribution, additional carbohydrate-rich foods such as pasta and rice could be added to the menu. These menu items are relatively inexpensive, light weight due to a low water content, and non-perishable.

The menu met the recommended number of serves of foods from the fruit and grains food groups (Table 3). The menu did not meet the recommended number of serves for vegetables, meat and alternatives or milk and alternatives. Increasing serves provided of each of these food groups would provide more energy, protein, carbohydrate, vitamins and minerals. Adjusting the menu to meet the requirements for all food groups could provide an additional 2850 kJ as well as improving nutrient intakes.

Analysis of a menu provided for year nine journey-based outdoor education programs revealed that the program menu did not provide sufficient energy and carbohydrate to meet the needs of the participants. The menu provided fruit and grain products at recommended levels but did not meet the recommendations for vegetables, meat and alternatives or milk and alternatives. Recommendations for future programs include increasing the

serves of these food groups as well as providing additional serves of lightweight, non-perishable carbohydrate rich foods such as pasta and rice.

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Nicholas Glover

Outdoor Recreation for Health and Well-being: it's Called Green Exercise

Introduction and background

This presentation is based on an honours study conducted in 2013 at the University of South Australia. The study was based on previous work at the university (Norton et al. 2011) gauging the effectiveness of a physical activity (PA) intervention to improve health and well-being outcomes for insufficiently active (Australian Institute of Health and Welfare 2003) adults. The present study took a novel approach to the original intervention by modifying the exercise type and environment to test the theories of green exercise (GEx) defined as exercise in the presence of nature (Pretty et al. 2005).

The need for the project arises from the continued search for more and better ways of getting inactive people into regular PA for health and well-being benefits. There was also a desire to add to the evidence base for the health and well-being benefits of being active in natural environments, such as through outdoor education and recreation programs and pursuits. Physical activity levels have declined worldwide in recent decades (World Health Organisation 2013), and Australia is no exception with a recent report (Australian Bureau of Statistics 2013) indicating less than half the adult population (43%) are sufficiently active for health (>30mins/day PA). Of further concern is the rising prevalence of mental health disorders, particularly with depression now the leading cause of disability, affecting an estimated 350 million people world-wide (World Health Organisation 2012). 'Screen' use has increased dramatically among children and adults for work, study and leisure, and has contributed to an increasing disconnect between people and nature (Louv 2011). A study that is able to address this range of issues might provide invaluable information to the public health sector to deal with the resultant spiralling cost to governments.

So how might a PA intervention using GEx help address these issues? The benefits of GEx are linked to the biophilia theory, which hypothesizes that we are genetically programmed to respond positively to open green spaces, clusters of tall trees and bodies of water, as we essentially have not genetically evolved from the hunter-gatherers that humans were for millennia (Kellert & Wilson 1993). In short, we are still designed to exist in natural settings. As a result of studies that suggest a relationship between human health and natural environments, a question might be asked as to whether exercise undertaken in natural environments may have additional health benefits to exercise undertaken indoors. A number of studies (Plante et al. 2007; Pretty et al. 2007; Yamaguchi, Deguchi & Miyazaki 2006) have sought to show a synergistic effect between PA and exercising in the presence of nature, resulting in improved health & well-being outcomes beyond those of indoor exercise. This study seeks to build on the findings of earlier research by modifying a previously successful, largely indoor, physical activity intervention (Norton et al. 2011) through the introduction of GEx. The program of exercise spanned 40 days, engaged insufficiently active adults, and involved group recreational exercise sessions in natural environments.

Aims

The specific aims of this study were to: (1) measure program adherence and exercise compliance among participants undertaking a 40-day daily GEx intervention; (2) determine the changes in a range of physical, physiological, biochemical and psychological variables following the intervention; and (3) compare the changes in the GEx intervention with those previously reported for a usual treatment (UT) group.

The main hypothesis was that the GEx intervention would be at least as successful as a UT group for improvements in program adherence and exercise compliance, as well as positive changes in the variables measured.

Methods

Advertising and promotion of the 40-day intervention occurred predominantly via email throughout the University of South Australia and a number of South Australian Government departments. Interested people were sent the *Active Australia Survey* to measure physical activity (PA) using a 7-day recall. Those adults (18-60 years) who were determined insufficiently active (< 150 minutes of PA per week) by the survey were invited to participate. Following health and fitness evaluations (and medical clearance if required), participants were randomly allocated to either (1) the current Green Exercise (GEx) intervention arm (n = 28); or (2) a Group intervention arm (n = 28) which was reported in a separate honours study. Only 22 participants actually began the GEx program.

Pre- and post-intervention testing occurred for all participants in order to test a range of common health risk factors and fitness variables, and their response to the intervention. The major variables included blood pressure (BP), total cholesterol, anthropometry, strength, dynamic stability and cardiovascular fitness. There were also several psychometric tests administered to measure subjective well-being, self-efficacy, depression, anxiety and stress. These psychometric tests were additional to the UT protocols used previously by the 40-day study.

WEEK	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Week 1 800kJ		**WALK** Easy grade walk at River Torrens Linear Park; Includes ice-breaker activities	Individual Day	**GAITs** Group initiative challenges in Victoria Park (East Parklands)	Individual Day	Individual Day	**KAYAK** Introductory Kayaking session at Garden Island using double kayaks
Week 2 1000kJ	Individual Day	**CYCLING** Introductory cycling session at linear park	Individual Day	**STRENGTH & STRETCH** Low impact strength exercises, stretching & yoga at Victoria Park (East Parklands)	Individual Day	Individual Day	**CYCLING** Introductory trail riding at Brownhill Creek
Week 3 1200kJ	Individual Day	**WALK** Moderate grade walk at River Torrens Linear Park	Individual Day	**TEAM GAMES** soccer at Victoria Park (East Parklands)	Individual Day	Individual Day	**WALK** Moderate walk at Marino Rocks
Week 4 1400kJ	Individual Day	**WALK** Moderate/challenging walk at River Torrens Linear Park	Individual Day	**CIRCUIT** Sweat track circuit in Victoria Park (East Parklands)	Individual Day	Individual Day	**EXPLORING MORIALTA** Hike to the waterfalls; rock climbing and abseiling at Morialta CP
Week 5 1600kJ	Individual Day	**ORIENTEERING** Introductory orienteering session in North Adelaide	Individual Day	**STRENGTH & STRETCH** Low impact strength exercises, stretching & yoga at Victoria Park (East Parklands)	Individual Day	Individual Day	**ORIENTEERING** Orienteering session at Belair National Park
Week 6 1800kJ	Individual Day	**WALK** Moderate/challenging walk at River Torrens Linear Park	Individual Day	**GAITs** Group initiative challenges in Victoria Park (East Parklands)	Individual Day	Individual Day	

Figure 1: Itinerary for the 40-day Green Exercise program

Participants attended group sessions three times per week (Tuesdays, Thursdays and Sundays) for activities conducted by trained instructors, and undertook an activity of their own choice on alternate days (Figure 1). Heart rate monitors were worn during all activity sessions. Subjects completed a daily diary of physical activity including type, duration, intensity and rating of perceived exertion (RPE). Researchers downloaded heart rate monitor data weekly to record exercise duration, %HRmax and energy expenditure (EE).

Results

Participant pre-intervention information is outlined in Table 1.

Table 1: Participant information pre-intervention. Mean, standard deviation (SD) and range are shown.

Variable	Mean	SD	Range
Males (n = 8)			
Age (yr)	48.8	9.9	28.7 - 59.3
Height (cm)	178.2	5.0	167.5 - 183.4
Weight (cm)	93.3	16.9	71 - 120.5
Unweighted PA (min/wk)	69	34	30 - 125
Females (n = 9)			
Age (yr)	47.8	11.0	28.4 - 59.1
Height (cm)	161.3	4.4	153.2 - 168.4
Weight (cm)	80.5	17.7	60.7 - 117.6
Unweighted PA (min/wk)	73	44	0 - 134
All participants (n = 17)			
Age (yr)	48.3	10.2	28.4 - 59.3
Height (cm)	169.2	9.8	153.2 - 183.4
Weight (cm)	86.5	18.0	60.7 - 120.5
Unweighted PA (min/wk)	71	38	0 - 134

Of the 26 participants that were allocated to the GEx intervention arm, 17 participants completed the program and returned for post-intervention testing, equating to an adherence rate of 65%. When considering only the number of participants that actually began the program (n=22), an adherence rate of 77% was observed. Data collected from the Polar HRMs were used to assess daily compliance rates of those participants that adhered to the intervention. Additional data sources were available to confirm compliance, such as PA Diaries and group session attendance records. Participants complied with the requirements of the intervention at a rate of 58%, which is being sufficiently active for ≥30 minutes/day. There were many days of compliance 'lost', such as when participants forgot to use or turn on the HRMs during exercise sessions. Compliance rates of participants who completed the program ranged between 9 and 37 days (23-93%; mean 23 ± 9 days). Using individual PA diary records, attendance records and HRM data resulted in a final compliance of 74%.

On a week-to-week basis, compliance measured by HRM data on group days was significantly higher ($p<0.0001$) than on individual days, being 77% as opposed to 46%. Using the second measure of compliance it was found

that of the participants who completed the program there were 16 (94%) who achieved sufficient levels of PA (≥150 min/wk) at post-testing.

Changes to health and well-being are shown in table 4.2. Although most anthropometric variables did not change significantly, small absolute decreases were found for weight, BMI, and waist girth. The change for hip reached statistical significance (p=0.036). Significant changes were seen for total cholesterol ($p = 0.026$), aerobic fitness ($p = 0.002$), dynamic stability ($p = 0.038$) and all categories of PA minutes ($p < 0.001$). The GEx intervention significantly ($p < 0.05$) improved outcomes for four of the five psychological variables, with increased mean scores for well-being ($p < 0.001$), and reduced scores for depression ($p < 0.001$), anxiety ($p = 0.042$) and stress ($p = 0.004$). Raw scores for self-efficacy also increased but not to statistical significance. No adverse changes to variables of any category were observed following the GEx intervention.

Discussion

The current study aims were to investigate the effectiveness of a physical activity intervention where exercise sessions were conducted in natural outdoor environments, denoting GEx. Effectiveness was determined by measuring program adherence and exercise compliance, and a range of physical, physiological, biochemical and psychological health and well-being variables. Results of the current study were compared to a previously reported study (Norton et al. 2011), representing UT.

Although this study was not designed specifically with the Outdoor Education sector in mind, there are implications of the research worth considering for those in the outdoor field. For the current study 17 of the starting 22 participants returned for post-intervention data collection, equating to an adherence rate of 77%. This is compared to the UT intervention in which 84% of participants finished the program.

Table 2: Comparison of measures pre- and post-intervention.

Variable	n	Pre Mean	Pre SD	Post Mean	Post SD	p (paired T-test)
Anthropometric						
Height (cm)	17	169.2	9.8	169.3	9.7	0.317
Weight (cm)	17	86.5	18.0	86.0	17.7	0.162
BMI (kg/m^2)	17	30.2	6.0	30.0	5.8	0.095
Waist girth (cm)	17	96.5	13.9	94.4	14.2	0.113
Hip girth (cm)	17	110.2	14.3	109.2	14.3	**0.036***
Cardio-metabolic						
Systolic BP (mmHg)	17	127.3	19.3	123.4	14.9	0.141
Diastolic BP (mmHg)	17	77.5	9.4	76.6	7.7	0.636
Total cholesterol (mmol/L)	17	5.0	1.2	4.7	1.1	**0.026***
Fitness						
Grip strength (kg)	17	41.7	13.3	41.4	14.1	0.357
Aerobic fitness (mL/kg/min)	17	25.4	10.6	30.8	13.3	**0.002***
Dynamic stability$^\#$	17	2.7	1.5	3.1	1.6	**0.038***
Physical activity						
Moderate PA (min/wk)	17	55	45	266	132	**<0.001***
Vigorous PA (min/wk)	17	13	20	179	150	**<0.001***
Weighted PA (min/wk)	17	84	43	624	367	**<0.001***
Psychological$^\#$						
Well-being	14‡	6.9	2.1	8.1	2.4	**<0.001***
Self-efficacy	17	12.9	4.5	15.4	2.5	0.0894
Depression	17	8.1	7.2	2.8	3.7	**<0.001***
Anxiety	17	4.4	3.3	2.5	3.0	**0.042***
Stress	17	10.6	5.8	6.0	3.9	**0.004***

Means and standard deviations are shown.
* indicates statistically significant ($p<0.05$) changes from pre- to post-intervention.
$^\#$ determined by Wilcoxon Signed-Ranks test.
‡ Results from three of the participants were not included as their questionnaires were incomplete

Researchers have speculated that adherence to physical activity programs could be higher for those using GEx, as the natural environments enhance mood (Pretty et al. 2007), leading to a higher likelihood of repeating the exercise (Thompson Coon et al. 2011). Theoretically this might translate to improved attendance for PA sessions by those not traditionally engaged by indoor exercise. Hypotheses on how exercise compliance could be higher for GEx over indoor exercise might follow those for program adherence, being the enhanced mood state following GEx is more likely to increase intention to repeat than would indoor exercise. No evidence for an effect of different exercise environments on compliance was discovered in the literature, so further investigation is required in this area.

An important finding in relation to attendance was the difference between group and individual sessions. Figure 2 illustrates the much higher rate of compliance on group days as opposed to individual days of exercise. This is not surprising when compared to a recent meta-analysis of 37 randomised controlled trials (Hong, Hughes & Prohaska 2008) which suggested that higher attendance rates are associated with group-based exercise programs relative to individualised-programs ($p < 0.05$). This suggests that people either enjoy group sessions more than individual sessions of PA, or feel more compelled to participate when in a group setting.

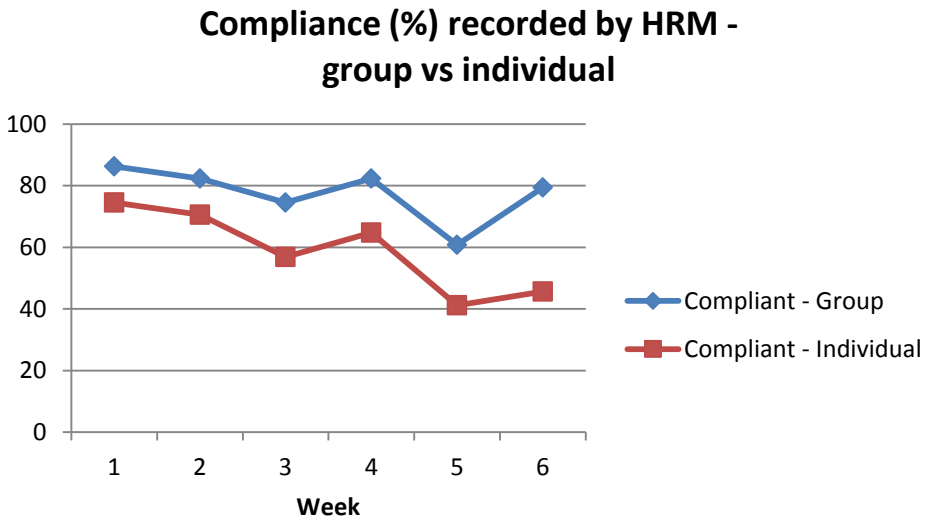

Figure 2: Mean compliance rate each week of the GEx intervention split by *group* and *individual* exercise days.

In relation to the physical and physiological outcomes of the GEx intervention, results were very similar to those of the UT. This provides additional support for the use of outdoor recreation in natural settings for health and well-being as an alternative to indoor, gym-based exercise.

A distinct advantage GEx is thought to have over indoor exercise is the benefit to mental health and well-being (Gladwell et al. 2013). Beyond the scope of previous UT studies, the present study sought to test theories of mental health benefits from exercising in nature. Although no UT comparative data were available, the results did show that, in general, GEx significantly improved participants' sense of well-being, and reduced feelings of depression, anxiety and stress. These findings might be applicable also for young people and therefore an important consideration for teachers programming physical activity.

With young people increasingly exposed to screen time and less engaged with nature (Louv 2011), GEx offers alternate opportunities to engage in PA, and with nature, providing a range of physical and mental health and well-being benefits, and restoring life balance. Although not improving on the results of **a** gym-based program, **i**t is heartening that a GEx program, which can provide greater mental health and well-being, social and cost-reduction benefits than indoor programs (Peacock, Hine & Pretty 2007), retained and engaged participants at equivalent rates.

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Natassia Goode

Trial of a new incident reporting system for the outdoor sector (UPLOADS): initial data and lessons learnt

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Introduction

The goal of the UPLOADS (Understanding and Preventing Led Outdoor Accidents Data System) project is to develop a standardised, national approach to incident reporting for the outdoor sector in Australia, and a corresponding national incident dataset. The project is a collaboration between the authors and outdoor education and recreation associations, outdoor activity providers and government departments. The system is primarily aimed at organisations which facilitate supervised or 'led' outdoor activities (e.g. organisations operating under the banners of outdoor education, school camps, adventure tourism, outdoor recreation and outdoor therapy).

As Fig. 1 shows, the UPLOADS project consists of a number of studies that contribute towards the development of a reliable and valid incident reporting, storage and analysis tools. This paper focuses on the 6 month trial of the prototype system. Organisations involved in the trial were asked to collect incident data using the UPLOADS software tool for six months. The software tool was stored on a computer within their organisation, and was not accessible by the research team. It included a function to automatically remove names from the data, so it can be sent to the research team for analysis. Organisations were asked to contribute incident data and participation days per activity to the project on a monthly basis.

This paper summarises:

1) The level of participation of organisations involved in the trial over the six months period;
2) The data collected in relation to bushwalking incidents, in order to demonstrate how a national dataset might provide a picture of the risks associated with particular activities; and
3) The lessons that were learnt from the trial regarding the needs of the sector.

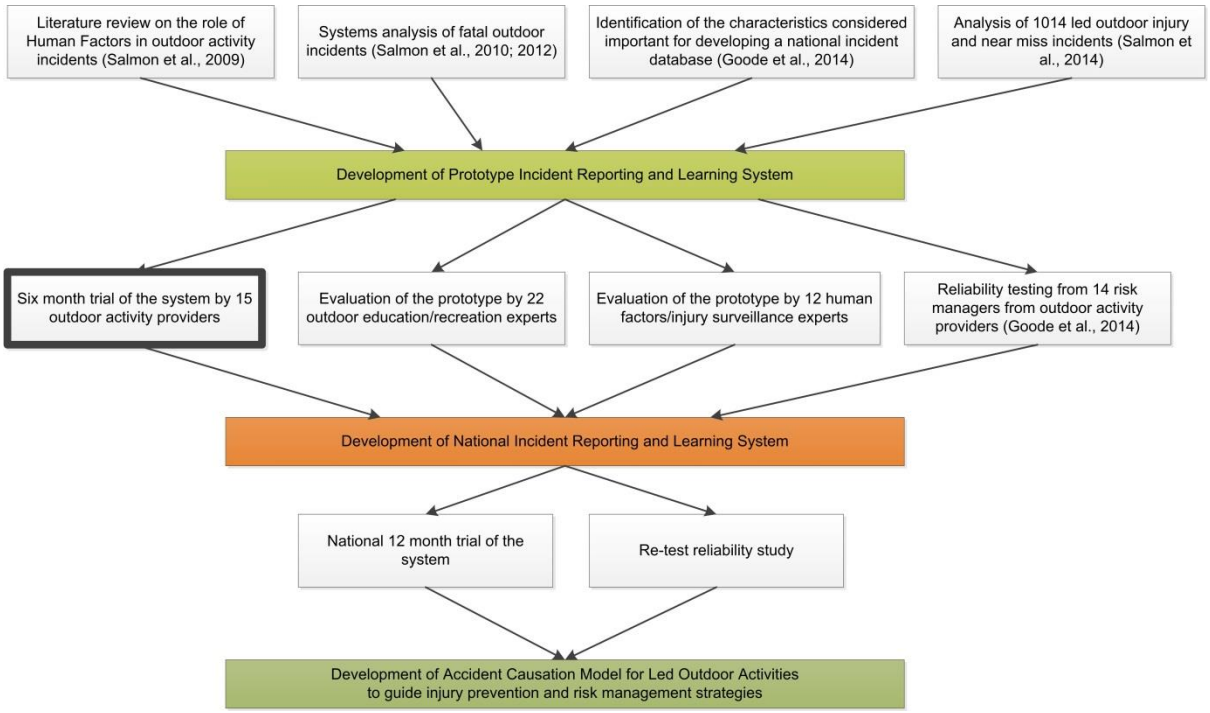

Fig. 1: Overview of the studies within the UPLOADS project, which contribute towards the development of the incident reporting system. The bold box highlights where the study reported in this paper sits within the project.

Organisations involved in the trial

Fifteen organisations participated in the trial. Five organisations operated in New South Wales, 4 in Queensland, 4 in Victoria, 1 in South Australia, 1 in Tasmania and 1 in Western Australia. Five organisations were commercial enterprises, 5 were not-for-profits, 2 were schools, 2 were registered training organisations and 1 was from the public sector. On average, organisations operated from 3 locations (SD = 2.07, range 1 to 7). 11 organisations were members of outdoor education/recreation industry bodies.

Contribution of data

For each month of the trial, participants either: contributed data; responded that no activities or incidents had occurred during the month; or did not respond to the request for data.

Fig. 2 shows the number of organisations that contributed participation data in each month of the trial. Five organisations contributed participation data or responded that no activities had been conducted every month. Four organisations did not respond to any requests for data.

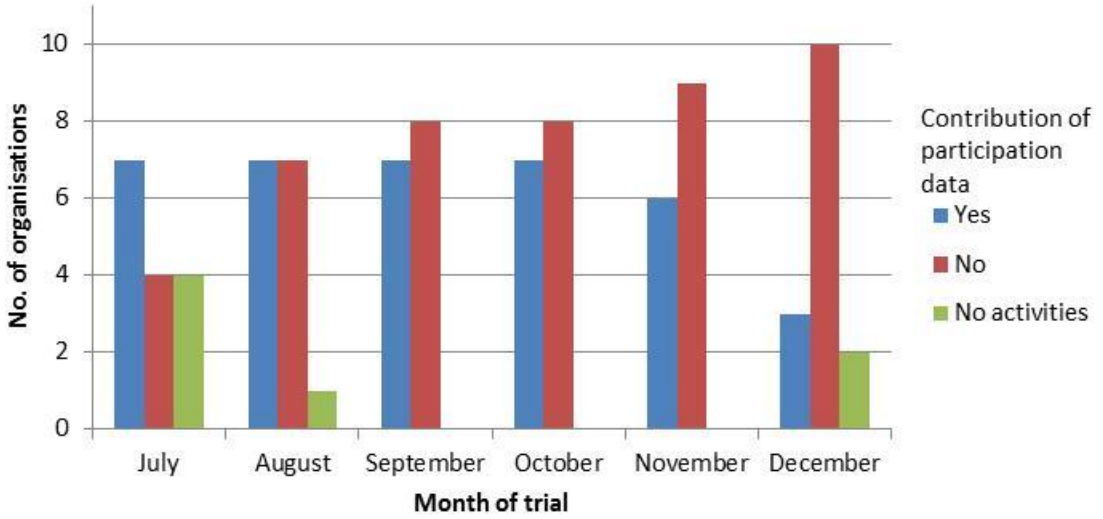

Fig. 2: Number of organisations contributing participation data in each month of the trial

Fig. 3 shows the number of organisations that contributed incident data over the six months. Five organisations contributed incident data or responded that no incidents had occurred every month. Two organisations did not respond to any requests for data.

