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Outdoor Recreation-related Outdoor Education - Scope of the Research (1995-2010). Part One.

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Abstract

This article reports on the scope of the New Zealand outdoor recreation-related outdoor education research literature published from January 1995 to June 2010. It draws on the literature covered by the 2010 Sport and Recreation New Zealand-funded Outdoor Recreation Research Stocktake, which included outdoor education material. This article is divided into two parts, both published in this issue of the journal. Part one describes how the stocktake was conducted and reports on the research literature relating to outdoor recreation-related outdoor education management and delivery. Part two covers resources for outdoor recreation-related outdoor education, as well as impacts of, and participation in, outdoor recreation-related outdoor education. Part two concludes with a summary of the outdoor recreation-related outdoor education research literature (1995-mid-2010) as a whole.

Keywords: outdoor education, outdoor recreation, research, stocktake, scope

Introduction

In 2010, Sport and Recreation New Zealand¹ (SPARC) funded a stocktake of the outdoor recreation research literature produced since 1995. This was one of the projects included in the work plan under the *Outdoor Recreation Strategy 2009-2015* (SPARC, 2008). The stocktake was designed to provide a basis for development of a national outdoor recreation research agenda as well as to provide information to all researchers, policymakers and others on the state of the knowledge about outdoor recreation.

Stakeholders to the stocktake considered the relationship between outdoor recreation and outdoor education to be sufficiently important to include relevant aspects of the outdoor education research literature in it. A delineation of which aspects of outdoor education were covered, or not, is given below. During the analysis phase of the stocktake study, the relevant outdoor education research literature was analysed in some detail. Summaries of this detailed analysis are included in the stocktake report under each topic heading, however not all the detail was included for reasons of manageability. (This is consistent with the way the outdoor recreation material was treated.) This article provides the detailed analysis of the scope of that outdoor education material in full.

This article provides an overview of the scope of the relevant outdoor education research literature alone - a 'birds-eye' view of the 226 research reports and articles produced over the 15 years from 1995 to mid-2010. It may be used by researchers and others as a guide in itself, or read alongside the wider-ranging stocktake synthesis report (Booth & Lynch, 2010). The stocktake bibliography (Booth et al., 2010) should be consulted for the reference details of literature discussed here. Both the full stocktake synthesis report and the associated bibliography are available on Sport New Zealand's website².

¹ During the stocktake project, Sport and Recreation New Zealand was re-named Sport New Zealand. In this article the older name is retained where appropriate.

² Go to: <http://www.sportnz.org.nz/en-nz/recreation/Outdoor-Recreation-Research-Stocktake/>

This article is divided into two parts. Part one describes how the stocktake was conducted and reports on the scope of the research literature relating to relevant outdoor education management and delivery. Part two, also published in this issue of the journal, covers the scope of the research literature on resources for relevant outdoor education, as well as impacts of, and participation in, relevant outdoor education. Part two concludes with a summary of the scope of the relevant outdoor education research literature (1995-mid-2010) as a whole.

Purpose of Outdoor Recreation Research Stocktake 2010

Good knowledge is vital to policy, planning and research development for the outdoor recreation and education sectors in New Zealand. While research overviews have been conducted from time to time (see Lynch et al., 1994; Devlin et al., 1995; Booth, 2006; Booth & Mackay, 2007), a recent, comprehensive review has been missing.

The purpose of the Outdoor Recreation Research Stocktake 2010 was to provide a 'state of knowledge' research review and bibliography listing for the outdoor recreation sector in New Zealand. Further, the stocktake was (and is) intended to inform the development of the Outdoor Recreation Research Agenda, a sector-wide project initially led by SPARC. The stocktake reports include a synthesis of what is known about outdoor recreation and relevant aspects of outdoor education, and commentary about gaps in knowledge. They make available information on research published in a wide variety of sources (e.g. theses, academic journals, conference proceedings, agency reports).

Outdoor Education in the Stocktake: Definition and Method

Outdoor education research literature was included in the stocktake where it related to "participation in outdoor recreation activities or maximising the value of outdoor recreation" (Booth & Lynch, 2010, p.8) in New Zealand.

Outdoor recreation was defined broadly, including any recreational activities that occur in “natural surroundings” (Booth & Lynch, 2010, p.10) in New Zealand (excluding Antarctica), including “... wilderness through to farmland, caves to air space, flora and fauna” but not including “highly modified urban spaces such as neighbourhood parks, playgrounds or indoor climbing walls” (Booth & Lynch, 2010, p.10). Commercial activities were included. Literature on the psychology of learning in outdoor education was beyond the scope of the stocktake and therefore does not appear in this article, though there is some literature concerning psychology and/or learning that is linked to outdoor recreation-related themes (e.g., health). Similarly, although there are connections between environmental education and outdoor education, environmental education generally was not considered to be sufficiently relevant to the outdoor recreation stocktake to be included in it. Where research dealt with environmental education in an outdoor education context, however, it was included in the stocktake and, hence, in this article³.