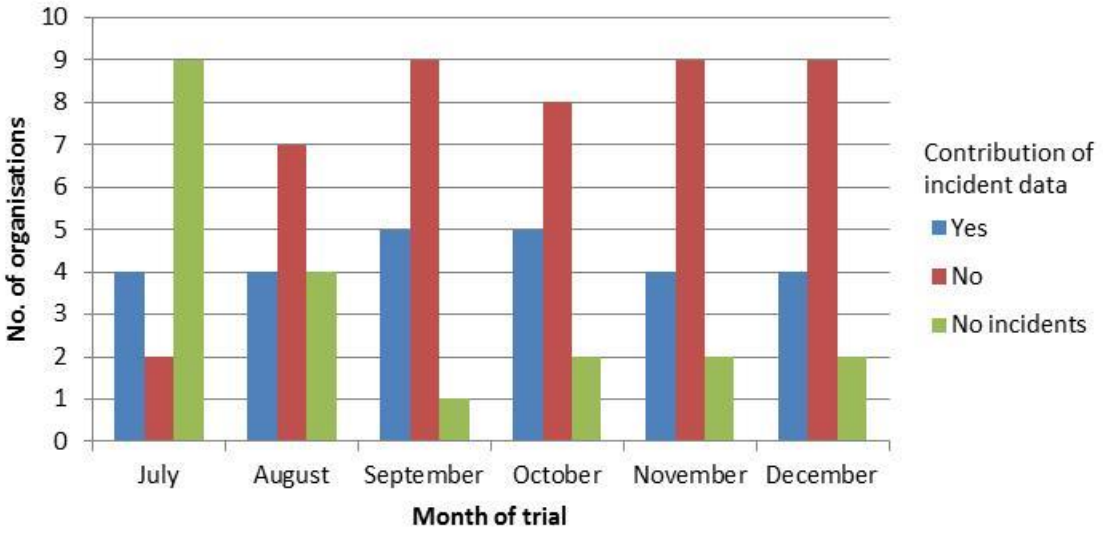

Fig. 3: Number of organisations contributing incident data in each month of the trial

Incident data

During trial, 184 incidents were reported, including 157 incidents associated with adverse outcomes and 25 near misses (2 missing classification). The reporter was present at the scene of 176 incidents (6 not present, 2 missing classification).

Incidents by activity type

Fig. 4 shows the number of incidents per activity type. The activity type most frequently associated with incidents was walking/running outdoors (71 incidents). The primary activity in this category was bushwalking, accounting for 70 incidents.

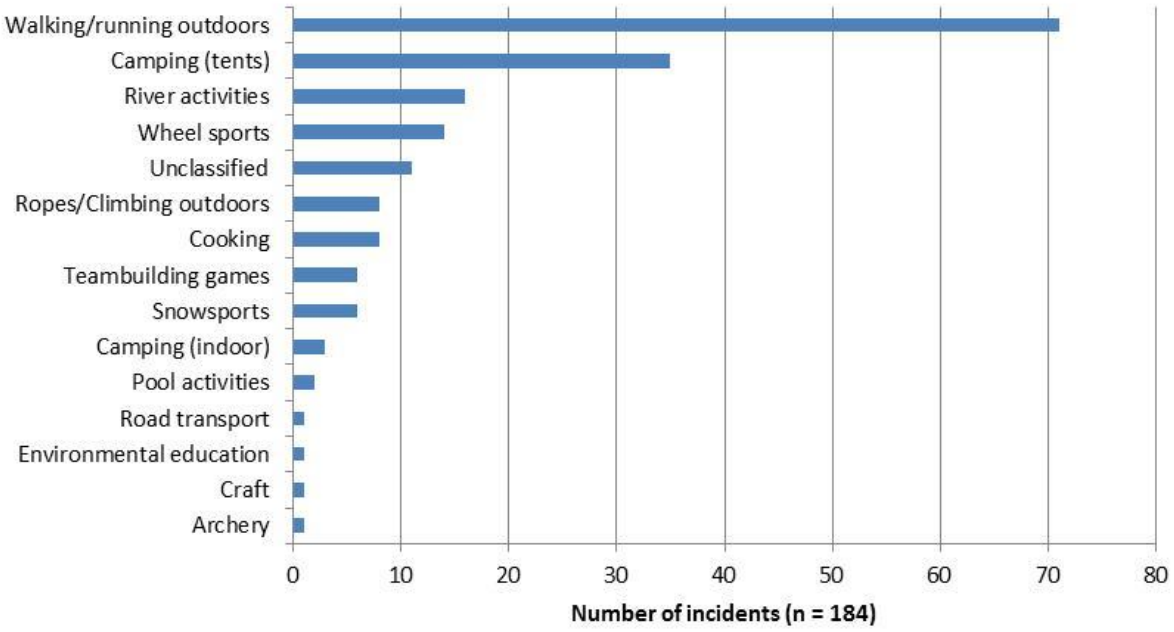

Fig. 4 Number of incidents by activity type

Analysis of bushwalking incident data

The following analysis is provided to demonstrate how data might provide a picture of the risks associated with particular activities.

Incident severity

Adverse outcomes were rated in terms of *actual* impact, while near misses were rated in terms of *potential* impact. On average, adverse outcomes were rated as 2.57 in actual severity (SD = 1.27). On average, near misses were rated as 2.67 in potential severity (SD = 1.53). According to the severity scale this is a "short term impact on individual/s that doesn't have large effect on participation."

People involved in the activity prior to the incident

The reports ask for details regarding the people involved in the activity prior to the incident. 69 activities involved participants, 68 involved instructors and 24 involved other supervisory staff. On average, 18 participants were involved in the activity prior to the incident (SD = 18), 2 instructors (SD = 1) and 2 other supervisory staff (SD = 2).

Adverse outcomes

Of the incidents reported, there were 59 injuries, 8 illnesses, and 1 case of equipment damage. No reported incidents involved social or psychological impacts, missing or overdue people, or environmental damage.

Injury details

Fig. 5 shows the type of injuries sustained according to body location. In addition to those shown on the diagram, 4 injuries were to multiple body regions (classified as 2 superficial injuries and 2 other and unspecified effects of external causes), 1 was to unspecified parts of truck, limb or body regions (classified as 1 superficial injury) and 1 was missing classification of body location.

Of the 59 people injured, 50 were female and 7 male (2 unclassified). Average age was 15.65 years (SD = 5.73, range 8 to 41, n = 23). 22 were classified as participants (37 unclassified). 7 people had some prior experience bushwalking, 49 were classified as "unknown prior experience" and 3 were unclassified.

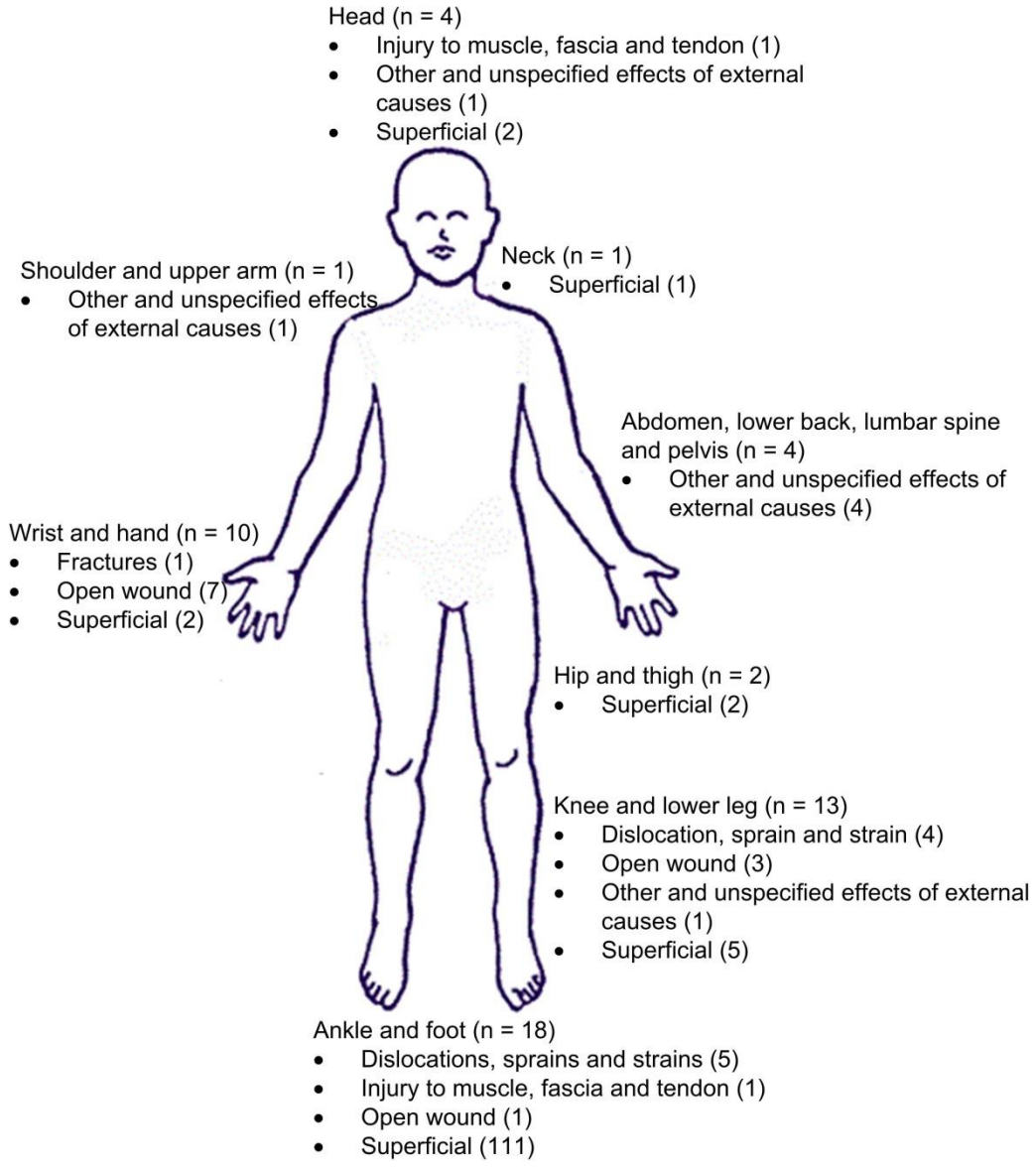

Fig. 4 Number of incidents by activity type

Illness details

Seven different illness types were reported across 8 incidents. Of the 8 people reported ill, 5 were female and 3 were male. Average age was 15.80 years (SD = 1.79, range 15 - 19, n = 5). In terms of their role, 6 were classified as participants (2 unclassified). In terms of prior experience bushwalking, 2 had some prior experience, 5 were classified as "unknown prior experience" and 1 was unclassified.

Causal factors and relationships

Organisations were asked to code the causal factors and relationships evident in each report. 71 different causal factors were identified across 59 reports. Fig. 6 shows the causal factors, and their frequencies, identified across the reports in the context of Rasmussen's (1997) Risk Management Framework. 23 relationships were identified across 15 reports. Fig. 7 shows the relationships between the factors identified, again presented in the context of Rasmussen's (1997) Framework.

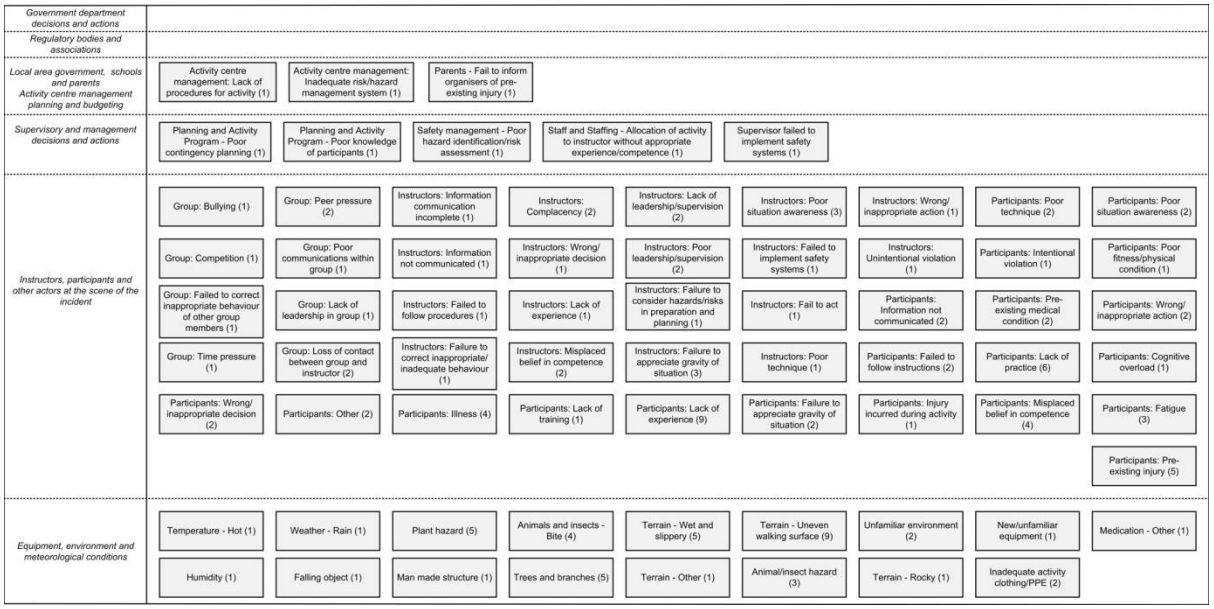

Fig.6: Frequency of causal factors identified across the reports, presented in the context of Rasmussen's (1997) Risk Management Frameworks (n = 59)

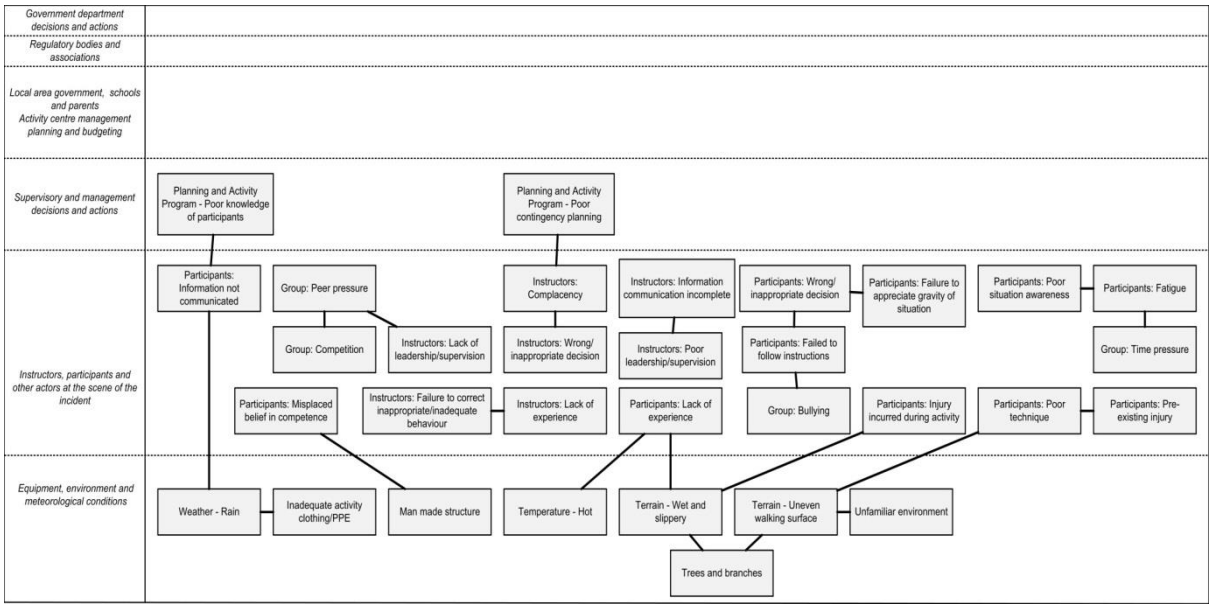

Fig.7: Relationships between causal factors identified across the reports, presented in the context of Rasmussen's (1997) Risk Management Framework (n = 1)

Lessons learnt from the trial

The key lessons learnt from the trial were that:

1) Some organisations do not run enough activities or have enough incidents to require a tool that analyses trends. Organisations should be able to select features that suit their needs.
2) The structure of activity programs differs considerably across organisations. The tool should focus on the collection of incident and participation data, rather than trying to provide a holistic system for tracking participants and activities.
3) Some led outdoor activity providers have a high staff turnover. The software tool should be intuitive and require minimal training to enter data.
4) Some led outdoor activity providers have minimal IT infrastructure. The software tool needs to run across multiple platforms, and take into account that organisations may have old software platforms. The need to install software updates is a significant barrier to participation.

Based on these findings, the UPLOADS Software Tool has been redeveloped. In addition, "UPLOADS Lite" has been developed for organisations that do not require complex data analysis tools. An online survey tool allows organisations to contribute anonymous incident reports and participation data, and save the data they enter for their own records.

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Peter Holmes

An Investigation Into the Intersection Between Vocational Training and Higher Education; Using Outdoor Education as a Lens.

Abstract

In this paper I will examine the nexus of vocational training and higher education using a case study approach with students studying a Bachelor of Outdoor Education at La Trobe University. In one subject a vocational training course was concurrently delivered, seeing students participating in a ten-day cross-country ski trip in Kosciuszko National Park in the winter of 2013. Three themes emerged through this case study. Firstly students reported merit in a collaborative approach in the delivery of both a vocational and a higher education curriculum. Secondly students reported that they felt better prepared to enter the work place. Lastly, that the separation of vocational training and higher education is an arbitrary one.

Introduction

An outdoor educator is required to have a broad theoretical knowledge (a higher education curriculum) mixed with a 'know how' (vocational) to do the physical skill of travelling across the landscape. So, within the practice of outdoor education we see that both a vocational and higher education curriculum are necessary. Thus outdoor education is ideally placed to be a lens to examine the intersection of vocational training and higher education and to ensure that learning is placed in an ideal position. The workplace expects graduates to be work ready and it is here that we find a dilemma when higher education comes up against industry; how does a university juggle the vocational (to be work ready) needs of students within a higher education curriculum? These tensions are explored and the relationship between these two approaches of learning are discussed from a student perspective. Students found that the combination of both a vocational and higher education was a valuable contribution to their learning and in their preparation to enter the workforce.

According to Hager (1998) competency based training "has been viewed as the antithesis of education" (p.526). He goes on to explain a position held by some in higher education, that training is a mindless, routine and a repetitive activity. He contrasts this with the view, of education as the development of mind via completion of intellectually challenging tasks. These contrasting and historical views of training and education are changing (Hager 1990). Profound changes have taken place within tertiary education in the later part of the twentieth and twenty-first centuries as we have seen successive Australian governments prioritise the instrumentalism of higher education. Symes (2000) explains that "this has caused universities to change their epistemological orientation to develop stronger links with business and industry and to integrate their research endeavours with industry" (p.37). Symes states that with this closer link with employers one outcome that may result is the rise of vocationalism in the university sector. Symes advocates for a working knowledge which "bridges the divide between theory and practice, and which has the potential to produce a significant reconciliation" (p. 31) between vocational training and higher education. It is the twin ideas of bridging the gap and collaboration between vocational and higher education that this paper will be exploring.

The context of the study

Students in their third and final year of a Bachelor of Outdoor Education participated in a cross-country skiing subject where both a vocational and a higher education curriculum were concurrently delivered over a ten day field trip in the winter of 2013 in Kosciuszko National Park. The trip consisted of two parts:

1. The vocational training phase:

a) The teaching of cross country skiing skills.

b) The teaching and assessment of the Australian Professional Snowsports Instructor (APSI) Level 1 nordic ski instructor qualification.

2. A three day journey based cross country ski tour.

The first phase of the trip was a competency based programme, where La Trobe University under a licence agreement with APSI delivered and assessed their qualification. The APSI is Australia's peak body in all aspects of snowsport instruction, (alpine, snowboard, nordic and telemark). APSI is the body that represents Australian interests at an internationally level, through its affiliation with the International Ski Instructors Association. The second phase, a three day ski tour required the students to carry with them all the equipment, tent, stove, sleeping bag and food so as to be independent and self reliant as they travelled and lived on snow for the length of the tour.

A case study approach was used to gather student reflections. The literature on case studies highlights the relevance of experiential learning as a means of education as it can bridge the gap between the theoretical and real world practice as it portrays people and their perceptions of an experience (Van Maanen 1999). In brief, case studies are useful in seeing things from different perspectives, "regarding different ways of seeing as new ways of knowing" (Cohen, Manion and Morrison 2011 p. 290).

Additionally students were invited to be research partners in a collaborative effort with the writer. As a function of that role, focus groups were used to draw out the student's way of seeing and knowing, both pre-course, during and post the field trip. Students kept a reflective journal and were asked to comment on their experiences during the focus groups and the trip. Students were asked to submit their reflections post trip. To strengthen the students reflections and to avoid potential biases, readings around issues of workplace training, vocational and higher education, where distributed. Readings were chosen to facilitate student knowledge and engagement. Guiding questions were also distributed to students to assist them to reflect on this learning experience and to help them to examine the issues of a vocational training programme within a higher education context.

According to Steinberg and Kincheloe (1998) engaging students as researchers will enhance deeper learning as they participate in the discovery of new knowledge. The students ceased being consumers of knowledge but instead become observers of their own learning, asking questions of what they observed and assisted in the process of constructing knowledge. As new researchers the students started on the journey of reflective practice, which is a key component to become intentional in one's practice of craft and vocation.

Craftsmanship, knowledge and vocationalisation

According to Pardy and Seddon (2011) one of the reasons why higher education is elevated over vocational training is that western culture elevates the pursuit of objective truth. The pursuit of knowledge is separated from practice and emotion, as Hager (1988) writes, "from the ancient Greeks we have inherited the notion that ideal knowledge is represented by universal necessary truth, i.e. truth that is purged of emotional or practical considerations" (p522). As a result western culture has given a higher value to mental /mind work and in turn given less value of the knowledge that is embed into a person's practice of their craft, including the habits of creativity, unique problem solving attributes and the hands on skill to perform a task (Pardy and Seddon, 2011).

Rylie's seminal work in 1949 on the application of knowledge, where he describes two types of knowledge, the 'knowing that' and the 'knowing how' is important for us to consider in the vexed understanding of the hierarchy of knowledge. 'Knowing that' is associated with mental and intellectual learning, whilst 'knowing how' is the practical knowledge, of how to do something, where "performance is just a matter of conditioning or habit" (Stolz, 2013, p.2).

I argue that this division of knowledge for vocational and higher education is not useful nor is it necessary. Winch (2009) argues that within the 'knowing how' there is an intelligence embodied in the practice of the doing the job. He writes that in the performance of every physical skill there is an "underlying mental intentional action" (p.90). Kemmis (2005) states that a way of thinking comes through the practice of one's craft. He calls it a 'knowing practice'. Kemmis argues that when a skilled practitioner undertakes their work they are undertaking more then just the habitual or routine work, 'the knowing how' of getting the job done. Pardy and Seddon (2011) would agree with Kemmis as they discuss a similar concept to 'knowing practice'. Pardy and Seddon argue that the mastery or performance of a skill as performed by a craftsperson has an intelligence to it. They call it an intelligence of practice.

Stolz (2013) draws attention to the contrast of 'knowing that' and the 'knowing how' as we observe an imagined skilled practitioner. In the judgement of whether someone is masterful at some skill will depend on how smooth and effortless the action looked, how graceful is the act and does it align to what we know to be good about those skills. The craftsperson is not judged on their articulation of how the skill is performed or the bio-mechanics of the action, but on how well that task is completed.

A person becomes masterful in their profession, over an extended period of time. However it is not just time that is required, but a mindful thinking and reflection of practice. This mindfulness of practice as Pardy and Seddon (2011) state is a knowledge that is not a repetitive or mindless work, but a developmental knowledge that is both practical, creative and an example of higher order thinking. Symes (2000) gives us a useful term in thinking about what is going on here. He uses the term 'a working knowledge' as a means of thinking about bridging the divide between vocational knowledge and professional knowledge. A 'working knowledge' is what professions like outdoor education require so as to be work ready and that such learning will bridge the vocational and higher education divide.

A framework to place student responses

Symes (2000) explores four common historical positions taken on the issues of vocationalisation of universities. These four positions will form the framework of the student reflections on their experience of vocational training in their higher education course. The four positions are:

1. The liberal education model of higher education to be maintained.
2. Higher education should be pragmatic and outcome driven
3. The workplace and higher education: a connection of learning.
4. Vocational and higher education are interwoven.

The above four positions are summarised below with student reflections shedding light on each from their experience. In turn I will discuss implications and draw out some of the themes.

1. Higher education must maintain its liberal education model.

Higher education must be safeguarded from a product style education, the pragmatic, and the instrumental (Symes, 2000). Higher education must be about a liberal education and provide courses that are intrinsically worthwhile. An education that cultivates and encourages scholarly application and self-improvement is to be the ideal at a university level. Beckett and Hager (2002) questions the validity of vocational training and argue that an education that is instrumental in its intent makes for a compliant and manipulated workforce. Furthermore workplace and government demands for outcomes are not to the driving force that drives accountability and/or the curriculum process (Symes, 2002). A student illustrates this viewpoint, of the value of a broad liberal based education.

> *I feel like my university study has taught me to be an educator, rather than just a guide. It has developed my critical thinking skills and provided an exposure to a range of different ideas and thoughts on what outdoor education could and should be. Whilst I may not take on all the ideas that university has taught me in my own practice, I think the awareness of other alternatives and possibilities of outdoor education is a positive thing and still has value for use beyond my time at university. I feel, despite the university's traditional liberal focus, they're still providing a solid grounding of skills to be used in the workplace.*
>
> *(Nadine)*

2. Higher education should be pragmatic and outcome driven

This position rejects the liberal education construct and believes education should be instrumental and pragmatic (Symes 2000). This construct has its origins in the Scottish Enlightenment, that education should be useful to a country's economic development (Symes, 2000). Education needs to be leading towards an outcome for employability and should have utility in the work place. A student, Jack articulates the value of a utilitarian approach when he writes about his learning on becoming a ski instructor. *"As a student, I appreciate the competency based training approach to the subject, as it was concerned more with skills and technique rather than theory and abstract thought."*

Another student describes and articulates their view of the value of a pragmatic and instrumental type education:

"The direct emphasis on skill development is brilliant and the positive results can be seen immediately on our three day ski tour where these skills were applied. Travelling over snow cover which ranged from freshly fallen powder snow to bullet proof ice required the use of a multitude of skills, which if had not been taught in the days prior would have found it to have been even more of a struggle than it already was."
(Mark)

Joe reflects on his vocational learning:

> *The vocational experience with the APSI course was completely skills and teaching focused, with the concept of only one way of doing it. Very different to outdoor education at La Trobe University. APSI set a strong routine and set out simple steps, which is sometimes a discipline outdoor education at La Trobe lacks.*

Whilst Joe could see the value of a step-by-step process of learning a skill, Ian was frustrated with being told what and how to teach it. Ian described the course as prescriptive and highly structured and limited his ability to learn and apply the learning to broader circumstances, *"It felt as though all there is to teaching skiing, is to complete the teaching recipe that has been taught to us."*

A student describes the tension of the acquisition of skills verses safety in her higher education context.

"The irony of La Trobe's huge emphasis on safety, is that the university de-emphasis the personal physical skills that are required of outdoor instructors. It appears to me that these two areas of knowledge go hand in hand in outdoor education. For example, as was evident whilst ski touring, efficient and effective cross country skiing skills was a safety issue. Our group didn't have solid skiing skills, we as a group were too slow to cover the distance planned and rather than camping in a sheltered valley, spent the night on the exposed ridge line at 1980m above sea level in a blizzard instead. It is for the reason above that it is important to have quality hard skills in the outdoor pursuits". *(Nadine)*

One student's evaluation of the insertion of a vocational course was that it was a narrow and limiting. If such training was not balanced with a higher education curriculum, Glenda felt the learning would of been unbalanced and unhelpful. "*Without the assistance from my prior learning from my time at university I would feel quiet disempowered by the APSI course. The APSI course alone is limited in what it can offer for the environment and adapting to new pedagogical paradigms."*

3. The workplace and higher education a connection of learning.

This position argues that there is a nexus between education and the workplace. It articulates that schools and higher education institutions are part of that system that supplies educated people for the workforce (Symes 2000). It states that work, workplace learning and education are not disparate and that concepts of workplace learning stem from this position. According to Symes (2000) underpinning this position is a different view of learning, labour and work, for it "overturns the distinction between mental and servile labour" (Symes 2000, p34). This position sees that it is integral that theory is linked to practice in the workplace (Beckett &Hager 2002). Theory is to enhance practice and gives it a framework to work within. Nadine writes of her experience, of how higher education has assisted her to be work ready.

"Vocational courses are effective at teaching base level skills required of outdoor leaders. These skills are relatively easy to teach and easy to assess. In the case of the APSI course, when it came to teaching skiing, having a simple framework to remember was a reliable fall back position when things became difficult or challenging. However, La Trobe provided an exposure to ideas and options for outdoor education, developed environmental knowledge and helped to teach us to become educators. This being said, having this broader set of knowledge is only truly valuable if the graduate also has that solid grounding of outdoor skills, necessary when working in the field." *(Nadine)*

Nadine states effectively that a graduate to be work ready needs the combination of both a vocational and higher education. Grubb and Lazerson (2005) argue that the goal of higher education is to have graduates work ready. As an example of poorly prepared graduates, they state that professional associations often critise universities of being too research orientated and separate from the real business world. Grubb and Lazerson advocate for a closer relationship between theory and practice, that "knowledge and competence are not as disparate as some commentators assume (Beckett & Hager, 2002, p. 133)

Jack writes of his view of the need to include both vocational training and higher education to have work ready graduates:

"The higher education model is based in generalist and in a broad framework and whilst it may prepare a graduate for entry into a profession, it does not render them competent. The inclusion of vocational training in an outdoor education degree programme may go some way to developing more complete, work-ready graduates."

Glenda articulates her experience of higher education and that of being work ready:

Questions of competence are expressed as Latrobe students focus less on 'hard skills' and more on the theory behind the activity, the theories of learning, and the place in which the activity is held. Therefore, hard skills learned at La Trobe may not always be up to the expectations of the workforce, as the minimal amount of skill may not be present in order to meet the standards of the work place.

4. Vocational and higher education are interwoven.

This position argues that both a liberal and an instrumental education must be delivered in a balanced and integrated approach (Symes 2000). Whitehead (1962) advocated that all education must be a blended delivery of both vocational and the critical and reflective. Together they will inform each other and build on each other's strengths and that the dualism of educational approaches and knowledge should be rejected (Beckett & Hager 2002). The advocates of this position see that there is no hierarchy in knowledge of practical verses mental and hand verses head. That the separation of knowledge is groundless and that "vocational education is not an oxymoron" (Symes, 2000, p. 34)

An example of a blended delivery is where Joe explores knowledge and ways of teaching. This vignette demonstrates that in using both a competency based training model of learning combined with a higher education approach enables Joe to solve a learning problem encountered by one of his students.

> *"The APSI course has given me a background of knowing and a basis to teach from. My time in higher education has allowed me to adapt the APSI into a teaching style that will work with multiple clients and situations. The principles I have learnt from the APSI course, I can transfer to teaching in other environments, therefore I can say the APSI course has giving me the best insight into teaching skills. For example on a teaching white water skills trip to first year university students I came across students that were finding it hard to hold their edges of their kayak. I found it difficult to communicate the skill and for them to grasp it. I decided to drop everything I had tried and followed an APSI teaching method modified for the kayaking skill, this worked extremely well and they completed the skill well and did not forget it. As I was doing this, one of the my lecturers was watching and afterwards commented about the approach saying, that it worked well and he had not seen it before. This shows to me the teaching platform used in the vocational experience of the APSI is not just specific to skiing and can be used in many other skill teaching in outdoor education.*

Joe's vignette illustrates why Hager (2000, p51) writes "there is a body of educational thought that maintains the application of knowledge is necessary for proper understanding, 'it was only in doing it that I really understood it". It was as Joe was teaching, applying his learning from a competency based training course to a learning problem that his understanding or teaching became deeper as he applied it to the teaching and learning issue he faced. It was by "doing it" that he really got "it". Joe's vignette gets to the crux of a dilemma of learning a skill. This separation of manual/mental learning is not helpful in understanding learning. It was both in the doing (manual) and thinking/applying/analysing (higher order thinking) that a learning issue was overcome.

Mark reflects below on the concept, of how having a high competence in a skill e.g. cross country skiing enabled him to be more involved in critical outdoor education (Martin 2008).

> *A competent outdoor educator may have developed abilities, skills and attributes that become intuitive over time. When able to complete these tasks in an unconscious manner, "things just get done", this allows the outdoor educator to operate with a calmer state of mind. It allows them to utilise and put into action those broader cognitive skills as required. This allows the leader to respond to other cues whilst giving little to no thought as to how to perform the skill. The outdoor educator can then focus on other areas of the curriculum other then the skills.*

Mark illustrates the concept of a working knowledge that Symes (2000) sees as the bridge between theory and practice, vocational and higher education. Mark's observation that by having an approach to learning that brings vocational training and higher education together enables graduates to be more effective in the work place.

Mark writes of an interesting insight in relation to the criticisms put forward by Grubb & Lazerson (2005) around issues of competency of graduates in the workplace.

> *"None of my outdoor activity electives at university demanded of me to be able to prove that I have the necessary occupational skills, so as to adequately perform in the work place. The university just wanted to know if I could operate in a safe manner. La Trobe University emphasised the mind/head knowledge, the theory of why go outside into the outdoors as it places the theory of knowing above and beyond the physical skill sets. The question I have as a student and learner is; does higher education create a lesser graduate than it potentially could by focusing so much on the mind/head knowledge, the theory?"*

Mark's question is one that should be considered. Cathy's observation helps to illustrate an answer to Mark's question as she reflects on the practical nature of the vocational training on the trip:

> *"Without these new vocational skills (how to teach skiing), I consider that I may not have been as confident in teaching and leading others in cross country skiing. I also believe teaching others how to ski would have been more difficult as I wouldn't have had a distinct sets of instructing skills. I feel as though when I was stuck on what to teach I could fall back onto my newly acquired instructional skills, it was in the doing of teaching that I came to finally understanding it."*

The vocational training gave Cathy the skills of the craft of skiing and the ability to teach skiing to her students whilst on placement. The embedding of vocational training into higher education here for Cathy seems to alleviate the criticism of Grubb and Lazerson (2005) and answers Mark's question, i.e. the importance of linking theory to practice. What is interesting to note is when Cathy writes about the learning of vocational skills, she is referring to 'the learning of how to teach'. By implication then, the question is asked, is doing a Diploma of Education an example of vocational training or of higher education? Perhaps the only difference is cultural and/or political, as suggested by Symes (2000) and Maclean and Pavlova (2011). Symes (2000 p. 42)) asserts that the "distinction between a liberal or vocational education is largely a spurious one...for all education is vocational and, in the end, it is simply a matter of to what degree".

Discussion

Advocacy for a more inclusive higher education sector, so as to value vocational training, with both sectors forging better links with the other has been argued for some time Hager (2000) and Pardy and Seddon (2011). Gillard (2009) in launching the Bradley Review recommends a bridge is needed between the two sectors. In this paper I heard from a student perspective of how we trialled a bridge, by embedding of a recognised vocational training course inside a higher education subject. Student reflections were strongly positive on such a combination of vocational and higher education. Jack commented on the collaborative approach to his learning at La Trobe: *"The vocational style of learning in the ''activity/outdoor skill" subjects at La Trobe demonstrates a marriage between the capabilities of an outdoor leader and the knowledge of the teacher"*

Students reported that the learning of skills assisted them to undertake the leadership of the activity with an increased capacity to mange groups safely, to deliver education outcomes and be engaged in critical outdoor education (Martin 2008). This confidence enabled at least one student to become more critical in his education. Mark writes: *Knowing that I can move easily and safely, as well as impart this knowledge to my students allows me to share my observations and provides more than just a trip to the Snowy Mountains.* Mark became more aware of the teaching opportunities that presented themselves and this enhanced his delivery of environmental and outdoor education.

Secondly concepts of students feeling work ready were examined. Students reported feeling better prepared to enter the work force, as they have both the theoretical knowledge and the knowledge of practice. Glenda writes: "*Hard skills learnt at La Trobe may not always be up to the expectations of the workforce, as the minimal amount of skill may not be present in order to meet the standards of the work place".* Without exemption students reported that the integration of a vocational course has increased their work readiness and confidence to be outdoor educators. This can be seen in Cathy's response *"without these new vocational skills (how to teach skiing), I consider that I may not have been as confident in teaching and leading others in cross country skiing"* It is clear from students self-reports that they have become more work ready.

What students articulated is that they found value in the balanced and integrated approach both in a knowing how and in a broader knowledge (a knowing that) approach. Hager & Gonczi (1996) referred to this approach almost 20 years ago as an 'integrated competence' where the higher education preference for the development of attributes meets the task focussed vocational education style. This concept allows for a richer learning experience for students. Skills (both of teaching and demonstration) that will assist a graduate to be work place ready and capabilities such as critical thinking and reasoning as part of a quality critical outdoor education.

Thirdly, the separation of vocational training and higher education is perhaps an artificial one in outdoor education. Jack writes: *"The arbitrarily separation of vocation education and higher education is difficult in outdoor education because there are components that are inherently vocational."* It appears Jack stands in good company. Maclean and Pavlova (2011) state, "on the epistemological level there is a basis for developing close relationships between higher education and vocational education" (p.325). Most students reported that the balanced approach of blending vocational and higher education taken in this subject enhanced their learning and was an example of bridging the gap between vocational and higher education. Symes (2000) explains that a knowledge that bridges the gap between vocation and higher education has been labelled or called 'a working knowledge', knowledge that "bridges the divide between theory and practice" (p.31) which has the outcome for graduates that they are work ready. As Jack puts it, in his opinion "*the goal in attending university is to get a vocation".*

In summary

In this paper we investigated the intersection of vocational training and higher education using outdoor education as a lens . Three themes emerged:

1. Students view the bringing together of both sectors as an advantage for their learning.
2. An integrated delivery assisted the students' work readiness.
3. From a student perspective, they agree with Hager and Laurent (1990) that the separation of vocational training and higher education is an arbitrary one and does not support learners becoming experts or masterful in their practice as educators.

The three themes that emerged are reflections and responses to a specific teaching and learning experience in Kosciuszko National Park. With this lived experience there are strengths and limitations. The difficulty of applying the implications of what these seven students wrote is implicit in that it was a unique experience for seven people. Therefore to generalise from this case study to the international debate of the vocationalisation of higher education would seem inappropriate. However its strength is that the themes articulated in this study is supported by the literature and this gives weight to their reflections. The implications for outdoor education, if the student's responses were to be considered, then an integrated approach of vocational education and higher

education be considered. Learning that brings together both the hand/practical and the head/theory will produce better graduates as they prepare to apply their craft in the workplace.

Finally the reflections of the students are an example of a collaborative approach to vocational training and higher education. Hager & Gonczi (1996) refer to a concept of 'integrated competence' where the higher education preference for the development of attributes meets the task focussed vocational education style. This concept allows for a richer and deeper learning experience for the student and this will assist the graduate to be more work ready.

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Tim Harley

Catering for Diverse Dietary Needs in a Wilderness Setting

A discussion about expedition catering for diverse dietary needs, the associated risks present amongst school aged children and some practical solutions from the Western Australian experience.

Prepared for the National Outdoor Education Conference, Adelaide 2014

The task of camp catering is often one organized by staff who have historically not had formal training in hospitality, group style catering, food handling hygiene or nutrition, but rather learned "on the job". This makes the challenges of providing a nutritious, allergy aware menu that is appropriate for an expedition programme significant, particularly if it is the intention to empower students in the food management and cooking process.

Wilderness based camping programmes present a real opportunity to learn about taking responsibility for what you eat. It may also be argued that school based programmes have a responsibility to promote fruit and vegetable intake. As providers of all-inclusive outdoor experiences it is argued here we have a duty of care to ensure participant safety through provision of not only healthy food, but food that is safe, both in terms of hygiene and remaining allergy-aware.

In response to compelling clinical research and changes in Australian population size, food production and the public costs of chronic disease, government sponsored campaigns such as *"Go for 2 fruit & 5 veg"* and *"Live lighter"* have raised public awareness about the importance of the issue as a major topic of public concern and comment (Heathway's Australia). At a broader community level Australians have known for some time; *"cardiovascular disease is the largest single cause of death in the United States, the UK and Australia. It is a multi-factorial disease, but the fundamental environmental factor is diet. These observations have led to the continued support for the recommendation to increase the consumption of fruit and vegetables."* (Samman et al., 2003, University of Sydney).

Beyond the realm of healthy eating is the secondary issue of food related allergies and intolerances. For the purposes of this article a *food allergy* will be defined as an immune system response to a food protein that the body mistakenly believes is harmful. Currently there is no cure for a food allergy. Avoidance of the food is the only way to prevent a reaction. There are more than 170 foods known to have triggered severe allergic reactions.

A *food intolerance* does not involve the immune system, is not life threatening and in this article does not include; gluten free diets, diet restrictions based on religion, vegetarian based diets or diagnosed eating disorders/anxieties, although these are all present in the current student population.

In Australia it is estimated that 1 in 10 babies, 6% of children and up to 2% of adults, have food allergy and some of them will experience a life threatening allergic reaction (anaphylaxis). Food allergy is the leading cause of (severe reactions) anaphylaxis outside of the hospital setting (Allergy and Anaphylaxis Australia, online May 2013).

Hale School offers an extensive Outdoor Education programme for all students in years 5 to 10 (compulsory) and a range of leadership development programmes in years 10, 11 & 12. The compulsory programme (5-10) is planned, staffed and delivered by the Outdoor Education Department that has been operating since 1996. Prior to that a significant stand-alone Outdoor Adventure expedition was run for year 11 students since the early 1970's.

In 2013, Hale School had a total student population of 1432 boys across Years 1-12 and 934 students involved in Outdoor Education programmes from years 5-10. The programme is entirely camps based with very limited student contact time prior to each camp.

Catering for these programmes is arranged by the outdoor education staff on a camp by camp basis including menu design, food ordering, storage and packing for each expedition group. This system of "in-house" catering is, in principle, the same method in use by many schools and commercial providers in Western Australia (WARGOE Food Summit, 2013, pers. comms).

The underlining principle in this process is that the catering must fit the programme style and support the specific camp outcomes. At Hale, the menu, the preparation, cooking and cleaning functions are all designed to be as student-centred as possible. Food on camp is not just a function of "feeding the masses" but a carefully planned stand-alone camp activity.

Based on Hale School student health records in 2013 there were 111 students on outdoor programmes with known diet restrictions, which equates to 11.8% overall. Almost half of these students (5.2%) reported a known food allergy and of these 49 students, 17 were classified severe with anaphylaxis risk.

TABLE 1- Known Dietary Restrictions at Hale School in 2013

Category	Number of Students	% of Known Diet restrictions	% of students Yr. 5-10
Allergy (mild to severe)	32	28.83	3.43
Anaphylaxis	17	15.32	1.82
Gluten Free	4	3.60	0.43
Intolerance	15	13.51	1.61
Religious considerations	26	23.42	2.78
Anxiety	3	2.70	0.32
Vegetarian	6	5.41	0.64
Medical	1	0.90	0.11
Other	7	6.31	0.75
Total	111	100.00	11.88

TABLE 2 – Types of Food Allergy at Hale School in 2013

Food Allergy	Kiwi fruit, macadamia nuts, peanuts, tomatoes, capsicum, walnuts, all nuts, prawns, crustaceans, mango, orange juice, shellfish, yellow food colouring, dairy, chocolate, fish, seafood, cashew, pistachio, eggs, egg based products, egg white, MSG, apples, preservative 282 (in bread)
Anaphylaxis Food Allergy	Eggs, dairy, all nuts, peanuts, tree nuts, cashews, pistachios, seafood

Hale School is an "allergy aware" school and acknowledges a duty of care to provide a safe and supportive environment for students with anaphylaxis. Student information collected through the enrolment process is uploaded to the main school database (Synergetic) and from this data, the camp medical forms are generated. Recent studies show that teens are the highest risk group for fatal, food triggered anaphylactic reactions. The most common food allergies in childhood are cow's milk, egg, peanut and tree nut. The foods that trigger 90% of food allergic reactions in Australians include cow's milk, egg, peanut, tree nut, sesame, soy, wheat, fish and shellfish. Peanut, tree nut, fish, shellfish and sesame allergies are usually lifelong (Allergy and Anaphylaxis Australia, 2013).

(*'Anaphylaxis on expedition - Kalbarri, 2013' – available on request.)

In developing strategies to deal with these food risk factors a very significant input to our camp menus has been through the sharing of ideas, recipes, suppliers, and products with local colleagues and outdoor guides working on our programmes. This was most recently achieved very successfully in the form of the "WARGOE -Outdoor Education Food Summit" (Western Australian Reference Group for Outdoor Education 2013 pers. comms. 5 November) where Outdoor Education colleagues across the education and commercial sectors came together and worked through common issues, recipe ideas, food planning and ordering systems. Through these discussions two very positive outcomes were achieved; (a) improved medical and diet form information flow and, (b) shift in focus towards vegetarian based meals.