The limitations placed on the interpretation of outdoor education in the stocktake mean that the outdoor education component of the stocktake comprises only outdoor recreation-related outdoor education research literature, so this article reports only that literature and does not attempt to cover the entire range of outdoor education research comprehensively.

The stocktake covered the written research published between January 1995 and June 2010. It included the findings of empirical studies, postgraduate student theses and dissertations, discussions of what is known about particular topics, and viewpoints by experts in relevant fields. A small number of unpublished works were included where they were considered significant. Works in progress at the time of the stocktake process, multi-media publications (such as lectures on You-Tube), publications - usually books - where outdoor education is only one component of many, and non-research documents were excluded.

³ A note regarding the research literature on outdoor education’s role in environmental learning is included in part two of this article, also published in this Issue.

Research literature was found through extensive searches of multiple databases, library holdings, online indices, internet resources, websites, bibliographies and textbooks as well as through contact with 76 outdoor recreation - and outdoor education - related agencies and researchers in New Zealand and overseas. The search terms used were: outdoor education, Education Outside the Classroom, EOTC, experiential education, adventure education, wilderness education, outdoor recreation education, Outward Bound, environment, nature, ecology and others relating more particularly to outdoor recreation (see Booth & Lynch, 2010 for the full list). To be included in the stocktake, literature had to: report research; be published within the stocktake period (some few unpublished research reports were included where they were considered to be significant); be focused on New Zealand; and address any aspect of outdoor recreation (including outdoor recreation-related outdoor education).

A topic framework was developed for the stocktake to guide literature searching and the subsequent synthesis. The framework reflected the three major planks of SPARC's *Outdoor Recreation Strategy 2009-2015* (SPARC, 2008): the outdoor recreation management and delivery system; outdoor recreation resources; outdoor recreation participation. Literature was allocated to all topics in the framework to which it related so that the synthesis could provide the most comprehensive possible overview of the knowledge base. An adaptation of the framework is expressed in this article through the three main sections of analysis and their respective subordinate topic headings. The adaptation replaces 'outdoor recreation' with 'outdoor recreation-related outdoor education' for the purposes of this overview.

Despite the wide net cast over the research sources during the stocktake exercise, it is possible that some literature was missed. Material that was inaccessible at the time, or unpublished and not highly significant, was not captured and is therefore not included in this report. A policy of inclusion was applied where there was doubt.

The stocktake exercise searched very widely and provided a useful means of collating and analysing what is, arguably, a sizeable portion of the outdoor education literature from the 15-year period covered. Despite its definitional and methodological limitations, it provides the basis for the otherwise unavailable research service provided by this article. This article not only reports on the literature that was covered by the stocktake, but consequentially also indicates where meta-research is still required for the literature not covered by the stocktake.

Outdoor recreation-related outdoor education - the state of the research literature.

The stocktake synthesis report (Booth & Lynch, 2010) provides a definition of each topic in the framework, an analysis of the scope of the research literature on that topic, a summary of key findings and, where possible, a comment on the quality of the publications included. There is not space here to cover all this ground, so the following commentary provides an overview of the *scope* of research on outdoor recreation-related outdoor education. The commentaries include topic definitions where these are not wholly self-evident or where they shed light on the way in which the relevant outdoor education research literature was treated in the stocktake report. The topic numbers given in brackets follow those used in the stocktake framework and report (Booth & Lynch, 2010), but the headings have been altered to reflect a focus just on the relevant outdoor education research literature.

Outdoor recreation-related outdoor education management and delivery system

Outdoor recreation-related outdoor education sector structure and coordination (topic 1.1)

The outdoor education sector includes education institutions at all levels, commercial and not-for-profit outdoor activity providers, youth development organisations, some social welfare and health agencies. It also includes organisations that provide organisation and/or coordination

on sector-relevant issues such as curriculum development, workforce development, qualifications, accreditation, and safety. Research interest is therefore on inter-relationships between the organisations involved in the sector, particularly in response to particular issues (such as safety, workforce development, qualifications).

There is almost no research on this topic. Some historical analyses refer to overall sector organisation and development, particularly from the late 1930s to the early 1990s. There is no material providing a contemporary analysis of the entire sector. There are no comprehensive comparative studies with relevant sectors overseas. Some authors concentrate on sector coordination around outdoor leader qualifications, in concert with sector activity in this regard over the past two decades. There appears to be very little, if any, research on outdoor leader qualifications coordination that is independent of the sector organisations involved. There is scope for research on all aspects of this topic.