The Dietary Information section of the medical form has historically been ineffective in providing accurate detail in regards to known and unknown diet restrictions. This experience has resulted in the development of a 'Dietary Information Form', developed in collaboration with other like-minded Western Australian Schools involved in the WARGOE group. This has been implemented at Hale in 2014 and has significantly reduced the administration task of defining one allergy from the next.

(*' Hale School Dietary Information Form' available on request.)

Through gaining a better understanding of vegetarianism, many risks associated with food allergy and changes required due to diet restrictions can be minimized or avoided. In the process, the meal designs becomes inherently well balanced with vegetable content, albeit sometimes in a canned form as maybe necessary due to the expedition style. An example of this approach working well was seen on a recent Year 7 camping programme where a student presented with severe (anaphylaxis) allergies to egg, diary, all nuts and normally eats only a piscatorial diet (no red meat but will eat fish). In applying our standard vegetarian diet menu plan we were not required to make <u>any change</u> to the catering as all ingredients were cleared of possible allergens. This type of prior planning provides field staff with a lot of confidence that the food risks have been mitigated and allows the student to be involved in the cooking process with his peers, as there were three other vegetarians on the same programme.

Vegetarians can be classified into the following groups and we have experienced all three at Hale;

- **Lacto-ovo vegetarians** – exclude red meat, offal, fish and poultry. Obtain protein from dairy products, eggs, beans, legumes, pulses and nuts.
- **Lacto-vegetarians** – exclude red meat, offal, fish, poultry and eggs. Obtain protein from dairy products, beans, legumes, pulses and nuts.
- **Vegans** – exclude red meat, offal, poultry, fish, eggs and dairy products. Obtain protein from beans, legumes, pulses, nuts and soy products like tofu.

It has become important to communicate clearly with the Hale parent body about the types of special diets present, the rationale for a vegetarian biased menu and how students protein needs will be met. It is possible to consume enough protein for proper growth and development by following vegetarian style of eating however the type of vegetarian diet most commonly associated with significant nutritional problems in children is the vegan diet and this is still a challenging diet to cater for in wilderness settings (Better Health Channel, 2013).

Victorian Government Health Department guidelines recommend a child-vegetarian diet must include protein alternatives which could include dairy products, eggs, grains, legumes, pulses and various soy foods such as tofu, tempeh. In particular grains and legumes are a reliable protein source on our outdoor programmes in the form of lentils, chickpeas, hummus, red kidney beans, three bean mix and occasionally baked beans. In addition we attempt to include a mixture of refined and unrefined (wholegrain) cereals and a variety of energy-giving foods in the menu such as:

Cereals – all types of cereal are suitable for vegetarian diets. We include wholegrain cereals (nut free muesli) and generic products like Weetabix, couscous, quinoa as well as refined cereals like pasta, white rice and bread

Dairy products – full fat dairy products are the most common choice (fresh full cream and long life UHT milk). A common alternative is soy milk with added calcium.

Fruit and vegetables – a modest variety of fruit and vegetables is served every day. As a guide we aim for a serve of fruit and three small serves of vegetables each day, not including canned fruit or vegetables which are also provided.

Oils – we are using canola oils because they contain linolenic acid, which is important for brain and nervous tissue function. Oils also provide energy. We avoid olive oil due to the low temperature at which it burns.

(* Sample of Hale School camp menu – available on request.)

For programmes with in-house catering systems a very large aspect of the prevention matrix is in the initial menu design and methods to be used for cooking. The following list provides some examples of where to start;

- Check the Allergy and Anaphylaxis Australia website. Go to http://www.allergyfacts.org.au
- Check the Grains & Legumes Nutrition Council. Go to http://www.glnc.org.au
- Become an officious label reader. Outdoor Education staff need to be "allergy aware".
- Choose wholesale suppliers that will provide "allergy" information about their products (on-line).
- Construct your own photographic catalogue of products you frequently use.
- Develop a system for communicating menu plans with those staff who will actually be in the field
- What is discussed in the office needs to transfer to the field in a practical way.

In addition to learning "on the job" Hale School Outdoor education staff have undertaken some limited PD (Food Handling course) and in 2013 engaged a nutritionist consultant specializing in RAW food. The concept of having a professional nutritionist conduct a nutrition-based audit on our camp menus is now under consideration.

This article has attempted to define the range of dietary restrictions that impact on the provision of wilderness camp based catering. In defining these restrictions the duty of care extended to our students requires programme coordinators to be well informed about their student's dietary needs and associated risks. It is suggested that through a greater emphasis on fresh whole food and vegetarian meals, that are inherently far more hypoallergenic in their design, coordinators can achieve student centred menus that will pose fewer risks and support the educational focus on healthy eating in our communities.

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Murray Henstock

All I Need is a Student, a Teacher, a Tall Ship and a Star to Steer Them By

Abstract:

A student's engagement with school is critical to developing healthy and productive members of society. As such, it is essential to identify effective strategies to help re-engage students who traditionally may have left school prematurely (Henstock, Barker & Knijnik, 2013). Results of recent studies suggest participation in sail training has a positive impact on the development of self-concept, social capital and student motivation as well as reports of higher overall engagement with learning and education. In addition teachers who participate in sail training programs themselves appear to be inspired to create more engaging and meaningful lessons further increasing positive student outcomes. The arena of sail training on both large and small vessels offers a number of unique and memorable learning environments applicable to many different key learning areas within the Australian Curriculum and opportunities in a number of tall ships around Australia and the world exist to explore how sail training programs can link with national and state curriculum. This would promote not only growth of individuals' teamwork, leadership and self-concept but also facilitate effective and meaningful learning experiences for teachers and students alike. Examples of existing connections between sail training and education can be seen in vessels in Australia such as Leeuwin II in Western Australia, Windeward Bound in Tasmania, One & All in South Australia, South Passage in Queensland as well as international vessels such as Spirit of New Zealand in New Zealand and the Ocean Youth Trust in the United Kingdom to name a few.

What is sail training?

Sail training is defined by Sail Training International, a global governing body for sail training, as requiring,

"participants to confront many demanding challenges, both physical and emotional, inspiring self-confidence and the acceptance of personal responsibility. It promotes an acceptance of others whatever their social or cultural backgrounds, and develops a willingness to take controlled risks. For most who undertake sail training program it is a positive life-changing experience" (2014)

Sail training can take place on any vessel where activities designed to develop teamwork and leadership skills can be accommodated. It is a common element of many tall ship and sailing yacht programs around the world.

Similar to land based adventurous learning, participants of these sail training voyages are expected to live in close confines with a number of other people, they may have previously never met, and work together to accomplish a wide range of challenging activities including; climbing up - and working on - a tall, and at times swaying, mast as well as participate in teamwork activities such as handling the sails, conducting regular ship duties, steering the vessel and even taking control of ship operations. Participants are also involved in several facilitated debriefing scenarios designed to provide opportunities for reflection on behaviours, feelings and attitudes and how these can be positively utilised for the future (Henstock et al., 2013).

Sail Training and Students

Like it's land based counterparts sail training is comprised of structured challenges which aim to increase an individual's physical and general self-concept which may traverse into academic self-concept and have a positive impact on the participants' learning and education (Bloom, Loughead, & Newin, 2008; Larson, 2007; Goldenberg, McAvoy & Klenosky, 2005).

Henstock et al. (2013) found other studies with similar results. Norris and Weinman (1996) highlight positive self-esteem changes following participation in a sail training voyage. Grocott and Hunter (2009) determined sail training improved youth self-esteem while Finkelstein and Goodwin (2005) demonstrated an increase in the development of social capital and "civic identify formation" and ability to work with others by facilitating participants in developing a positive physical self-concept that could be transferred to other areas of the participants lives. An international study by McCulloch, Allison, McLaughlin, Edwards, and Tett (2010) investigated sail training as being an education for life which leads to a long lasting increase in self-confidence and self-efficacy. Additionally Henstock et al. (2013) found evidence to suggest participation in sail training can lead to greater student engagement with education. The preliminary findings suggest there is a positive relationship between participation in a sail training program and engagement with learning, the development of physical, social and emotional self-concept, as well as an increased sense of purpose behind studying, translate into an increased academic self-concept and an increased motivation to study (Henstock, 2013).

Sail Training and Teachers

Sail training's relevance to the educational environment is just as important to teachers as it is to students. When teachers participate in outdoor programs they become the student (Marlow & McLain, 2011). As such many of the benefits highlighted by previous studies can also occur within them. In other words, teachers who participate in a sail training program can potentially increase their leadership skills, their ability to collaborate with others, their self-concept and self-efficacy as well as increase their desire to contribute to the greater community.

Foran (2005) suggest "the outdoors magnifies the teaching experience" and allows the teacher to link the outdoors with learning. When they return to the role of the teacher this will be reflected in the preparation, execution and reflection of classroom activities. "A strong sense of efficacy facilitates cognitive processes and performance in a variety of settings, including quality of decision making and academic achievement" (Zulkosky, 2009).

Anecdotal evidence suggests teachers who participate in sail training programs become inspired to use these experiences in the classroom to engage the students and create exciting unique learning experiences that both connect with the curriculum requirements as well as the sail training and maritime environments in order to deliver unique, memorable and relevant lessons to their students. Teachers who become more confident in their

abilities also more willing to try new things in the classroom (Ghaith & Yaghi, 1997) and more engaging lessons leads to more engaged students.

Marlow and McLain (2013) investigated the impact of experiential learning on teacher classroom practice and found teachers who participate in experiential learning seek more experiential activities and once familiar with them begin to seek how to pass this on to their students.

A teacher who recently participated in a sail training program for the first time remarked "As teachers we are the first line (apart from parents) to give students input on things". On average a student will spend between five and seven hours per day, five to six days per week, with their teachers. This happens around 40 weeks per year depending on the school and educational system. This student - teacher interaction suggests teachers have a potentially long lasting influence on students.

Other teachers who have recently completed a sail training program report they have "thought about a lot of other students that would really benefit" and have "been inspired and would love to do something like this with those other students". These teachers are now actively searching their school and identifying students they feel would benefit by participating and are actively encouraging them to apply for their own sail training programs. This suggests getting teachers involved with a sail training program may lead to a future increase in sail training applications from students who have been influenced by those teachers.

The inclusion of teachers in sail training is not a new concept. Practitioners and operators all around the world have had either casual, formal or unidentified links with both teachers and education in many ways. Some operators have teacher volunteer crew, others take school groups out to sea whilst others conduct formal education classes at sea. Some countries even have sail training embedded in their school curriculum.

Linking sail training and education

In whatever format sail training can be linked to a wide range of key learning areas across the school curriculum. These include, but are not limited to Biology, Chemistry, Physics, Earth and Environmental Science, Astronomy, Maths, Personal Development, Health and Physical Education, Languages, History, Music, Geography, Psychology, Communications, Business Studies, Visual Arts, Technology and Design, International Studies and Engineering to name a few.

Examining the practices occurring in sail training and similar programs around the world it can be seen each program has been established for a different purpose with the core aims of personal development and improvement in mind. Closer investigation of these programs could uncover underlying principles and outcomes that may allow the development of new and innovative classroom programs and activities to help increase

engagement and learning and possibly decrease anti-social behaviours such as bullying and students dropping out of school.

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Tony Keeble
Magic Weavers – A Curriculum Journey

Introduction
In 2011 I travelled to Europe and Scandinavia on a six week study tour. The first three weeks was spent travelling with a dozen other Principals and teachers visiting several schools and looking at innovative practices in rural schools.

During the third week we visited Scotland and attended the annual Scottish Learning Festival (SLF). It was during this festival that I attended a talk by Sir John Jones. Sir John Jones was Knighted in 2003 for his services to education and teaching and learning. His talk was on 'Making Change' and during the talk he spoke about how teachers really are 'Magic Weavers', and it was from this talk that I have borrowed the term 'Magic Weavers'.

In term 3 of 2011 I became the Principal of Bogong Outdoor Education Centre. The schools strategic plan at that stage included the evaluation of the current curriculum and then to re write the curriculum to align with the school's vision of ***'Educating towards Sustainable Living'***.

Underlying Principle
It was important to me that we designed an Outdoor curriculum that ***didn't*** use outdoor adventure activities as the building blocks for the curriculum. From my own personal experiences, many 'Outdoor Providers' including schools often start from the activity premise when building outdoor curriculum programs. For example conversations might sound like….., 'we have a venue situated in a certain geographic location and we can do white water rafting on this river, we can climb on this cliff, bushwalk and camp in this area as the views are amazing and we can ride on Mountain Bikes because the 4wd tracks in this area are great. Therefore let's design a curriculum program that includes these activities, oh, and don't forget high ropes as we can build that at the centre'.

While this might be a little crude, we can imagine the scenario. Thus the challenge to the staff was to design curriculum based around an academic and outcome need. What were these outcomes? What was our educative purpose? And what was the journey? This is what I call ***'Magic Weaving'*** and forms the basis for the remainder of this paper.

Our Curriculum Journey

In 2010 there was a new School Strategic Plan (SSP) written that had five areas to work on between 2011 and 2014. These two main areas were:

1. A review of the current curriculum.
2. To formalise a curriculum to incorporate a specific education for sustainability program.

We decided that we no longer wanted to deliver the current curriculum as it was activity based focused. Thus we didn't review it. Instead we jumped straight into formalising a curriculum specific to education for sustainability.

What did we do?

We watched the TED talk from Ken Robinson titled 'Changing the Education Paradigm'
http://www.ted.com/talks/lang/en/ken_robinson_changing_education_paradigms.html

From this talk we looked at the role of reforming public education and what role does our school play in public education, it's fair to say we looked at big picture stuff to start with.

We then looked at the habits of our school and posed two questions:

1. What does an education for sustainable future curriculum look like?
2. How long does the educational experience need to be at BOEC in order for the curriculum to have an impact on student learning.

Both these questions were answered over an 18 month period.

We also looked at the Green School in Bali and looked at their curriculum. We sent a staff member to the school to talk to the teachers there about their curriculum and how they manage and develop it. We looked at the TED talk at http://ted.com/talks/john_hardy_my_green_school_deam.html

The lessons learnt from the green school consisted of:

1. Be local
2. Let the environment lead
3. Grand Children

Once we looked at the big picture items, we then went about restructuring our school so that the teachers could focus on educational delivery and development and not be consumed by other mundane Department paperwork.

We then looked at Professional Learning Teams in each campus and what these meant. Staff where then put through a series of day long training sessions on how PLT's function and their importance in the school development process.

We then set aside whole days to develop the curriculum at several retreats based around the questions and focus.

During these sessions staff watched a video of Sir John Jones talking at the Scottish Learning Festival. His discussion was around change and what that looked like in a school. The three questions asked were:

1. Who are we?
2. Why do we live and work the way we do?
3. What might we become?

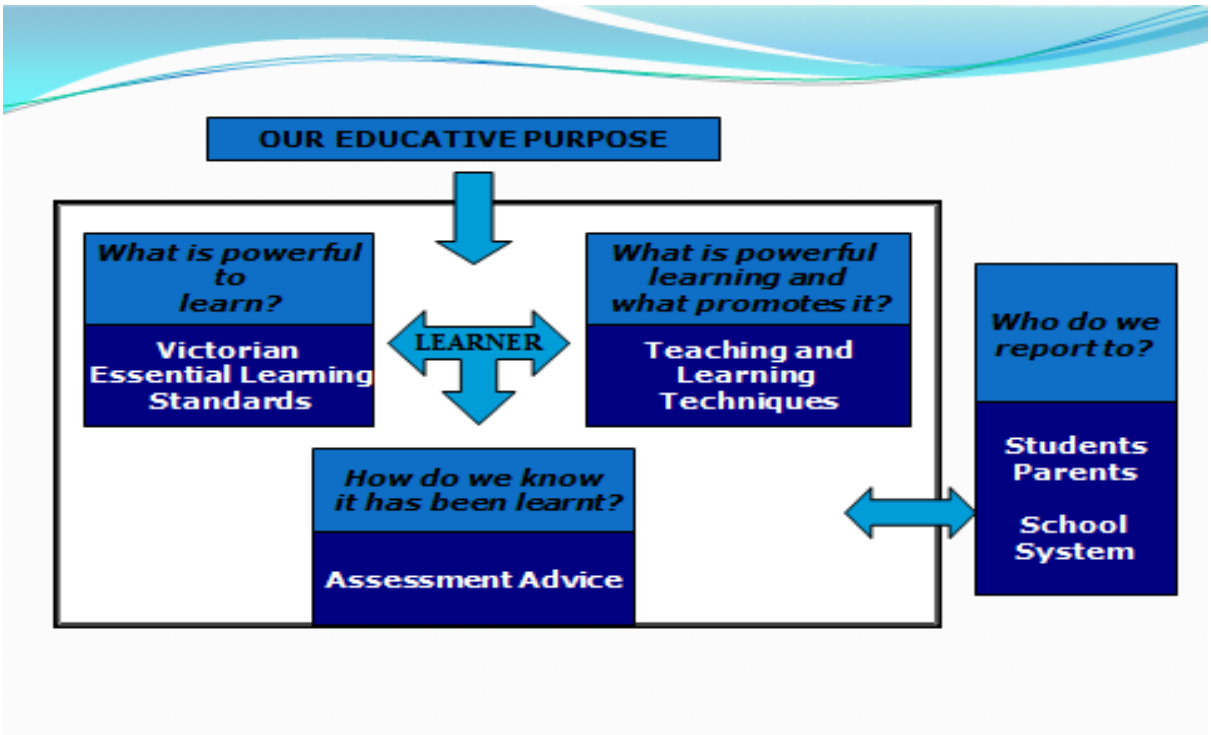
We then introduced several documents on research and curriculum that was relevant to the Australian context. These documents include:

1. The Australian Governments National Action Plan for Education for Sustainability.
2. Educating for a sustainable future: A national Environmental Education Statement for Australian Schools.
3. Earth Citizenship: A conceptual framework for learning for sustainability.
4. Critical review of current practice and research of environmental education and education for sustainability for Kindergarten to year 12 from 1990.
5. Sustainable Action Process (SAP).
6. Sustainable curriculum framework: A guide for curriculum developers and policy makers.

As part of our conversation, we agreed on a definition of curriculum. We settled with:

- Curriculum/ n.p. Curricula/E19. (from Latin = a running, a course)
  A course of study at a school, University etc

We also agreed that curriculum is not teaching materials and that curriculum is the framework around our teaching and learning. Once our staff established this understanding, it made it easier to produce the curriculum framework, instead of it looking like this huge mountain to climb.
With this we looked at the following diagram:



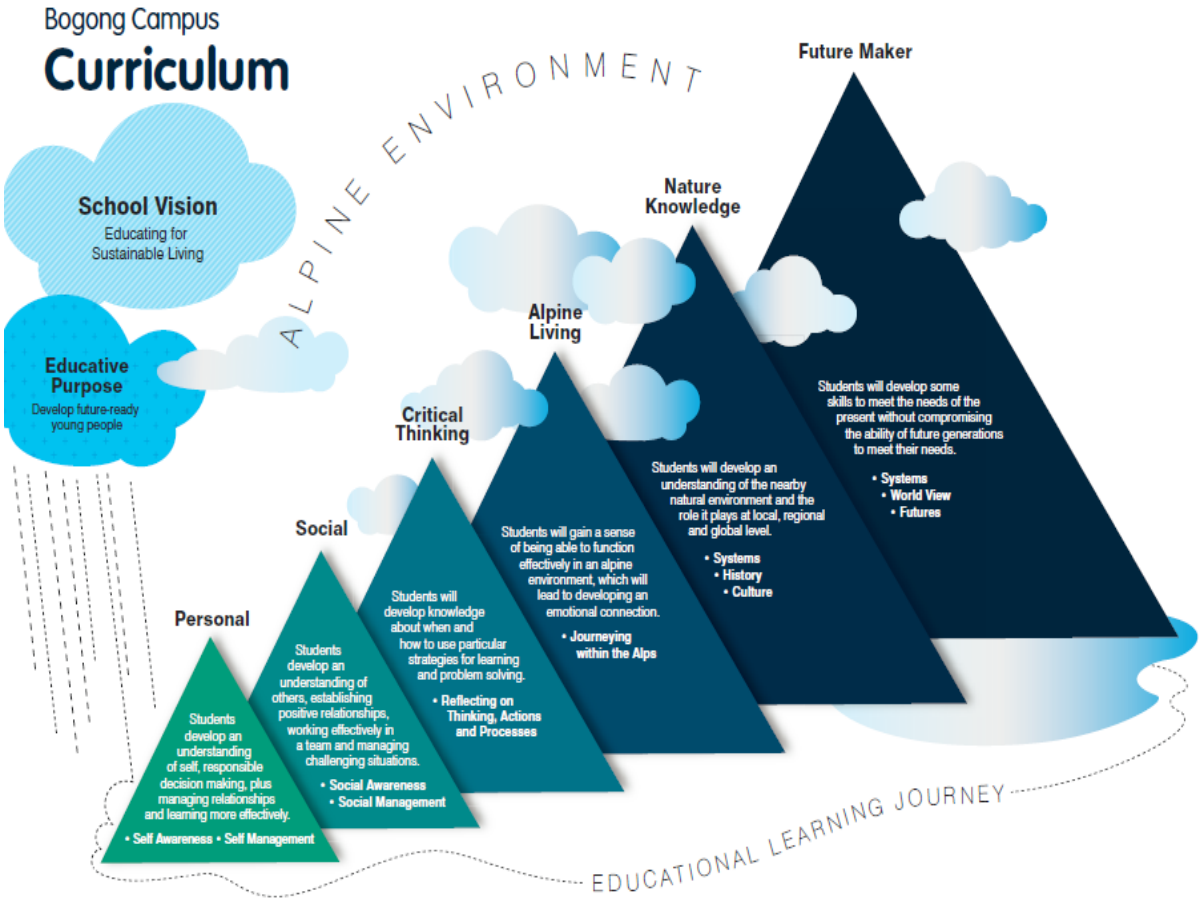
(source: DEECD 2010)

The diagram above gave our staff the context on which part of the curriculum journey we one. In the first section we looked at what is powerful to learn and these are our two curriculum framework documents which at in appendix 1 and 2. From there we discussed that the next phase will be the assessment phase and that our assessment has to match what is powerful to learn. Prior to looking at assessment we did spend a few terms on evaluating the teaching techniques and establishing a preferred teaching model. In 2014 we are developing the assessment material. We already have a staff member who has completed their Masters in developing a formative assessment tool known as 'Concept Mapping'.

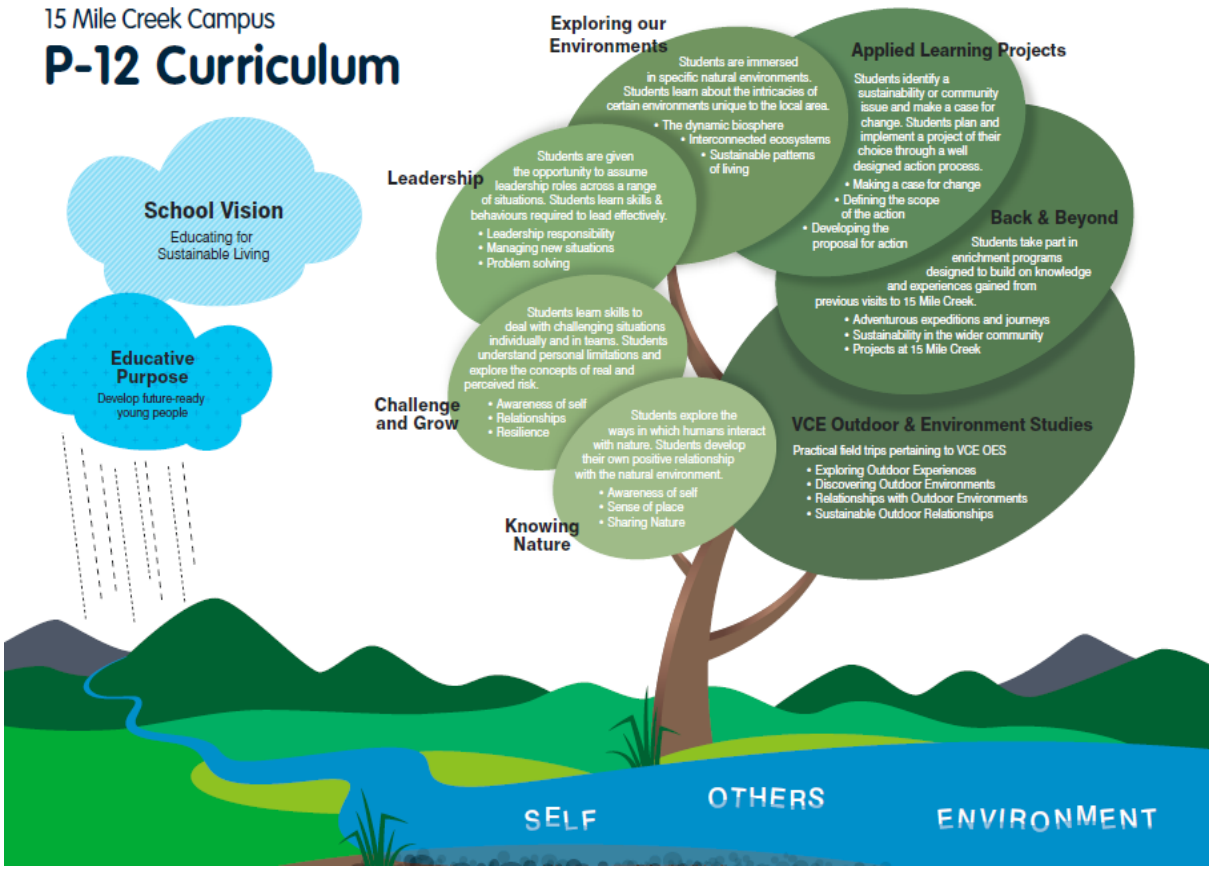
From all of this process we have redefined what we teach and how we teach. We have redefined the programs and made several new teaching units that are local and look at students working together to make change in their communities around sustainable living practices and other projects that have come out of critical thinking curriculum.

In 2014 the curriculum was implemented and we are currently delivering the new curriculum. Like anything at the school level, we are on a continuous learning cycle and we will continue to learn from each program and make small changes as we go. Now for us it is time to embed the new curriculum.

Appendix 1


Bogong Campus
Curriculum
ALPINE ENVIRONMENT
School Vision
Educating for Sustainable Living
Educative Purpose
Develop future-ready young people
Future Maker
Nature Knowledge
Alpine Living
Critical Thinking
Social
Personal
Students will develop some skills to meet the needs of the present without compromising the ability of future generations to meet their needs.
• Systems
• World View
• Futures
Students will develop an understanding of the nearby natural environment and the role it plays at local, regional and global level.
• Systems
• History
• Culture
Students will gain a sense of being able to function effectively in an alpine environment, which will lead to developing an emotional connection.
• Journeying within the Alps
Students will develop knowledge about when and how to use particular strategies for learning and problem solving.
• Reflecting on Thinking, Actions and Processes
Students develop an understanding of others, establishing positive relationships, working effectively in a team and managing challenging situations.
• Social Awareness
• Social Management
Students develop an understanding of self, responsible decision making, plus managing relationships and learning more effectively.
• Self Awareness • Self Management
EDUCATIONAL LEARNING JOURNEY

Appendix 2


15 Mile Creek Campus
P-12 Curriculum
School Vision
Educating for Sustainable Living
Educative Purpose
Develop future-ready young people
Exploring our Environments
Students are immersed in specific natural environments. Students learn about the intricacies of certain environments unique to the local area.
• The dynamic biosphere
• Interconnected ecosystems
• Sustainable patterns of living
Applied Learning Projects
Students identify a sustainability or community issue and make a case for change. Students plan and implement a project of their choice through a well designed action process.
• Making a case for change
• Defining the scope of the action
• Developing the proposal for action
Leadership
Students are given the opportunity to assume leadership roles across a range of situations. Students learn skills & behaviours required to lead effectively.
• Leadership responsibility
• Managing new situations
• Problem solving
Back & Beyond
Students take part in enrichment programs designed to build on knowledge and experiences gained from previous visits to 15 Mile Creek.
• Adventurous expeditions and journeys
• Sustainability in the wider community
• Projects at 15 Mile Creek
Challenge and Grow
Students learn skills to deal with challenging situations individually and in teams. Students understand personal limitations and explore the concepts of real and perceived risk.
• Awareness of self
• Relationships
• Resilience
VCE Outdoor & Environment Studies
Practical field trips pertaining to VCE OES
• Exploring Outdoor Experiences
• Discovering Outdoor Environments
• Relationships with Outdoor Environments
• Sustainable Outdoor Relationships
Knowing Nature
Students explore the ways in which humans interact with nature. Students develop their own positive relationship with the natural environment.
• Awareness of self
• Sense of place
• Sharing Nature
SELF
OTHERS
ENVIRONMENT

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Amanda Lloyd and Marian Crossley

Connecting to the Outdoors in the Primary School Curriculum

Our nature-estranged lifestyle is a cause for concern (Gray, 2005; Kellert, 2012; Townsend and Weerasuriya, 2010**)**. Direct contact with the natural world is diminishing for many children in modern society and as O'Brien & Murray, (2006, p. 5) espouse, "the vital experience of using the outdoors and being comfortable in nature is being lost". In Australia it is becoming increasingly evident that children are not spending time in the outdoors and their connection with nature is also being lost. Data from "Who Cares about the Environment in 2009?" (Department of Environment Climate Change and Water 2010) states that the percentage of respondents who participate in environmental activities was generally under 50%. It was noted that, "activities beyond the household that require the most effort had the lowest participation" (2010, p. 74).

The formative years of a child's education are the most influential time to foster an affinity with the natural world (Charles, Louv, Bodner & Guns 2008; Davies, 1996; Malone, 2004 & 2007; Santer, Griffiths & Goodall, 2007). Gould, (1991) and Orr (2004) posit, "Simply knowing about environmental issues has little impact upon behaviour. Knowing is not enough; children have to care enough to create harmonious relationships with the Earth and with fellow human beings" (cited by Herbert, 2008, p. 63). It is evident that for the development of environmental knowledge in children we must teach *in, for* and *about* the environment, by using the principles that were initially outlined in the report of the first UNESCO Intergovernmental Congress on Environmental Education in 1978, The Tbilisi Declaration (UNESCO, 1978).

Rafferty and Laird (2013) indicated that children with environmental knowledge alone can acquire a negative state of learned helplessness, a belief that the world is doomed and there is nothing they can do. However, it has been argued that children who are provided with opportunities to engage with the environment acquire a sense of connection and a belief in their own ability to enact change (Rafferty & Laird, 2013). Engaging in outdoor learning in the primary school is one way to provide opportunities to engage with the natural world.

Outdoor learning within primary schools has produced significant academic and affective outcomes. Malone (2008) in her search of studies involving primary aged children found 30 cognitive, 9 physical, 20 social, 9 emotional and 28 personal, studies completed in the area. This report and the works of the American Institute for Research (2005); Bensten, Mygind, & Randrup (2009); Bensten (2012); Munoz (2009); Knight (2009); Lovell, O'Brien and Owen (2010); O'Brien and Murray (2005); Malone (2008); Rickinson et al (2004) and SEER (1995 & 2005), are the most relevant to this paper.

The American Research Institutes (2005) found science scores where raised by 27% when children completed outdoor environmental education. Bensten (2012) in studies of the udeskole method of schooling reported that there has been noted academic gain. The SEER report (2005, p. 22) found that in 12,700 children's data sets they compiled that:

* In 100% of the reading assessments, treatment students scored as well or better than control students.

* In 92.5% of the math assessments, treatment students scored as well or significantly higher than control students.

* In 95% of the language assessments, treatment students scored as well or significantly higher than control students.

* In 42% of the cases treatment students scores significantly higher than control students in reading, math, language and spelling.

Lovell (cited in Munoz, 2009) used pedometers to find that on Forest School days children where more active. Rickinson et al (2004) notes the physical advantages of outdoor learning in relation to fieldwork, adventure activities and programs completed on school grounds.

Knight (2009); Lovell et al (2010) and O'Brien and Murray (2006) highlight the affective gain of children involved in Forest School programs. Largely based on qualitative data they have found that there are improvements in confidence, self–belief, social skills, motivation, concentration and anger control. Rickinson (2004) quotes studies where confidence and a positive is gained through participation in outdoor activities for example; Reid (2002); Rickinson et al (2003); and Skamp and Bergman (2001).

Standardised testing of children completing place-based education programs in the United States found that there were improvements across the curriculum and that classroom discipline problems declined (Sobel, 2013). Using a variety of indicators Basile (cited in Sobel, 2013) reports that children involved in these programs also showed increased higher order thinking, observation, analysis and problem solving skills.

There is qualitative evidence that schools implementing outdoor and environmental learning see improved environmental stewardship amongst their pupils (Rickinson et al, 2004). Jaus (cited in SEER 1995, p. 8) used a scale instrument to assess environmental attitudes of an experimental group against a treatment group. The findings where that the experimental group expressed 22% more "positive" environmental attitudes than the control group.

Chen and Monroe (2010) developed the "Connection to Nature Index" to measure children's affective attitudes towards the natural environment. The results covered four dimensions: enjoyment of nature, empathy for creatures, sense of oneness and a sense of responsibility. Their findings found that children's connection to nature influenced their intention to participate in nature-based activities in the future and their interest in performing environmentally friendly behaviours.

Relationships with place

The 2011 Australian State of the Environment report articulates that, "For many Australians, particularly those from Indigenous backgrounds, the divide between nature and culture is artificial because the environment is perceived as one interlinked, complex cultural landscape, created and lived in by ancestors and the contemporary community", Department of Sustainability, Environment, Water, Population and Communities (2011, p. 697). Indigenous cultures embrace their connection with all life, beings, existence and time (Ellis-Smith in Dickson, Gray & Hayllar, 2005).

It has been recognised that, "People/ places sometimes pass through our lives leaving little or great imprint. In any case, relationships do not just 'happen' – they must be created", (Birrell in Dickson et al, 2005, p. 53). Martin in Dickson et al (2005, p. 46) summarises the development of the human/ nature relationship in the typology in Figure 1.

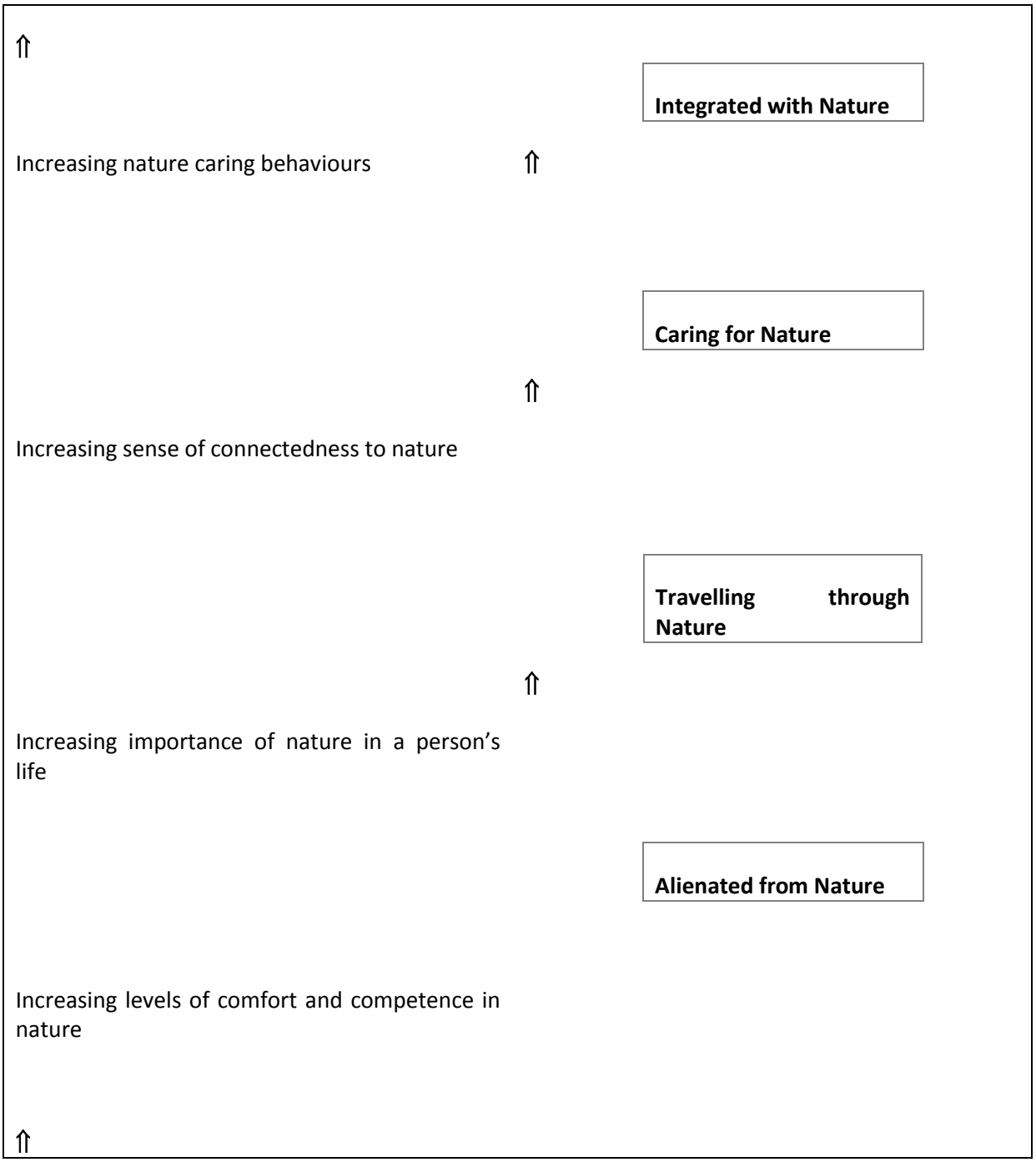

Figure 1: The development of human/ nature relationship

Kellert (2012, p. 138) explains that "When children feel familiar and secure in the places they encounter, they are far more likely to access, engage, and experience nature than if these places seem strange and unknown". Connecting to a familiar place through experiencing the beauty and wonder allows relationships to be formed. Hill (2013) believes that this is the place where outdoor and sustainability education can intersect. This enables children to bond with place and to begin to develop environmental ideals.

A sense of place: place based pedagogies

New understandings of pedagogy are emerging to support the claim for outdoor learning. Ballantyne and Packer's 5th Pedagogy, cited in Tooth and Renshaw (2009, p. 4) believe in the educational advantages of an experience-based pedagogy that they outline as;

> "Being in the environment students are encouraged to experience and appreciate the special characteristics of the natural environment; Real life learning - learning activities based on real places, real issues, and authentic tasks; Sensory engagement opportunities provided to explore the environment using all five senses; Learning by doing students actively involved in hands-on exploration and investigation; Local context students encouraged to explore and investigate environmental problems and issues in their own backyard" (Tooth & Renshaw, 2009, p. 4).

Gruenewald and Smith (cited by Wattchow & Brown, 2008 p. 92) state that, "Places, and our relationship with them, are worthy of our attention because places are pedagogically powerful". The importance of place – based learning has been highlighted by educational researchers such as; Derr, 2002; Gruenewald, 2003a, 2003b & 2005; Sobel, 1996, 1998 & 2013; Somerville et al 2011 and Wattchow & Brown, 2008.

According to Sobel (1996, p. 9) "What's important is that children have an opportunity to bond with the natural world, to learn to love it, before being asked to heal its wounds". His theory stipulates that between the ages of four and seven a sense of empathy and connectedness between the child and the natural world should be the main objective, before moving to exploring the nearby world and knowing your place for children aged seven and eleven (Sobel, 1996).

Local Indigenous knowledge and learning: Country

The Melbourne Declaration on the Educational Goals for Young Australians (MCEETYA, 2008, p.10) states that, "Active and informed citizens understand and acknowledge the value of Indigenous cultures and possess the knowledge, skills and understanding to contribute to, and benefit from, reconciliation between Indigenous and non-Indigenous Australians". While ACARA promote that "The Aboriginal and Torres Strait Islander priority provides opportunities for all learners to deepen their knowledge of Australia by engaging with the world's oldest continuous living cultures" (ACARA 2013a). Considering this information it is a pivotal time to place importance in the Indigenous ways of knowing and doing in our formal school curriculum.

Considering that;

> "Country' is a subject in its own right that people engage with in a reciprocal relationship….Place, in this concept, is multi-dimensional and includes human beings in relationship with both non-human others and the material terrain of an enlarged concept of landscape. Knowledge of country, and responsibilities to country, are deeply folded into the bodies, memories and imaginations of the human subjects who belong to country" (Somerville, 2011, p. 5 & 6).

Time spent immersed in local places and local story will enable the concept of country to be enmeshed within a uniquely Australian pedagogy of place. Contemporary Indigenous education methods, such as the eight ways of learning (Yunkaporta & Kirby, 2011) enable this to occur within the mainstream primary school setting and there is no better location to do this than in the outdoors.

Pragmatics for programming using place-based pedagogies

The pragmatics for programming using place-based pedagogies in outdoor learning can be problematic,

> "Because the structures and processes of schooling are based on institutional patterns of isolating teachers and students from places outside school, one can claim that schools limit experience and perception; in other words, by regulating our geographical experience, schools potentially stunt human development as they help construct our lack of awareness of, our lack of connection to, and our lack of appreciation for places" (Grunewald, 2003b, p. 625).

However, there are examples of programs that are used to connect children to their local environments that alleviate the burdens that traditional structures and process of schooling enforce. Beams, Higgins and Nicol (2013) have recognised that in these cases it may not be the *content* that changes it may *context* in which teachers choose to teach their students.

In the United Kingdom, the Forest School movement children use full sized tools, play, learn boundaries of behavior in their half-day sessions that last normally one term of a school year and may be repeated in different school year levels, (Knight, 2009 & Warden, 2010). Forest School programs run throughout in all weather conditions with the children wearing protective clothing where there is a high ratio of adults to children. They have an emphasis on experiential learning and self-directed play in a safe and supportive natural environment. The philosophy of Forest School is to encourage and inspire individuals of any age through positive experiences and participation in engaging and motivating achievable activities in a woodland environment, helping to develop personal, social and emotional skills such as; independence, self-discovery, confidence, communication skills and raised self-esteem (Knight, 2009). There are considerable lessons to be drawn from this example when devising a best practice Australian immersive outdoor learning programs.

Programs are developed by Forest Schools trained leaders and can sit within or completely external to the regular school curriculum. While teachers attend with their class, they may not be the leader facilitating the session. Programs run in areas of nearby forest settings where detailed risk assessments are completed, (Knight, 2011). Warden, (2010, p. 17) has highlighted the fact that it is 'unfortunate' that Forest School sessions are often pre-planned by the adults. Warden stresses the child focused direction of all sessions, the author suggests that while this may be appropriate in the early years setting in a mainstream primary school this would be problematic for reasons based in accountability. It is for this reason that there is a need look beyond the Forest School example to an example clearly driven by curriculum.

Udeskole is an approach to outdoor learning in Denmark which is defined as where children between 7 – 16 years are involved in weekly or bi weekly sessions and are known as an "outdoor school day" (Bensten 2009). 28% of Danish schools practice udeskole (Bensten, Mygind & Randrup, 2010) in settings such as the natural environment or a museum visit. The outdoor lessons are based on specific curriculum subject areas in a cross- disciplinary approach. The approach is often to work with the content of an academic subject and make the concept real or concrete to facilitate learning and understanding. Udeskole is not mentioned in the Danish national curriculum, but outdoor teaching and learning are mentioned indirectly in the overall aims and directly in some of the subject content (Bentsen, 2012).

Within udeskole, there is a strong emphasis on place-based progressive pedagogy and constructivist traditions in a holistic mode of teaching (Bentsen, 2009). The parallels between this model and an Australian context are significant. Denmark and Australian are culturally different however, the pragmatics that udeskole uses are transferrable to the framework and guidelines of Australian mainstream education. There is an opportunity to learn from overseas examples of outdoor learning to develop our own pedagogy of place within our unique situation .

"The Sustainability Curriculum Framework" (DEHWA, 2010, p. 8) states "Education for sustainability is cross–disciplinary as no single learning area provides all the essential knowledge and opportunities to enable students

to contribute to sustainability. Appropriate knowledge and skills must be interconnected throughout the learning years and across the disciplines if sustainability is to be achieved". The National Curriculums inclusion of the cross curricula perspectives of 'Sustainability' and "Aboriginal and Torres Strait Islander histories and cultures" (ACARA, 2013a) provides an increasing scope for place-based pedagogies in mainstream primary schools.

Implications for environmental knowledge and environmental sustainability

Chawla (2007, p. 155) developed the "Positive interaction cycle of accessibility, mobility and engagement with the environment", where the factors combine to motivate individuals to develop growing environmental knowledge and environmental competence. Malone in Figure 2 (2012, p. 22) has further adapted this cycle to incorporate place attachment and environmental stewardship. She proposes that the original cycle by Chawla coupled with environmental knowledge and place attachment enable children to become active environmental change agents.