Law (topic 2.1)

This topic deals with legislation and regulations that have implications for outdoor recreation-related outdoor education. It is concerned with the nature and effect of legislation and regulations.

Almost all of this literature relates to legislation concerning risk management and legal liability for accidental injury. One piece addresses the relevance of environmental legislation to outdoor recreation and outdoor education. A further piece concerns legal responsibilities of schools for students accommodated by the school. There is no research on other legislation-related issues such as employment (other than safety), tax, or education (to name a few examples).

Most of the literature has been stimulated by changes in employment safety law and by criminal case law relating to one particular accident. There is no research looking from the opposite direction, that is, the impact (if any) of accidents in outdoor recreation and outdoor education on legislation. Such

analyses might throw light on the appetite in New Zealand for legislative solutions to outdoor accident problems.

All the literature considers how the legislation affects outdoor recreation and/or outdoor education practice. Only one piece also analyses the criminal law legislation with regard to the purpose of law and in comparison to similar legislation elsewhere.

There is no research on how outdoor education organisations respond to the environmental legislation and related regulations, nor on the impact on programmes.

Community involvement in outdoor recreation-related outdoor education planning (topic 2.3)

In the 2010 stocktake, this topic dealt with community involvement in outdoor recreation planning. It is relevant to outdoor education where there is focus on community involvement in outdoor recreation-related outdoor education planning. There is one relevant outdoor education-related work on this topic. It comprises a descriptive analysis of community partnerships in educational activities in Alexandra from the mid- to late-1990s; the activities include outdoor education programmes. The analysis focuses on outcomes for learners rather than community partnership processes.

Codes of behaviour (topic 2.4)

This topic deals with formal codes that moderate behaviour. Codes may take the form of guidelines or rules. A small amount of literature refers to codes in outdoor recreation-related outdoor education contexts. It analyses guidelines; for example, the guidelines for safety in EOTC in schools. There is clearly scope for much more research on this topic.

Curriculum planning (topic 2.5)

For the purposes of the stocktake, curriculum planning was taken to be the outdoor recreation-related outdoor education equivalent of outdoor recreation planning. Therefore, this topic deals with the principles, processes and practices of planning for outdoor recreation-related outdoor education activity. Outdoor education activity is described (or prescribed) within curricula. This topic addresses the content and processes of outdoor recreation-related outdoor education curricula.

Curriculum content is closely associated with learning outcomes. Literature that is mainly concerned with learning outcomes for outdoor education participants is reported under a separate heading (topic 18.4 - Benefits: learning). Research that investigates students' experiences during outdoor education programmes in relation to curriculum objectives is also discussed under that heading.

We found one piece of research that directly addressed curriculum development over time. There is no research that directly addresses the principles, processes and practices of contemporary curriculum planning (but note that there is a wide body of such research in the general education literature).

The literature covers curriculum content in the following contexts: early childhood education and schooling; tertiary education; youth development; therapeutic programmes; Outward Bound; people with disabilities. The majority of it relates to formal education. Apart from the youth development and therapeutic studies, claims made about curricula effectiveness are not well tested by accepted scientific methods. Longitudinal studies of curriculum effectiveness are rare. There is a dearth of curriculum-related research on outdoor education for people with disabilities, women, Māori, ethnic minorities. We found no wide-ranging research on outdoor education curricula in the tertiary sector.

Some of the literature consists of arguments for alignment of outdoor education, and related educational approaches (e.g., Adventure Based Learning), with core curriculum content and competencies. Methods for measuring extent of alignment do not appear to have been developed.

Outdoor recreation-related outdoor education organisational governance (topic 3.1)

This topic deals with governance and leadership within individual outdoor recreation-related outdoor education organisations. This topic is distinguished from field leadership by focusing on overall organisational leadership, rather than outdoor activity leadership.

There are two pieces of research on this topic; one deals with organisational management requirements for students living in one organisation's residential facility and the other deals with organisation of curriculum documentation.

We found no other research on outdoor education organisations at management or governance level. This is a major gap in the research literature. Information about how outdoor education organisations are structured, governed and managed are likely to be useful for knowledge development and inter-agency support within the sector. Information about how sector organisations respond to challenges, such as changes in legislation and financial support, are likely to be useful within the sector and nationally.