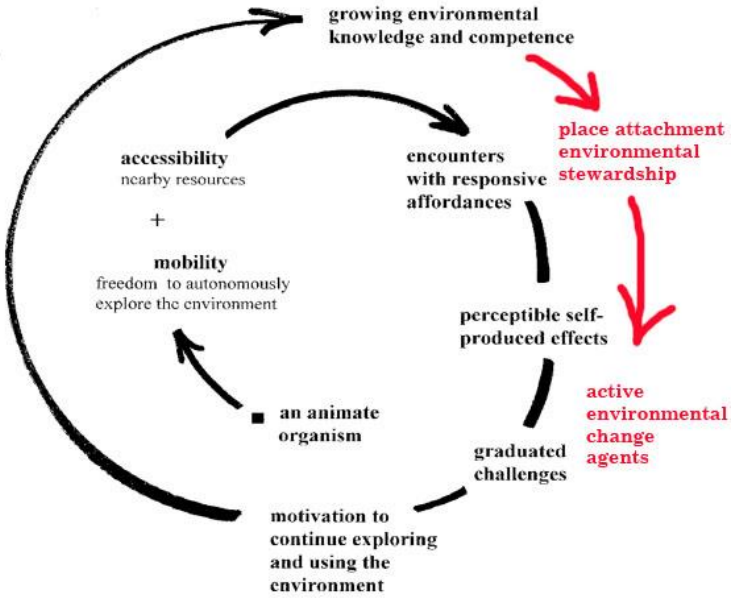

Figure 2: Positive interactive cycle of accessibility, mobility and engagement with environment leading to environmental change agency (Malone 2012, p. 22, adapted from Chawla 2007, p. 155)

The Australian Outdoor Context and the National Curriculum

Outdoor Education in an Australian primary school context is essentially cross- curricula, relying on the teachers' ability to integrate innovative learning across their traditional programs. At St Michael's Nowra this has been embraced by some of our staff as a way to engage children in the formal curriculum and develop social skills. Having a school population of 20% Indigenous children in an area rich in culture has meant that the cross-curricula perspectives are richly embedded into the overall organisation of the school. Amanda and Marian will share some stories of the programs where outdoor education has made its way into the school over the last few years during the presentation showing photos to tell the story. Here is a summary of the activities:

Bush - Boys

One of the programs completed has been with additional needs Year 6 boys, with a high ratio of adults to children. Lessons occurred in the school playground and in nearby parkland. There were supporting lessons in the classroom with a high interest – needs based approach many of which used technology. Activities completed with the boys encouraged teamwork and effective communication with their peers. Each session had an overarching theme and links to Indigenous story. We started each session off with a pair task, the boys favourite being hiding an object and then having to lead the other child back there blindfolded. This encouraged the building of trust and positive relationships amongst the group that did not exist before we embarked on this programme. Each session the boys were given a manipulative task to complete, which involved making shelters of many kinds. Nests hide outs, cubby houses you name it we made it! Over the term natural materials were creatively used to construct the design brief of the day. In class the boys followed instructions and used phone apps to learn knots to then transfer to the outdoors to rig up tarps.

At all times collaboration was encouraged and the key theme was to learn from each other's creativity. We would debrief each session taking many photos to write descriptions and procedural texts back in the classroom. To complete the session the boys would film each other in a self lead asking about what they learnt about teamwork, how to work in pairs, what ways they communicated to each other that day and so on. The boys would freely talk in front of the camera about how they felt in the session and were excited to show this back on the interactive whiteboard in the classroom. There was significant personal growth in this group of boys with strengths seen in them that we had not witnessed inside the traditional four walls of a classroom. Self-esteem, social skills and communication in the group improved over the weeks. Some of the boys were apprehensive at the beginning of the program to make structures from natural materials but by the end the only difficulty was getting them to stop at the end of the session! A number of boys have been so moved by this program their parents have chosen high schools and out of school activities that foster their renewed outdoor interests.

Kinder – Year 1 outdoor learning

Outdoor learning at this age is a hands on adventure. The curriculum units in the National Curriculum lend themselves to innovative programming using the outcomes and content provided. Table 1 outlines some of the content our teachers have used in the outdoor learning programs on and off site that our Kinder and Year 1 children have participated in. Some lessons will be based in nature play and others more formal and involve the children learning in the playground and in the areas of natural space surrounding the school. Afternoon, half day and whole day sessions are organised, with parents invited to assist when needed.

Table 1: Where does Outdoor Education fit in the Kindergarten – Year 2 Curriculum Content

Key Learning Area	Content
Mathematics	*Problem solving *2D and 3D shapes *Measurement *Collecting and gathering data *Position *The application of various numeric skills.
English	*Communication *Listening Skills *Reporting to peers *Recall of information *Interpreting information *Imaginative writing text types *Reading texts *Interpreting diagrams
Geography	*Recognise and make observations of physical features *Expressing views about the environment *Gather information about natural and built environments *Compare and contrast natural and built environments
Science	*Exploration (environment, hazards, forces- push and pull, sounds, living things) *Design and make tasks
History	* Indigenous history * Stories from the area
Arts	*Recording senses activities. *Imaginative use of manipulative materials.

	*Dramatic play and performance
Health and PE	*Gross motor skill development *Running, chasing, dodging, awareness of space, traveling on hands and feet, turning, rolling, swinging, climbing, coordination and balance *Express and communicate feelings *Interpersonal skills: building relationships and working in groups *Safe living practices *Decision making skills *Problem solving: seeking help and drawing on past experiences *Safe and unsafe behavious: taking risks safely

Indigenous Programs

The Indigenous programs we run at school for all our children immerse them in local culture and country, visiting the same areas to teach our children with the help of our Elders in the community. The children in the school are exposed to Indigenous perspectives throughout the curriculum and this is becoming increasingly evident as the school is adopting the National Curriculum. Classroom lessons are supported by the teachers and Indigenous staff members within the school. This year all our staff are going on a cultural excursion bus tour so they know the opportunity that the local environment offers for our students. It is hoped after this more classes will experience the rich outdoor and cultural history of our area.
Each year we take all our Koori kids and invite the parents, community and Elders to a day at Currarong. We celebrate the rich culture within the school and learn about traditional ways, also enjoying a bushwalk and a swim along the way. It is important to us to celebrate and be proud of the strong Indigenous community in our area and for that we are very proud.

A whole school approach

The outdoor learning curriculum is supported within the school grounds with a "Rainbow Snake" sustainable garden and Indigenous learning space complete with worm farms, compost system, orchard, chook shed and a yarning circle. Classes come here to plant and learn about gardening and it is a very active place in our school. The environment group come out each Tuesday to work with our "Grandparents in the garden" and help out at the school environment stall "The rainbow shop". We are in the process of constructing nature play areas around our school oval. The aim is to provide our students with a rich outdoor learning environment for curriculum and non-curriculum activities.

Conclusion

> "To live is to live locally, and to know is first of all to know the places one is in" (Casey, 1996, p. 18). Such an idea may seem obvious. But when considered against the background of standardized educational practices or the homogenizing culture of global capitalism, claims of the primacy of place are revolutionary: They suggest that fundamentally significant knowledge is knowledge of the unique places that our lives inhabit and, conversely, that to fail to know those places is to remain in ignorance. Recognizing that places are what people make of them that people are place makers and that places are a primary artefact of human culture suggests a more active role for schools in the study, care, and creation of places (Gruenewald, 2003b, p. 627).

Developing and implementing a progressive pedagogy of place that combines the concepts of sustainability and outdoor education furthers the academic and affective gains of our children in the hope that their drive to protect the "global" (Sobel, 1996) throughout their lives.

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Tony Keeble

Outdoor School's Curriculum Documents Unpacked

This paper is the second in a series of four. The first paper was on the Magic Weavers and how the staff at the Outdoor School developed their curriculum over a two year span. The third was a paper and presentation by Roger Blackwell looking at formative assessment of our curriculum by the utilization of 'concept mapping'. The fourth in the series was my discussion on social capital and outdoor education and looking at the PhD I am completing and looking at the 'Future Maker' program and evaluating its ability to improve social capital in a year 9 cohort.

In paper 1 we looked at the making of our curriculum documents. In this paper we unpack the elements in the curriculum documents of the Bogong Campus and the 15 Mile Creek Campus.

The following pages are the word version of the presentation we made.

(The complete 42 page submission is not included in these proceedings, but can be obtained by downloading at the conference or by contacting Tony Keeble at Keeble.anthony.j@edumail.vic.gov.au)

Tony Keeble

Exploring the concepts of Social Capital and its linkages to Outdoor Education Outcomes: A possible solution for community building.

In 2011 I travelled to Europe and spent six weeks on a study tour of rural schools and how they work together to provide the best educational opportunities possible. For three of these weeks I travelled around Finland. Firstly I spent a week at a Government run outdoor centre in the North, then a week visiting schools in the Savolinna district with the Director of Education and then finally in Helsinki for the World conference of sustainable buildings. It was while I was travelling with the Director of Education at Savolinna, Markku Kankkunen, that I was introduced to two concepts. One was on '**concept mapping**', a tool that Markku (2001) had completed his PhD on and the other '**social capital**'. The social capital concept was a discussion on the possible directions Markku felt was needed for Finnish schooling. That evening I went back to the hotel room and researched and found many articles on social capital. One article that caught my eye was an article by Patricia Wilson (1997) titled *Building Social Capital: A Learning Agenda for the Twenty-first Century*'. In her article Wilson (1997) utilises the term 'Inter-personal and group-processing skills', a term familiar with outdoor education. Wilson then breaks inter-personal and group processing skills areas of need when looking at building social capital, these included: *communication skills, relationship skills, mutual respect, building trust, conflict resolution, team building*, *networking skills and leadership skills*. It was here where I was most excited and I felt like I had finally found an academic framework in which to justify and use in Government policy for Outdoor Education. I decided to dig a little deeper and wider.

In 2013 I enrolled and was accepted into a PhD program with the now Federation University and with Dr Peter Martin as my supervisor. The working title of my PhD is 'Outdoor Education and Social Capital'. I am certainly in the infant stages of this research; however I am very excited about the possibilities and the future of this research. On completing a google scholar search, I only found two pieces of writing that discussed outdoor education and social capital. One was a conference proceeding by Stoddart (2004) and the other a peered reviewed journal article by Beams and Atencio (2008). This lack of academic literature around outdoor education and social capital both worried and excited me.

Introduction

Beams and Atencio (2008), state that areas such as community intervention and improving social welfare have gained momentum within outdoor education (2008, pg. 100) and that they suggest that these notions can be significantly extended by the concept of social capital.

> "As it currently stands, social capital remains a topic that has received little attention
> In peered reviewed outdoor education journals" (2008, pg. 100).

Stoddart (2004) also discusses the lack of research in linking the concepts and framework of social capital and outdoor education outcomes. Stoddart echoes Beams and Atencio's (2008) article by arguing that social capital and the ideas hallmarking this body of literature have a number of themes in which outdoor educators will find sympathy. Stoddart goes on to say that…,

> "…the field of outdoor education is well placed to enhance young people's ability
> to access social capital at the community level' (quoted in Beams an Atencio's 2008, pg. 100.).

In adding to the argument that we should look more closely at linking the outdoor education research with the large but young body of social capital theories and research, is the scholarly work by Maeda (2005); McKenzie & Blenkinsop (2006) that have discussed the significant role that outdoor education can play in the development of social relations that benefit both individuals and their broader communities. What Beams and Atencio (2008) attempt to do is to look at the outcomes of outdoor education, the transfer of knowledge that a student learns while on an outdoor education program and the benefits to the community from that transfer of knowledge. Beams and Atencio (2008) introduce Putnam's (2002) notion of 'bridging and bonding' which I will explore after a

brief discussion on social capital. I will then finish with a discussion on my proposed PhD research and implications.

What is Social Capital?
Coleman (1988), in his breakthrough study, used the concepts of social capital as an analytical tool to understand 'dropouts' from high school.

Coleman (1988) affirms that there are two broad intellectual streams in explaining social actions.

a) One that is from a sociologist point of view and
b) One from an economist's point of view.

The ***sociologists*** believe social actions can be attributed to social norms, rules and obligations and thus an individual's actions are a reaction to community rather than the individual. This point of view means that social action can be explained, shaped, constrained and redirected by the social context.

The ***economists*** believe that social actions are arrived from the individual having independent goals that are self-interested rather than community interested. This aspect of social action has led to the growth of neoclassical economic theory, as well as the growth in the political philosophies of utilitarianism, contractarianism and natural rights.

Coleman (1988) has argued previously for the development of a theoretical orientation in society that includes components of both the sociologist and economists intellectual stream. Coleman believes that the two intellectual streams only account for the actions of the individual and not the development of social organisation. In his research he announces that the theoretical orientation of both intellectual streams is called: ***social capital***.

For a large part of the paper titled *'Organisation And Institutions: Sociological and Economic approaches to the Analysis of Social Structure*' Coleman (1988) then looks at the criticism and revisions of the theoretical orientation in order for him to have a conceptual tool to understand the reasons for the 'dropouts' from high school.

Coleman goes on to describe that ***social capital*** is neither the individual nor the group, but rather the relationships between people and within communities. He argues that social capital is defined by its function and that it is not a single entity but a variety of entities with two common entities. These being that social capital consists of:

1) Social structures
2) Actions that facilitate certain actions in people.

In his work, Coleman (1988) illustrates some of the different forms of social capital with examples from America. The examples are mainly based around communities that have a high degree of trust and that without that trust certain transitions and human behaviour would not occur. An example he uses is the diamond trade in New York City amongst the Jewish community.

Coleman (1988) also distinguishes between the differences of ***physical capital, human capital and social capital.***

a) ***Physical capital*** – embodied in tools, machines and other productive equipment
b) ***Human capital*** – created by changes in people that bring about skills and capabilities that make them able to act in new ways.
c) ***Social capital*** – created through changes in relationships among people that facilitate actions.

From this knowledge, Coleman (1988) dives into an examination of social relations that can constitute useful capital resources for individuals. It is worth looking at these points as many of the stated outcomes in outdoor education are around relationship building in the inter-personal capabilities (Neill 2002). Coleman looks at six points:

1. ***Obligations, expectations and trustworthiness***. Coleman (1988) uses examples of obligation where people have credit slips, 'if I do something for you, you do something for me'. For these obligations to work there needs to be a high degree of trustworthiness (think of climbing scenarios, bushwalking scenarios or just about an OE scenario in the bush).

2. ***Information Channels*** and their importance to social capital. Basically, the information you have access to determines your actions and social context. To increase your understanding of the community you are in you need appropriate information channels to stay connected.

3. ***Norms and Effective Sanctions***. Coleman (1988) uses examples of law to outline actions and Norms and that when there are norms that inhibit crime people walk more freely in their communities. Norms that forego self-interests are the most important forms to have when improving social capital in communities. The more people interact with the lack of self-interest, the more this norm builds young nations, strengthens families and facilitates the development of nascent social movements through small dedicated inward looking and mutually rewarding members.

4. ***Closure of social networks***. Social networks that have closure will know each other and will work for each other. Communities that do not have closure will have fragmented groups in the community working in different directions and not working together. Again an insight to the workings of outdoor education. We tend to use the analogy of being in a boat, 'are we all rowing in the same direction?' Or 'are we rowing in different directions?'.

   Coleman uses the closure section to bring in the discussion around schools and that schools with open social networks don't do as well as schools with closed social networks and this can be seen in the rates of 'drop outs' as they have less support in open social networks where kids can fall through the cracks.

5. ***Appropriable Social Organisation***. Much of this discussion centres on voluntary organisations and how when things are not working well, organisations are built out of necessity by the people for the people and that these social organisations greatly improve social capital. Just think of a group on a 5 day bushwalk where it is pouring rain and where everyone is helping out in a volunteering way for the other group members in their little community.

   Coleman looks at generational change in regards to human capital through the lens of social capital. In essence, communities with high social capital in turn have individuals with higher levels of human capital which is then taught to the next generation. So things like poverty and in our case, sustainable living practices and the outcomes of outdoor education could be intergenerational if our social capital capabilities where strong and effective enough to increase human capital.

   Coleman again cleverly uses this linkage to look at schools and families and those families that increased their human capital through social capital means were more able as a family unit to help their children once at school. He then looks at the 'dropout rates' of students at high schools in America and looks at the different socioeconomic make ups, the ethnicity and mobility of the families. It is obvious that families that are more connected with their communities have lower 'dropout rates' in high school.

6. ***Public goods aspects of social capital***. Coleman (1988) refers to the fact that those families, communities that are better at investing time in developing human capital end up with more highly paid jobs, more satisfying jobs and better understanding of the world around them.

As you can see from the concepts that Coleman places on the table in regards to social capital, it is easy to see why there isn't an agreed position amongst academia on what is social capital. Rather, if we step back and take a bigger picture view, social capital is about social structures and the actions that people take to make their communities more liveable.

The work by Coleman (1988) and Bourdieu (1986), who were amongst the first scholars to develop the theoretical concept of social capital (Portes, 1998: Walters, 2002), helped Putnam (2000) to understand the decline of social networks outside of the family and work. '***Bowling alone'*** (Putnam 2000) is probably the most widely read text on social capital, and in this text Putnam first describes the notion of ***'bonding and bridging'***. It is this notion of bonding and bridging that Beams and Atencio (2008) use in linking social capital framework with the intricacies and outcomes of outdoor education.

Outdoor education and social capital

There are many areas of the social capital theoretical framework that are worth exploring in regards to their linkages to outdoor education, but the one I am going to focus on is the notion of what Putnam (2000) defines as 'positive experiences of trust and co-operation within a group or community' and that this notion can be identified as 'bonding and bridging'.

Putnam (2000, pg. 23) describes bonding and bridging as;

> '….bonding….social capital is internally generated within a particular group or typically smaller community. Bridging social capital is considered to be more outward looking, developed through the relationships existing between people in different social groups….
>
> or…..
>
> put simply, bridging has the potential and capacity to generate broader identities and be the WD-40 of communities, while bonding is described as the sociological superglue.

So where does this leave outdoor education and the educational process and the development of social capital?

Beams and Atencio (2008) believe that outdoor education, if concentrated on a placed based approach, could increase and improve the notion of transfer (2008, pg.104). The notion of transfer in outdoor education has its critics (Brookes 2003), however Beams and Atencio assert that if the outdoor education program utilises and recognises the various families, businesses, public services, voluntary groups and social groups in a community that a student lives in, then 'bridging' can occur and students can use the lessons learnt from 'bonding' to form other relationships and thus transfer their knowledge.

Beams and Atencio (2008) further develop this notion by relating the bonding and bridging theory with an ethic of care (Beams 2008; McKenzie & Blenkinsop, 2006). McKenzie and Blenkinslop introduce the concepts of ***care for self*** and ***care for close others.*** If we use these terms when teaching outdoor education we will strengthen the notion of bonding and bridging, and if we then introduce the concepts of ***care for distant others*** and ***care for the natural world*** we can build more explicit links and transfer of knowledge to a local context from which the student came from. Thus;

> ' The theme of transference of learning to home life, which falls under the category of *Care for self*, would also support the development of bridging social capital. Within these categories of *Care for distant others* and *Care for the natural world*, much more explicit links to bridging social capital can be made. For instance 'commitment to community service, and local and global community service projects are highlighted in the former category while the latter category incorporates bridging themes such as seeing ones efforts make a difference, environmental service projects and environmental ethics/activism'.
>
> Beams and Atencio (2008, pg.105).

It is exactly the above scenarios that I want to test in my PhD research.

PhD research

The work introduced by Beams and Atencio (2008) has helped me to identify an area of research that hasn't yet been developed. And that is to look at the notion that if an outdoor education program is set up to develop areas of social and personal capabilities with the development of critical thinking while using an outdoor program that uses a placed based theory, that these programs are more able to build 'bridging' social capital by being embedded into the local communities.

The research I am proposing will look at the 'Future Maker' program that is being delivered by the Outdoor School (formerly known as Bogong Outdoor Education Centre). This particular program took over two years to develop and research. The program looks at personal, social and critical thinking capabilities. Embedded into the program are the notions of environmental knowledge of the Alpine area, a journey based concept and then finally the sustainable action plan. The program starts in the home school and the student's home community. There are several teaching sessions at the local community before the cohort venture to Bogong Campus for a twelve day residential outdoor program. Once this component is completed there are more lessons delivered at the home school where students are developing and running ***Care for Nature and Care for distant others*** in their Sustainable Action Plans (SAP's) at the local level.

What I propose to do is to measure the effectiveness of the 'Future Maker' program in increasing the social capital of a cohort of year 9 students in a rural community in Victoria. Interestingly, just like the notion that social capital means different things to different people (an often criticism of social capital), there isn't a well-established measuring tool to measure social capital. While I have found some measuring tools, for example the OECD discusses measuring tools for social capital in its paper titled 'The measurement of social capital at International level' (Healy 2002), I still have a way to go before I settle on a measuring tool.

Regardless, my research aims to see if there is a link between social capital frameworks and outdoor education: Can outdoor education curriculum develop social capital in our communities? If so, what are the ramifications for outdoor education theory and policy at the Government level? PISA is looking at developing a tool to measure human social capital in schools alongside literacy and numeracy testing. PISA would like to establish how connected young people are as the more a person is connected (***bridging and bonding***) the better their life chances (Putnam 2000). If this is the case, can outdoor education lay claim to a teaching pedagogy that creates and develops social capital? If this is the case, there would be a strong argument for Governments and Education departments to ensure students have educational opportunities, such as outdoor education, in order to develop communities.

Summary

It is obvious to me that there is a link between the theoretical frameworks of social capital and the stated outcomes of outdoor education. What is more important is that there is a strong link between the pedagogy of outdoor education, transfer of knowledge and the use of placed based outdoor education programs. A mantra

that many educational institutions employ is 'education for the whole child'. Can outdoor education be a tool to drive community development? I am hopeful that my research will provide insights into these questions.

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Val Nicholls and Sandy Allen-Craig

Outdoor Environments and Therapeutic Interventions

Introduction

Outdoor environments have long been used as a setting for therapeutic or alternative health interventions for a variety of 'at risk' groups (Nicholls, 2008). In 2011 the Australian Catholic University (ACU), Melbourne integrated a new unit: Outdoor Environments and Therapeutic Interventions (OETI) into the Bachelor of Exercise and Health Sciences curriculum. This unit was a culmination of a variety of different units previously offered that explored aspects or dimensions of the field of Adventure Therapy. This unit aims to introduce students to the foundational principles of programs that utilise the outdoors for therapeutic interventions with specific populations. The unit examines the historic development of therapeutic interventions that incorporate outdoors environments and explores the range of applications that are evolving from these emerging alternative health programs. The use of outdoor settings and outdoor pursuits as part of these therapeutic health interventions are investigated. There is an expectation that students work towards developing a positive and supportive relationship with a young person as they participate in a community outdoor adventure therapy program.

The Outdoor Environments and Therapeutic Interventions unit offered at ACU is one of few units offered at tertiary level nationally. In Victoria, a Graduate Certificate in Experiential Learning offered from 1999-2005 at Victoria University engaged students in a dialogue about adventure therapy theory, practice and programming. In 2007 the University of South Australia conducted its first 'Introduction to Adventure Therapy' course as part of a study stream in Outdoor Education. The course is no longer offered. The Australian Association of Bush Adventure Therapy (AABAT) acknowledges a lack of a clear career pathway for prospective practitioners. At present, ACU's emerging units in the field of Adventure Therapy offer the only opportunity in Victoria, and possibly nationally, for students to engage in learning in this field at a tertiary level.

Rationale: Initial motivation

The rationale for the inclusion of a unit offering students an insight into the growing field of Adventure Therapy (AT) or Bush Adventure Therapy (BAT) as it's frequently referred to in Australia, grew out of discussions with various Adventure Therapy providers in Victoria in 2002. At that time a number of agencies were working with ACU students on placements in their programs. One such provider expressed an interest in offering a single placement opportunity to all students in the class (maximum 12 clients). The provider tailored a program for their clients and gave the students the responsibility for planning and implementing the program for their clientele. In addition, students were placed with a particular client in the role of a mentor for the duration of the program. The adventure therapy provider ran a day of basic training for the students.

Whilst enthusiastic about the students' contribution and confident in the overall success of the program the agency identified the potential benefits of additional pre placement training. It was suggested that providing the students with the opportunity to engage with issues such as personal boundaries, dealing with challenging behaviours, confidentiality and disclosure requirements prior to placement would significantly enhance and protect the placement experience. It was also anticipated that a longer lead in time for the placement would provide extra time for the acquisition of foundational outdoor acquisition for clients and students as well as additional time for the development of trust and engagement between mentor and mentoree. With this feedback in mind two new units were developed at the ACU: 'Outdoor Programming and Mentoring Youth at Risk'

and 'Outdoor Environments and Therapeutic Interventions' (OETI). Key leaders and educators in the Adventure Therapy field were invited to have input into the curriculum development and both units were offered for the first time in 2011. At the end of 2011 an evaluation of the two units identified a number of areas of knowledge duplicity. For example it was desirable for students undertaking the OETI unit to gain experience on placement with a provider, this placement often entailed a mentoring role in much the same way as placements within the 'mentoring' unit. The evaluation also identified that students undertaking the mentoring unit were disadvantaged by a lack of depth in their understanding of foundational theories and philosophy underpinning adventure therapy practice. In response to these issues the OETI unit was rewritten so as to combine appropriate content and curriculum from each unit. The new composite 'Outdoor Environments and Therapeutic Interventions' unit was offered in 2012 and continues to date. Figure 1.0 depicts the evolution of the OETI units at ACU.

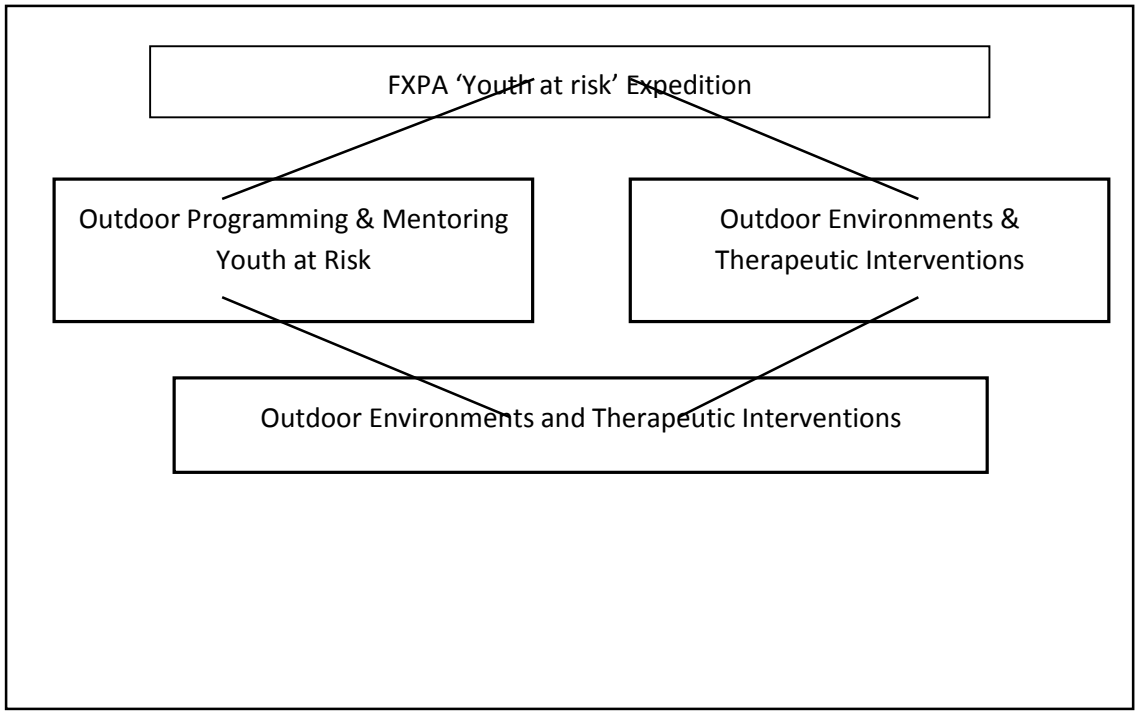


Figure 1. Evolution of Adventure Therapy Units at ACU

Who is it for and why

OETI was initially designed to give Exercise Science students who were undertaking a major stream in outdoor recreation leadership the opportunity to learn about the field of adventure therapy and to gain enough experience and knowledge to be able to competently assist a seasoned Adventure Therapy practitioner. One of the unanticipated benefits of combining the mentoring and OETI units is that the unit content has proved appealing to a number of Youth Studies students. Over the past two years a third of the class has been made up Youth Studies students electing to take the OETI Unit. The coming together of students from differing, but aligned, disciplines has added depth and breadth of perspective to class discussion. It also a mirrors a practice amongst many Adventure Therapy programs of developing staff teams representing two or more professional disciplines. For example, The Outdoor Experience (T.O.E.) provides Outdoor Adventure Interventions for young people aged 15 – 25yrs. An Outdoor Educator and a Social worker or Counsellor staffs all programs.

DEVELOPING CURRICULUM

Decision making about curriculum posed a timely and intriguing challenge. Whilst the Proceedings of the third, fourth and fifth International Adventure Therapy Conferences held in Canada (2003), New Zealand (2006) and Edinburgh (2009) clearly demonstrate that AT is increasingly recognised as a credible alternative therapeutic approach they also highlight an imperative, expressed in other key contemporary texts that continued maturation requires engaging with the task of developing theoretical frameworks that foster comprehensive understandings of the field and a theory informed practice (Bandoroff & Newes, 2004; Hoyer 2004; Gass, Gillis & Russell, 2012)).

With these concerns in mind, the instigation of OETI and the development of its content could be appreciated as a contribution to the development of theory informed practice within the Australian context.

The challenge to expose students to enough theory to support but not overwhelm their placement experience was resolved via identification of a number of learning outcomes (Table 1) and relevant topic areas listed in (Table 2).

Table 1 OETI Unit descriptors of desired Student Learning Outcomes (2014)

On completion of this unit students should be able to:

- Describe different therapeutic interventions and their use of outdoor settings and programming
- Understand a variety of natural environments in outdoor programming and in particular their use to achieve program outcomes in therapeutic interventions.
- Describe the importance of therapeutic interventions within the context of health and wellbeing issues.
- Understand the professional practice of an Adventure or Wilderness Therapist.
- Outline the risk assessment needed to be undertaken for a participant of a therapeutic interventions process.
- Consider the management issues that could arise in an Adventure Therapy program.
- Describe a variety of therapeutic approaches and understand how to facilitate a group towards specific outcomes.
- Understand a range of therapeutic intervention agencies and how they work differently with specific client groups.
- Outline the key concepts of a successful mentor relationship.
- Develop a supportive and positive relationship with a young person and work alongside them on their journey and involvement with a community program and field trip.

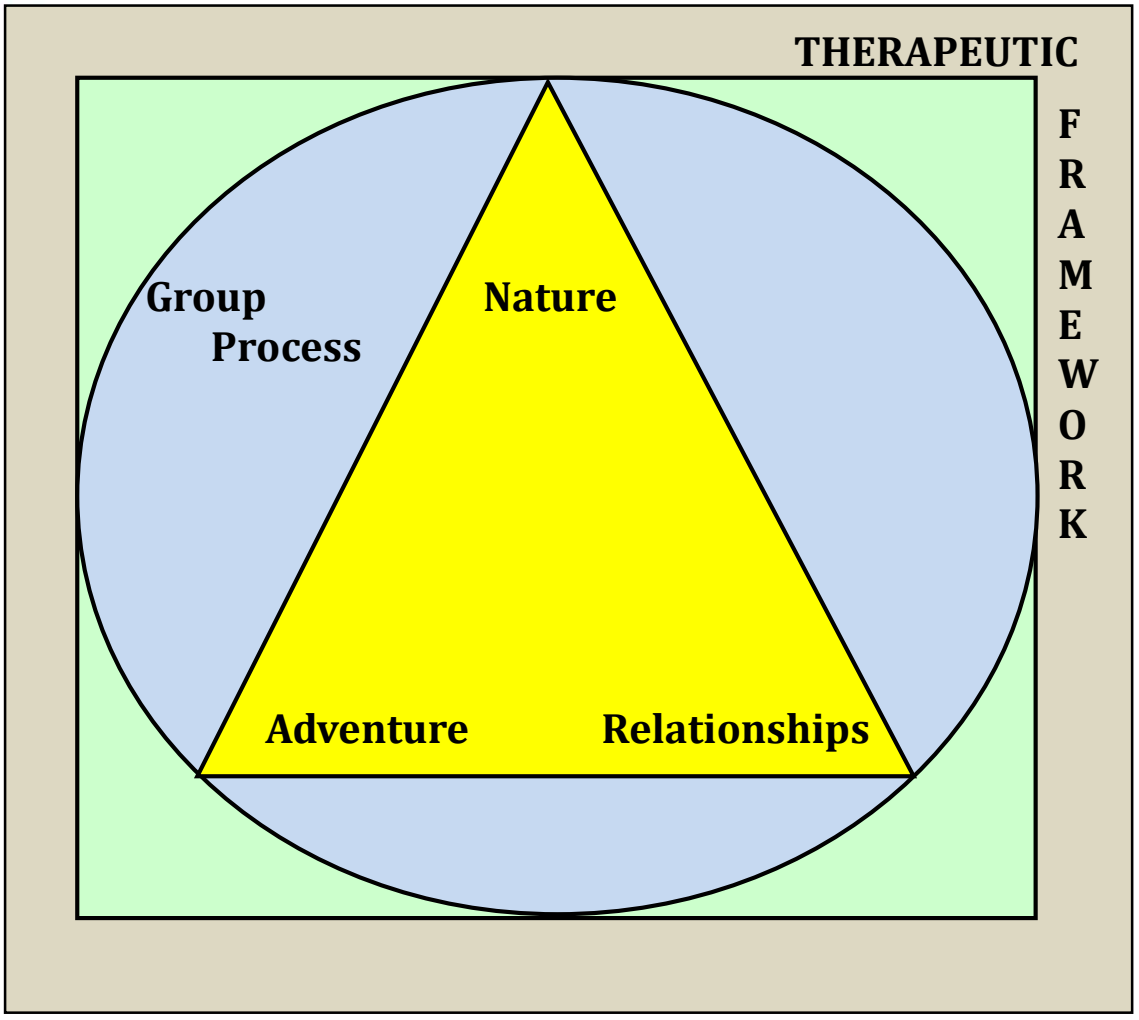
Table 2. Course content for 2014

Topics include:

- Defining Adventure Therapy, Wilderness Therapy and Bush Adventure Therapy
- History of Australian and International therapeutic interventions in the outdoors
- Philosophical and theoretical foundations of nature and adventure based therapeutic
- interventions
- Spectrum of practice and programming
- Health and wellbeing of clients of Adventure Therapy programming
- Leadership styles, facilitation and micro counselling skills for Adventure Therapy
- Working with group process
- Holistic risk assessment and management for specific client groups
- Concepts of mentorship
- Applications of the mentoring practice in the context of outdoor therapeutic interventions
- Personal behaviour patterns and their effect on the mentoring relationship
- Privacy and ethics in the mentor relationship

The visual model presented in Figure 2 provides a simplistic visual representation of key components of AT theory and practice. Within the OETI unit students were introduced to key theories underpinning each of the elements identified. The central triangle depicts three integral and interdependent variables at the heart of AT: Relationships, Adventure and Nature.

Within the context of OETI 'Relationships' references inter, intra and transpersonal relationships (Gass, 1993); 'Adventure' implies any experience, whether a first abseil or conversation with a stranger, involving movement towards the unknown (Pryor, 2009). At the apex, 'nature' references an appreciation of the natural world as a therapeutic ally in the AT process of change (Miles, 1987). This 'catalytic triangle' (Beard, 2007) is contextualised within the complexity of group processes (Johnson & Johnson, 2009) and bounded by therapeutic frameworks (Corey, 2009; Davis-Berman & Berman, 1994; Gass, 2012) integral to intentional practice.



Nicholls (2014)

Figure 2: OETI: A Theoretical Framework

In the absence of clear recommendations as to how best prepare to work in an adventure therapy setting (Polley, 2012) a recommended reading list was compiled from four classic texts: 1. Wilderness therapy: Foundations, theory, and research (Davis-Berman & Berman 1994). 2. Adventure therapy: theory, research and practice (Gass 1993). 3. Processing the adventure experience (Luckner & Nadler, 1992) and 4. Islands of Healing: A guide to adventure based counselling (Schoel, Prouty & Radcliffe, 1988) as well as selected readings from Australian Journal of Outdoor Education (AJOE); International Adventure Therapy Conference Proceedings and two recently completed PhD's by Australian AT practitioners focussing on Adventure Therapy programming and practice in Australia (Nicholls, 2008; Pryor, 2009).

Adapting Course Content

It has become apparent that for many of the students the unit presents a first exposure to the kind of challenging life circumstances and mental health concerns that are part and parcel of everyday life for participants in Adventure Therapy programs. This insight has impacted upon both the content and delivery of OETI.

Over time the selection of academic content has become more discerning, offering a 'Bite' rather than a 'Banquet' of the wealth of literature underpinning the use of nature and adventure for therapeutic purpose. Based on student feedback and staff reflection it seems that any sacrifice in

academic breadth is outweighed by the benefits of a focus on experiential, interactive, reflective and personally relevant approaches.

THE MENTOR EXPERIENCE

The ongoing success of the placement relies on access to therapeutic programs utilising nature and adventure experiences and the willingness of those programs to embrace the aims of OETI and welcome its students.

Over the past two years' time has been well spent engaging and nurturing relationships with Adventure Therapy agencies in pursuit of a mutually beneficial placement program. A wide range of providers have offered to be involved. These include: Operation Newstart: S. East, Northern, Southern and Casey programs, Leaps and Bounds, People Outdoors, Lynall Hall Community School, Fitzroy Community School, and SKYS: St Kilda Youth Services. Previous and potentially new providers are contacted a few months prior to the commencement of teaching to provide an overview of the current program and invite participation. Providers willing and able to support the program provide, when possible dates and details of suitable upcoming programs. These details are provided to the students during their first OETI session. At this point students are required to take responsibility for their placement by establishing contact with a potential agency, organizing an interview and, if acceptable to both parties, negotiate their involvement in the program and ensure that all ACU and agency paperwork is completed. Students must commit to 4-5 days involvement. At the end of their placement students are required to submit a reflection and report on their placement as part of an academic assignment. Providers submit an ACU formalized evaluation of the students' participation and contribution.

EVALUATION OF THE UNIT 2014

Each year OETI students have been invited to complete an informal evaluation of the teaching and content of OETI. The questionnaire poses six questions to which students provide a written response. Students are not required to identify themselves. The format for the evaluation has remained the same through 2011, 12 and 13. Table 3 identifies the key themes that emerged from the responses of the 2013 cohort. Each theme is illustrated by a verbatim quote.

Q1. WHAT ARE THE BEST THINGS ABOUT THIS UNIT?	
Experiential Learning	• "Learning practical skills" • "Interactive class time by balancing theory with a relevant activity"
Group Development	• "Small group, good communication' • "Group becoming closer"
Course content	• "Interesting and relevant" • "Learning how we as future leaders, facilitators and /or therapists can influence the lives of individuals who choose to use outdoor environment as a therapeutic process." • "Learning theory behind the techniques and skills"
Placement	• "What you get out of the placement and understanding of yourself is so worth it".
Teaching style	• "Val! Expertise, experience, engaging etc"
Q2. HOW MIGHT THIS UNIT BE IMPROVED?	
Location	• More outdoors/Less time in class room…change up the setting…Perhaps a trip away together" • "I think it would be innovative in the Uni guidelines if we could do some theory and a base camp"
Practical Focus	• " Less theory/ talk and more tasks"
Q 3. WHAT ARE THE BEST THINGS ABOUT THE TEACHING IN THIS UNIT?	
Content	• Content is very interesting…. the stories and anecdotes • Learning everything from the basics of adventure therapy to the more advanced techniques • Learning a variety of games and icebreakers
Enthusiasm and experience	• Enthusiasm and experience, • Dedication and passion
Fun	• Breaking up content with games, relaxed atmosphere…fun
Interactive	• Interaction, teaching by example
Q4. HOW MIGHT THE TEACHING OF THIS UNIT BE IMPROVED?	
More practical	• More opportunities for practical learning will assist the theoretical aspects • Practical demonstrations
Q5. WOULD YOU RECOMMEND THIS UNIT TO OTHER PEOPLE? All student responses 'Yes'	

Q6. ANY OTHER COMMENTS?	
Appreciation	• Loved this unit and learnt heaps • Very interesting and worthwhile
Enjoyment	• Really enjoyed the unit, got a lot more out of it than expected • Have thoroughly enjoyed the unit and Val's endless supply of stories and experience

Table 3: Informal Student evaluation of OETI teaching and Content.

Students identify the best aspects of the unit as relevant, interesting and engaging content delivered in a predominately experiential and interactive style. The enthusiasm and experience of the teacher is rated highly as is the opportunity for personal and interpersonal growth and development.

The students appreciate the opportunity to learn, grow and interact with participants. For some the placement experience is profound: *"The best 9 days and the best opportunity of my life so far"; "I will have these memories with me for the rest of my life and hopefully the experience I have had can help me to overcome my battles at home"* (Student diaries).

In combination with staff reflection annual feedback has informed the development of the unit content, structure and teaching style. Taking on board student suggestions as to how content and teaching might be improved, in 2014 the delivery of some single sessions will double up to facilitate the opportunity to provide extended sessions from 10am – 4pm in local natural environments. The quest for interactive and meaningful ways to engage students in theory and skill acquisition is ongoing and enticing.

To date the Adventure Therapy programs involved have expressed support and enthusiasm for OETI, recognizing a mutual benefit to themselves and the student. Providers appreciate students' role as Mentors and informal facilitators of 'games' and activities. Each year a number of students have been invited back to their placement organization to participate in additional programs in either a volunteer or paid worker capacity.

Whilst there seems little doubt that from students' perspective placement is the cornerstone of OETI, Placement is not without its challenges. Making contact with busy field staff, and endeavouring to align academic schedules with Adventure Therapy opportunities have often proven frustrating and time consuming. Adventure Therapy programs are frequently unable to confirm the go ahead for a program until close to departure, some run their programs towards the end of the academic year. Hence, some students remain uncertain about their placement beyond the last OETI session. In the past year financial pressure has seen the closure of one well respected program and a reduction in programming of another. The clearly witnessed and expressed merits of placement continue to significantly outweigh organisational frustrations.

CONCLUSION

This paper sought to provide some insight into the development and delivery of an innovative unit for students at the Australian Catholic University in Victoria.

This unit has been well received by students. Through continuous reflection and feedback since the first offering of the opportunity to study in the AT field 12 years ago at ACU, a strong and well defined unit has emerged.

Unexpected outcomes such as the depth of personal growth and maturity the students have identified as a key strength of the unit has enabled cross pollination of skills with the more traditional outdoor leadership units offered.

This unit has only touched the surface of the depth of content and knowledge to be explored, and the untapped experiential learning opportunities in the AT field. The success of this unit is encouraging and gives support to the possibility of the expansion of the unit into a major AT stream. We hope to continue to offer such study opportunities not only for the growth and learning of our students but also to support the quality and standard of the AT profession into the future.

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Alistair McArthur

50 Years of Passion in Outdoor Education but What Does the Future Hold?

INTRODUCTION

Alistair McArthur commenced his Outdoor Education career in October 1964. He reflects on almost 50 years of passionate involvement with Outdoor Education as Instructor, Chief Instructor, Course Director, Program Director, Executive Director, Board Member and Consultant.

He has worked in the United Kingdom, USA, Canada and Australia. Managing the aftermath of three separate fatalities while working for Outward Bound in USA and Canada deeply impacted his psyche and his attitude to risk management. After looking back at his international experience he will look forward to the future for Outdoor Education in an increasingly complex world.

REFLECTIONS ON 50 YEARS OF PASSIONATE INVOLVEMENT:

- **OUTDOOR EDUCATION:** A tough "gig" but absolutely worthwhile for all involved.
- **MAIN OUTCOME**: "Quiet self – confidence"
- **THE FUTURE:** Evidence based research absolutely essential.

50 YEARS – HOW I SURVIVED AND HAD A CAREER IN OUTDOOR EDUCATION

- **JOB CHANGES**: Many positions - Field, Management, Administration, Consulting, Board/Council, Volunteer.
- **NOMAD**: Gained experiences though a nomadic existence for several years.
- **SIGNIFICANT INJURY:** Serious ankle problems precluded field work – needed to consider management/administration and upgrade skills.
- **ACADEMIC ARENA**: Master's degree in Adventure Based Experiential Learning (ABEL)
- **RELATED & OTHER JOBS**: Patrol Officer, Papua New Guinea; Farming; Base Commander of a British Antarctic Survey Expedition for two years travelling over 2,500 kilometres by dog sledge.
- **TRAVEL:** Extended overland trips - North & South America, Africa, Russia, and Asia.
- **DIFFERENT COUNTRIES & CULTURES:** Seeking new ideas, innovation, and creativity.
- **LIFETIME LEARNER**: Internet, conference "junkie", reading, talking, being deliberately inquisitive, keeping 'fresh'.
- **INVOLVEMENT IN THE SECTOR:** Politics/Associations/Special Interest Groups/Volunteer
- **KEPT COMING BACK:** Enabling positive outcomes for participants became a lifetime passion – nothing else provided the same satisfaction on a professional level.

BAPTISM OF FIRE | MY FIRST JOB | 11th October 1964 – "*In the old days*"….

- Ullswater Outward Bound Mountain School, Lake District National Park, England near Scottish border.
- 23 years old
- First year: Ten x 26 day courses, 260 days. 70% of the year on programs.
- Rugged, windswept mountains to 1,000 metres (3,000 feet). Arctic weather conditions.
- Rainfall average 2,000 millimetres (80 inches) up to 5,000 millimetres (200 inches) per annum (Melbourne average 640 millimetres – 25 inches)
- Helly Hansen sailing suits – two sets of clothes – wet and dry.
- Group of 12 teenage boys – many from industrial midlands of England.
- 96 students per course – year round.
- 95% sponsored by industry, police, fire brigades, Royal Air Force.
- Mountaineering, canoeing, rock climbing, abseil, solo, service projects, ropes course.
- Final expedition – three days – huge distances – students were unaccompanied, foul weather, fog, rain, compass out most of the time, amazing resilience.