Qualifications, competencies and skills (topic 4.1)

The outdoor recreation-related outdoor education workforce includes personnel at all levels: governance, management, field operations, support staff, mentors and volunteers. It includes staff of commercial and not-for-profit outdoor programme organisations, early childhood centres, schools and tertiary sector institutions. The qualifications, capabilities, experience, skills and competencies required of these personnel in all aspects of their outdoor education-related work make up the focus of this topic.

The majority of the literature on this topic deals with qualifications, competencies and experience of outdoor leaders, that is, those people in direct leadership of groups in the outdoors. There is no research on the qualifications, competencies and experience of other personnel in the

outdoor education sector. This is a major gap. We found no research on the attributes of outdoor education personnel for organisational robustness, efficacy and efficiency; nor on workforce capability development and succession to meet current and future needs. There is one study relating to outdoor education workforce capacity. It provides a small amount of information about the need for staff but does not provide data on the size of this demand, nor on the size of the existing workforce.

There are five distinct subsets of the literature relating to outdoor leader qualifications, competencies and experience. These are:

- Literature about qualifications and qualification systems across the sector. The focus is on qualifications relating to professional instructors and school teachers; the needs of community youth leaders are not addressed specifically, though there is overlap between these groups. There is no research on 'in-house' or programme-specific qualifications. There are a few studies of outdoor-related qualification pathways in tertiary education institutions but not comprehensive, overall analysis. Research into the role of universities in outdoor leadership is a particular gap. There is very little research into qualifications for particular activities - two items relating to rockclimbing were found.
- Literature about the impact of qualifications on educational processes and objectives. This fairly recent literature is sparse but of high quality. It focuses on qualifications in tertiary education institutions. There is scope for further critical analyses on the relationships between qualifications and education, in particular detailed work extended beyond tertiary education and traversing the spectrum of political perspectives.
- Literature about the competencies and experience required of outdoor leaders. This literature mainly comprises studies of learning processes within outdoor programmes, with general findings relating to leader competencies, and with only a few exceptions, it does not address issues of how leaders gain these competencies. The exceptions are two studies of decision-making.

- Literature about the competencies and experience that outdoor leaders and teachers actually have. This is found within wide-ranging surveys of outdoor education provision in New Zealand schools, all of which rely on self-reports of teacher competence and experience. We found no corresponding literature on non-school outdoor leader qualifications, competencies and experience and this is a major gap.
- Literature about the leadership needs of particular groups. The only study refers to the needs of Māori. There is wide scope for research on the particular leadership needs of all sub-groups of participants / learners.

Volunteers (topic 4.2)

This topic addresses all aspects of volunteer contributions to outdoor recreation-related outdoor education. We found three relevant pieces of literature. Two of these are fairly comprehensive national surveys including data on staffing. The other is a report on qualifications within the sector and it mentions volunteers. Outdoor education relies on volunteer contribution at all levels, though not in all organisations, but there is little known about their work. There is wide scope for further research on this topic in the outdoor education field.

Organisational risk management (topic 5.1)

Organisational risk management concerns management of 'business' risk; that is, the risks to the successful functioning of a business or organisation that may arise from such things as poor financial management, insufficient staff capability, threats to credibility with key stakeholders and markets ('bad press'), or insufficient insurance cover.

While risk and safety management is a major topic of interest in outdoor recreation-related outdoor education research, there is very little research on organisational risk management. We found only 7 directly relevant items – two are small research studies conducted in 1997, one is a survey of Australian and New Zealand organisations, another is a more recent

descriptive overview of schools' responsibilities for risk management. The latter, and two further analyses focus on legal liability implications for organisations if risk management fails. One study considers auditing and accreditation practices of outdoor education organisations. A small number of other studies focus on other topics but have some findings of relevance to organisational risk management.

All 7 directly relevant items refer to risks to organisations that arise from outdoor activities. Three of these items report data from studies of organisations, but two are now over 12 years old and the third reports Australian and New Zealand data together. One study deals in detail with how teachers and schools deal with injury-potential incidents and actual accidents. There appears to be no research specifically about other types of risks to which outdoor organisations are exposed, although one study includes data on professional development of staff. There is wide scope for research on this topic.

Activity risk and risk management (topic 5.2)

This topic addresses issues of risk and risk management associated with particular outdoor activities (e.g., rafting, glacier-walking), rather than risk management in general. It is mainly concerned with management of threats to the health and safety, both physical and psychological, of people involved in specific outdoor activities. It can also extend to environmental threats. This topic differs to the topic 'risk & safety general' through its focus on risk management of specific activities.

There is very little research that specifically focuses on risk and risk management in particular outdoor recreation-related outdoor education activities. The relative paucity of research on leader responses to accidents and incidents is notable.