- Three individual formal student interviews; four paragraph report on each student.
- Many students dependant on the formal written Outward Bound report for work/promotion/imminent dismissal/release from youth detention centre (Borstal)
- Very professional, well established Outward Bound School – steep learning curve in every area!

EXPERIENCE:

- Worked or consulted at over 50 programs in UK, USA, Canada, Asia and Australia.
- Independent management consultant since mid-1980's – strategy and risk management

LOOKING BACK: MEMORIES, REFLECTIONS, ISSUES, THOUGHTS

- DROWNING: Knocking on a mothers door at 5.00AM
- DEATH BY ROCKFALL: Walking to the site with the fiancée of deceased student
- DEATH BY ROCKFALL: Death of a teacher in the high mountains and effect on my boss and mentor
- FATALITIES: Death in the outdoors – traumatic, long term, ripple effect, post-traumatic stress disorder (PTSD), hyper vigilance.
- YOUTH AT RISK: Nine months consulting in poverty stricken inner city USA (Newark, New Jersey). A very challenging outdoor program. Early 1970's.
- SOLO: 72 hour solo at 9,000 feet in the Rockies
- ORIENTEERING: 24 hour orienteering in the Bogong High Plains, Victoria
- HIGH ROCKIES: 4.00 AM starts to climb 14,000 foot peaks in Colorado
- CONSENSUS: Decisions by consensus at Canadian Outward Bound Wilderness School – generally got the desired outcome. Very time consuming.
- REMOTE AREAS: Remote student expeditions in Canada – two train lines for safety!
- DEBT: Debilitating inherited debt in Canada - dealing with creditors. Very difficult.
- BOARDS: Board leadership and terms of office critical – do not let people stay too long
- IMPACT or CHANGE? Outdoor Education has an impact but change is a big word.
- RESEARCH: Anecdotal evidence is strong but evidence based research is weak
- BURN OUT: Instructor burn out – three to five years on the front line/coal face – getting better
- OUTDOOR EDUCATION GROUP (OEG) BOARD: Nine years – innovative, creative, dramatic growth from $2.5 million to $12 million, on the cutting edge. Challenging.
- PEOPLE: Passionate, committed, positive, diligent, energetic, innovative, creative, hardworking, compassionate, intensely interested in people and their well-being. A wonderful community.

CURRENT SITUATION 2014 | CAUTION: WILL OUTDOOR EDUCATION SURVIVE?

Important recent article in USA: *"How Outward Bound lost, and found, itself"*

This article looks at loss of market share and debt.

Reference: High Country News | Colorado, USA | News - From the January 21, 2013 issue by Emily Guerin

http://www.hcn.org/issues/45.1/how-outward-bound-lost-and-found-itself/article_view?b_start:int=1

[Outward Bound is a US$100 million organisation supported by 3,000 staff working in 34 countries to serve close to 250 thousand participants each year]

GLOBAL MARKET SHARE – Total: US$150 million | WILL THESE PROGRAMS SURVIVE?

1. Outward Bound International **(OBI) US$100 million** (Established 1941) Global.
2. National Outdoor Leadership School **(NOLS) $US34 million** (Established 1965) USA
3. Outdoor Education Group **(OEG) US16 million** (Established 1984) Australia

LOOKING FORWARD | Next 20 years

1. EVIDENCE BASED RESEARCH: Absolutely critical to the survival of Outdoor Education.
2. ADAPT: People will adapt to changing environments, economies and culture.
3. GUIDELINES AND STANDARDS: High community expectation
4. RISK MANAGEMENT: Wary of litigation ($300 million claim NSW, April 29, 2007)
5. PROGRAM ACCREDITATION: The community will demand this. (Approximately **2,600** accredited organisations and camps in North America and Australia)
6. INTERNATIONAL INCIDENT DATA BASE PROJECT: Vitally important. : (***Outward Bound Australia*** reduced their incident rate by **48%** over six years by collecting incident data - other factors could have also prevailed)
7. SAFETY AUDIT & REVIEW: Will be common practice.
8. SCENARIOS FOR SERIOUS ACCIDENTS AND FATALITIES: Will become common practice.
9. STANDING SAFETY COMMITTIES: Will be become common practice.
10. NEAR MISS INCIDENT REPORTING: Will improve
11. SEQUENTIAL OUTDOOR PROGRAMMING: Will become "common practice"
12. BURNOUT: Vigilance required. Administrator/Manager: Aim for 100 field days (27% of the year). Field Staff: Aim for 200 days (54% of the year).
13. KIDS IN OUTDOOR EDUCATION: Aim for 80% of 10-18 year olds for seven (7) days per annum
14. PROGRAMS: Currently approximately 4.4 days per annum. Will hopefully increase.
15. TECHNOLOGY: Evolving very fast (keep up to date)
16. MEDIA TRAINING: Will become necessary
17. PSYCHOLOGY & PUBLIC RELATIONS CONSULTANTS: Will be on an annual retainer.
18. EFFECTIVE PUBLIC RELATIONS: Critical to the survival of Outdoor Education. . e.g. Campaign for Adventure, UK
19. LEGISLATORS: Skills will be required to deal with politicians.
20. LEGISLATION: Occupational Health and Safety – WorkSafe Victoria. Watch carefully
21. GOVERNMENT FUNDING: Be wary of using taxpayer funds.
22. COTTON WOOL SYNDROME: Beware! This syndrome is moving fast!
23. PUDDLES AND MUD: Let kids roll around in puddles

INNOVATIONS:

$285 million election promise | November 2010 | For the Outdoor Education sector this was a "breakthrough" initiative of huge importance. The Brumby Labor Government was defeated in the November 2010 Victorian election so the proposal was "*mothballed*" by the new Liberal/National Party Coalition.

►Victorian Brumby Government Election Promise November 2010 (Australia)

Total $285 million election promise for a term long (10 weeks) Year 9 'life skills' *Education for Life* program centred on a two week Outdoor Education component in Victoria. | $208.2m for Year 9 | $77.4m for Camps infrastructure | A significant innovation for any Government in the world.

NOTE: '*ACNIESLEN/AGE POLL'* Saturday 27th November 2010 (Page 4, The Age, Melbourne, Australia)

78% support a change in the Year 9 curriculum to teach students more about 'life skills' while **16% are opposed.**

CONCLUSION

There is a good rationale for going forward with confidence. Outdoor Education makes a difference in the lives of many people in the community. We need to revisit these well-known quotes:

- *"**Nothing ventured, nothing gained**"*
- *"**The outcomes greatly outweigh the risks involved**"*
- ***"We are all better than we know; if only we can be brought to realise this, we may never again be prepared to settle for anything less"*** **Kurt Hahn**, Co-founder of The Outward Bound Trust.

A society grows great when old men plant trees whose shade they know they shall never sit in.
- Greek Proverb

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Malcolm Nicolson

Aims and Experience in Outdoor Education

This study provides an insight into the lived experience of seven participants in the Somers School Camp (Somers Camp) programme. It is significant in that it is the first such examination of the programme. The participants revealed themselves to be perceptive individuals and worthy commentators on the phenomenon of their experiences of the camp, describing an experience which was rich, deep and complex in nature.

The methodology (phenomenology) and method (photo-elicited interviews) which I used in the study required me to listen to the participants and give them voice. This provided a new and different perspective from which to view Somers Camp. A broad range of themes emerged from the interviews, with some far stronger and more complex than others, and some differences in range and emphasis from those expressed in the programme aims.

Friendship was by far the strongest and most complex theme, occupying more than half of the interview time. Making friends posed the biggest challenge for participants. Dewey (2004/1916) and Gardner (1993) asserted the dominance of friendship in the student experience. Its emergence as a context for learning is similarly important, as Dewey emphasised.

The interviews revealed the processes and contexts involved in making and developing friendship, the importance of friendship in student's lives, its role in developing their sense of self, its contribution as a pathway to the creation of a caring community and the attributes of friends. The capacity to articulate such complexity around the notion of friendship indicated reflection by the participants, and development of their consciousness of the theme through that reflection.

The participants considered care between individuals to be the foundation of relationships and an important personal value. As care was also a strong dimension of the student construct of environmental education at Somers Camp, it has developed as a central theme to be considered for the Somers Camp aims. Creation of a caring community emerged as an important general project of the experience, as well as a significant educative context. Quay, Dickinson & Nettleton (2000) suggested creating a caring community as the best context for social development. Care is such a strong theme in the study, appearing in all three domains of self, others and environment, that it should be included as an aim of the programme. This also supports the fourth part of Nicol's (2003) model of experiential education – care as practical knowing manifest in caring action.

The strongest sub-major theme was environmental studies. The responses affirmed that the aims of the environmental studies programme, developed from those of the Tbilisi Declaration (UNESCO, 1977), were being achieved. This supports Dewey's (2004/1916) contention of the importance of aims in the achievement of educational outcomes.

The importance of context and method (Dewey, 2004/1916) in the educational process at Somers Camp became obvious as the participants demonstrated consciousness of the fact that they were in an educational environment (as distinct from being on holiday), and that they were learning. They were able to compare learning at Somers Camp and learning elsewhere. Comments by the participants covered all aspects of the experiential method of education as discussed by Nicol (2003), but also revealed a way of knowing which added meaning to their lives.

Another significant finding of the study was the range of contexts revealed by the participants. Particular situations became meaningful educative contexts because they were being directed by both the student aims and those of the programme. The importance of the contexts is determined by how teachers have constructed them. Any of the contexts directed by different aims would have achieved different outcomes. This point highlights the importance of having programme aims and understanding the intent of those aims. The strength of the aims of the participants evident in the study underscores Dewey's (2004/1916) entreaty for teachers to structure their aims within the scope of the aims of the students or risk failure. To ignore context and method in the aims risks the outcomes becoming haphazard.

Challenge emerged from the interviews as a dimension of all contexts, rather than as a context in its own right. Challenge became evident in the study when purposefully crafted contexts, used alongside experiential method, took participants out of their comfort zone. Hence, the study reveals Somers Camp as a challenging physical context and a challenging emotional context rather than simply a challenge. Ultimately the challenge was to their sense of self. It presented the participants with opportunities to develop new propositions about themselves; to develop their sense of self.

Reflection was an important part of the process of developing experience from activity, understanding causality and using that insight to inform the foresight of the participants. The meanings which developed out of their experiences were alive in their memories. If the Somers Camp experience is to become part of the context of memory of its participants, then it must place a high premium on reflective activity. Without it, achievement of the aims is left to chance. This defines the difference between education and activity.

It is Gardner's (1993) contention, that in middle childhood and adolescence, individuals search for a variety of roles they may be comfortable with. Somers Camp provided the participants with many opportunities to try new roles; to add new meanings to their lives. The participants' sense of self was expanded through the strongly held belief that they had become friends, helpers, carers, archers, boaters, surfers and climbers; amongst other roles. Adding a way of knowing, which develops meaning in the lives of students, to the experiential model of education proposed by Nicol (2003), would reflect the reality of the experience.

Minor themes emerged from comments throughout the interviews. Themes such as encouragement, help, tolerance, trust, support, sharing, cooperation, acknowledgement and honesty have been subsumed into the

major theme of friendship, which includes care and the personal intelligences. They have added to the richness of that theme, rather than becoming lost amongst a myriad of small themes.

The Somers Camp aims statement starts by listing activities and the categories into which they fall. To list categories is helpful. It directs attention to the areas of endeavour of the programme – environmental, outdoor recreational and adventure activities, and acts as a contextualizing statement. In a significant omission, the groupings do not mention education. And the list of activities is just that – a list of activities. The activities are not aims; rather they are the means to achieving aims. They lack the structure of a framework to give them guiding purpose.

Stating that the children will learn about themselves, the environment and others through guided activities are good aims. In Dewey's (2004/1916) terms they are general, flexible, able to grow, able to respond to the needs and strengths of individuals and they have been chosen by the organisation. These aims have much support in the disciplines of outdoor and environmental education. Gair (1997), Hales (2006), Hopkins and Putnam (1993), Mann (2002), Mortlock (1984), Nicol (2002) and Priest and Gass (1997) discuss them as worthy aims of outdoor and environmental education programmes. To then list specific qualities, as the Somers Camp aims do, narrows the possible outcomes and doesn't reflect the breadth of what is really happening.

The lived experience of the students in the Somers School Camp programme was revealed as rich, broad and deep. The themes of the student experience reside in those domains of activity, predicted by the literature, for the age of the Somers School Camp cohort. That the Somers School Camp aims do not reflect this state of affairs more comprehensively leaves some of the achievements to chance. It also makes assessment of the students and evaluation of the programme problematic. The results of this study point to obvious adjustments which could be made to the aims which would allow them to fulfil their role – to give guiding purpose to the programme and the student experience.

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Russell Shem

The Alpine School

The benefits and outcomes of a residential program for Year 9 students focused on developing student leadership.

Thank you for the invitation to share with you my accumulated knowledge of working with Year 9 students in residential settings. Obviously today my focus is on The Alpine School.

Too often when we think of teaching or working with Year 9 aged students we can fall into the trap of generalisation..... like, Generation Y students whose focus sometimes does not move beyond Maslow's basic needs of food, sleep, air, water and .....the internet. But today I would like to prove you wrong!

I would like to begin by sharing an email I received late last year from a past student who attended The Alpine School in Term 4, 2001. Some 13 years ago.

This testimonial is one of many that staff members receive them following a student's experience.

Now, I would like to provide you with some background to our school.

The Alpine School opened in Term 2, 2000 and is located at Dinner Plain, near Mt Hotham.

It was a Victorian Government Education initiative that began as a response to tabled discussions around the notion of; 'we need to establish a government version of Geelong Grammar's Timbertop Campus'. This initiative needed to be affordable and accessible to middle years students.

The target year level was Year 9 and construction started the year before in 1999.

Since its inception in 2000, two more campuses have been established. The Snowy River Campus at Marlo, near Orbost in Gippsland in 2007 and the Gnurad Gundidj Campus near Terang in the Western Districts of Victoria in 2009.

Myself, I have been working at The Alpine School since 2006, and all of these three campuses now come under the umbrella name of The School for Student Leadership. There is a Campus Principal at each of the 3 sites, in which I am one of and an over-arching Principal.

I would now like to give some context to The Alpine School, as it is today.....

Each term, the school enrols and accommodates 45 students.

They are co-educational in their mix - 23 girls and 22 boys or visa-versa

Students apply as a team from DEECD schools across the State of Victoria, and are made up of teams between 4 to 6 students. Whist there they develop a Community Learning Project.

They have a liaison teacher supporting them from their initial home school.

Each term, the program goes for 9 weeks in length hence, our school runs all year round.

This equates to 180 students per year at each campus (540 in total between the 3 campuses)

Students live in shared accommodation with two students per room. They are intentionally mixed between metropolitan and rural based schools, to broaden their experience.

Residential Education

Location

In brief, I view Residential Education as having 3 broad integral components.

Location is one. This develops a 'sense of place' and belonging to over time, with shared experiences and a closer connection to a specific natural or surrounding environment.

Hence, with The Alpine School being located at Dinner Plain up near Mt Hotham in the Victorian Alps, the students who attend often reflect back upon their connection they have made with the local environment and leave having a deeper understanding of the fragility of the Alpine area. Our experience tells us that many students return at a later stage in their lives to revisit the area or region, either with peers, family or often with other past students. These behaviours reinforce the notion of developing a 'sense of place' and having connectedness to an area though a positive shared experience.

Community

Community is very important.

Living in, and being part of a community, students experience diversity first hand along with the individuality of community and with this comes the reciprocity of relationships demanded by communities in order to sustain the well-being of individuals and all others.

Students at The Alpine School, take responsibility for aspects of food, cleaning, washing, daily management of the program and facilities, as staff members do not live on site.

Over the nine weeks, students learn to share, be considerate of others, realise the impact of their actions and behaviours upon the community, deal with homesickness, illness and learn to be independent in a safe learning environment. They learn to gain trust in their peers and work closely with the adults experiencing the same journey with them.

Students at our school do not have mobile phones, IPods, I Pads, or other such IT devices. They are not allowed computer or IT games, soft drink, lollies or money (as they have no access to shops). This immediately establishes an equitable living and learning environment for all from the onset.

We support them in bringing cameras, musical instruments, books and board games.

The communal living experience is often referred to as a contemporary 'rite of passage'. A 'rite of passage' has clearly defined stages around preparation, separation and reintegration. Our students and families experience all of these stages and particularly the feeling of separation, whilst they spend the first 5 weeks apart before a visiting weekend takes place. For a 'rite of passage' to have significant impact leading to transformational change, there must be a period of separation from one's family or immediate support group. This is evident in some cultures both within our country and around the globe that shape their lives and live by the practices of a 'rite of passage'.

During this time of separation is when we see students begin to make that transformational change as they become more responsible, demonstrate greater initiative, self confidence and maturity, especially in the final weeks before departing.

Metaphorically, we sometimes describe their journey of student leadership as initially 'walking in front, to walking alongside then to being able to walk behind' as good leaders and leadership should have flexibility in their influence. We have a day we refer to as 'step up day' later in the program and students must demonstrate good leadership practices, show initiative and have greater influence upon the program and the running of the community. This then becomes a reference point of their progress and development.

Curriculum

This being, the third component.

The curriculum at The Alpine School has core elements that are taught across each of the three campuses, whilst outdoor educational activities are seasonally specific to the local environments and natural surroundings, like the Victorian Alps and nearby ski fields.

Our schools mission is to provide opportunities for personal, community and leadership development.

The underlying focus of the curriculum is the development of Student Leadership.

Within the three components of location, community and curriculum, the **students are always at the centre** of what we do, value, teach and live by.

Now, I would like to talk about what we do.

Our curriculum is an integrated curriculum, hence we do not teach Maths, English, Science and the like as separate subjects, rather we teach classes based around life skills, leadership development and life-long learning.

Leadership. We recognise that all students have the potential for leadership as leadership is both transactional, in that students have the ability to act and perform leadership tasks and transformational, in that students can develop the qualities that will enable them to lead by example and positively direct their own lives, through sound decision making.

We teach classes focused on teamwork, team building, peer skills, conflict management, decision making, beliefs and values and hold a leadership conference day for students. Every day, two students are 'student leaders' for the day taking on the responsibility to coordinate 'roll call' (we call it headcount) at meals times and to oversee announcements from staff or students. They attend our staff meeting and also have a video conference linkup meeting in the mornings with the student leaders from the other two campuses.

Outdoor and Experiential Education. Much of our program is experiential, whilst much of the curriculum has a significant focus on the interaction with the natural world, the local environment and the surrounding Victorian Alpine Region. Being located at Dinner Plain, the environment lends itself to seasonal experiences and activities to match the seasons. Skiing becomes the focus in winter, mainly cross country with some downhill, but also accompanied with snow camping. Mountain bike riding, bushwalking and day walks are amongst the other major foci outside of the winter months.

We teach classes on First Aid, Introduction to Bushwalking, Cross Country Skiing, Bike Riding, Navigation, Rogaining, Indigenous Education, Sustainability and Water Watch utilising the environment as much as possible. We run the activities of caving on Mt Buffalo and in spring White Water rafting on the Mitta Mitta River. Students will often undertake activities on 'Rest Days' as well, like walking out to Mt Feathertop and back.

Reflection. Throughout the program, students are given specific time to reflect upon their hands-on experience, as a range of structured activities are utilised to assist students to reflect and move from an experiential mode of thinking to a reflective mode.

Daily, we run a reflective session called DEARR (Drop Everything and Read or Reflect). This goes for 30 minutes at the end of each day, before dinner and students write in a journal or draw or use visual expression on an 'art wall'. At the conclusion of outdoor based activities, like Bridge Building, Expo 1 and Expo 2, students are given specific guided questions to help them reflect upon their learning. At this time, they are also given direct feedback from staff.

The Structuring of Time. The curriculum is structured into two-half day sessions or sometimes a full day session, and an evening session. As mentioned earlier, each day there is a reflective time called DEARR.

We teach classes on Safe Food Handling, Goal Setting and Time Management.

Collaborative learning and relationship building. Most of the learning tasks are structured in such a way that students must work as part of a team or within a team environment, and therefore if they are not contributing equally to a task, then their input is noted and peer or staff feedback will constructively be given. This creates real life opportunities for learning.

We teach classes on raft building, run a team's day and Alpine Challenge day and our students peer teach to the local Primary students for a whole day about the local Alpine environment.

Role Modelling. As a staff team, we place high emphasis on modelling positive and appropriate behaviours to our students and from this modelling, we expect the students to do the same to their peers and to staff.

This is discussed within Peer Skills, Goal Setting and Passport classes.

Teaching about Thinking. We teach the students about different types of thinking and the application of the appropriate type of thinking for a task. This is an important part of our program. All students are introduced to Ned Herrman's Whole Brain Learning Model and this approach to learning.

We then teach classes based around Thinking and Learning and whether students are visual, auditory or kinaesthetic learners. Students develop a brief profile based around the Whole Brain learning model.

Problem Based approach to Learning. Community Learning Projects are student driven and take on a problem-based approach to their own learning. This involves the students identifying real and significant issues within their home or school communities and then establishing strategies to find solutions to improving or addressing these issues. This improvement or benefit to their community becomes their learning project.

For example; Past students have run multicultural days at their schools, drown the drought day for their community, raised money for local hospitals, activity days for primary students and more.

We teach classes on Presentation Skills, hold Community Service days and a formal presentation day for students to present their Community Learning Project intentions to their Principals or Liaison teachers.

Research.

Since 2001, our school has had an ongoing relationship with Monash University and has been involved in ongoing research looking at the outcomes and impact on students, staff and more recently parents. The feedback and data we have received from Monash University has helped guide or reinforce the curriculum to maximise the student learning outcomes.

Assessment. Students are presented with a report at the end of the term, based around VELS strands which include peer comments and a comment from their teacher and the Principal.

They must also complete a Level One First Aid course, a TAFE Safe Food Handling course and produce a reflective booklet called a 'Passport' outlining all of their learning's over the past nine weeks. Students must also give a presentation to their peer group and staff members. This is known as a Presentation of Learning. Again, this must capture their learning and development whilst giving them opportunity to verbally reflect about their personal growth.

I would like to present two different examples of Presentations of Learning from Term 1 2014, as these will highlight the benefits and demonstrate some of the positive outcomes of our program.

Each presentation runs for around 5 - 7 minutes in length. The first is from a girl called Lily Baxter.

This next one is from a boy called Giacomo Lytis who struggled with 'how to ask for help' hence his initial behaviour was at times boisterous and outgoing. Remember, both are in Year 9.

Lastly, I would like to show you another email from another past student who is now on our School Council.

In Summary.

In summary, our school program adopts a holistic, safe and experiential opportunity that is positive and memorable. My advice when teaching or working with teenagers is to exercise patience and catch them doing the right thing then be prepared to recognise them for this. Make the time to build relationships, they are social beings. Build resilience in them through 'real-life' related experiences and provide them with opportunities for responsibility, for when we take this away, they behave irresponsibly. Their willingness to learn will become clearer.

Happy times in the outdoors and educating. Thanks for listening.

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