There is only one comprehensive investigation of accident rates in outdoor education and one detailed study of how accidents and near-accidents are understood by outdoor leaders. Both these studies involve the larger outdoor education centres; there appears to be little or no activity risk-related research on smaller centres and programmes not based at centres (e.g., community or school-based programmes).

The risks, and risk management, associated with learners progressing from instructional situations to non-supervised outdoor activity has received some attention, but no dedicated formal research. This is a clear gap that has implications for safety in outdoor recreation, leader training, and curriculum development. Further research on decision making of leaders at all levels is indicated, especially field studies of leader practices and in a wide variety of activity contexts.

Risk & safety general (topic 5.3)

This topic includes research on risk and safety in general – not specific to any particular activity, nor necessarily to risk management though this is included. It includes research on different philosophical and theoretical perspectives of risk, safety and risk/safety management.

The literature on this topic includes studies and reviews of internationally well-established perspectives on risk and safety. These perspectives take as a given the objective, rational nature of risk phenomena and risk management practices, and psycho-social benefits of risk-taking behaviour. Since 2000, a line of critical research has opened that challenges these assumptions, but empirical studies have been relatively small-scale or only partly relevant to New Zealand. There is a need for more empirical research on subjective perspectives of risk and actual practices of risk management in specific situations (different programmes, environments and leaders; different learner groups; different activities). In particular, there is a need for more research on learner perspectives of, and experiences of, risk and risk management, and the consequential implications for programme outcomes.

Bibliographies & literature reviews (topic 6.1)

This topic covers literature that reports on bibliographical work in the field of outdoor recreation-related outdoor education. It includes wide-ranging reviews of the literature in the field.

There is one study relevant to this topic. It is a review of the literature, including New Zealand literature, published in three major outdoor education-related journals, all published overseas, between 1998 and 2007. There is wide scope for further outdoor education research in this topic area. To our knowledge, there has been no bibliographic work published on outdoor education literature since Lynch, et al's (1994) *Outdoor Education in Aotearoa/ New Zealand - an Annotated Bibliography*.

Research methods & tools (topic 6.2)

This topic covers research on research methods and research tools. It includes studies specifically on methods and/or tools, and also studies that report on methods and/or tools as major findings.

We found four items relating to outdoor recreation-related outdoor education. They are all very recent publications. One item deals with a specific quantitative research tool; the others deal more generally with qualitative and/or mixed methods approaches to research. In light of the wide gaps in the outdoor education research literature, more research on methods in outdoor education enquiry is warranted.

Research strategies & research overviews (topic 6.3)

This topic deals with approaches to defining, directing and leading research practices in outdoor recreation-related outdoor education. It is concerned with the processes of initiating, fostering, supporting and maintaining research activity, productivity, and value.

There is a dearth of research on this topic. One position paper exists, but it is brief and is now over 10 years old. There is wide scope for research on this topic.

Investment strategies for outdoor education (topic 7.2)

This topic deals with strategies for investing in outdoor recreation-related outdoor education, for defined outcomes. There is one relevant piece of literature on this topic; it is an evaluation study, now about a decade old. Further research on investment in outdoor education would be highly beneficial to the sector.

Societal change & outdoor education (topic 7.3)

This topic deals with research literature that analyses outdoor recreation-related outdoor education in relation to general social change. It includes historical work and position papers that focus on the future.

Just over one third of the outdoor education-related literature focuses on history and is represented by one author. There is one cross-national analysis. About half the outdoor education-related literature critiques ideological influences on outdoor education practices. We found no research on demographic aspects of social change, or on detailed economic change.

Product description and development (topic 7.4)

This topic covers research on outdoor recreation-related outdoor education 'products'. 'Products' includes services as well as material objects (such as maps).

There is one study on this topic relating to outdoor education. It relates to Outward Bound programmes (as products). Outdoor education is largely a non-commercial enterprise in New Zealand (to date) so product development may not be a major concern in this sector.

Management tools (topic 7.5)

This topic is concerned with tools that outdoor educators can use to manage aspects of outdoor recreation-related outdoor education. Two studies produced tools for managing accidental injury in outdoor activities. There is wide scope for critical appraisal of existing management tools and their application in outdoor education contexts. There is also wide scope for evidence-based development of new tools for use in outdoor education.

Sustainability (topic 7.6)

This topic deals with sustainability as a value, practice and/or ideology relating to outdoor recreation-related outdoor education.

We found a small amount of literature on this topic, mainly position papers by two authors. There is scope for much more research on this topic, including empirical studies.

Interval

The overview to this point has dealt with the outdoor recreation-related outdoor education research literature that was included in the Outdoor Recreation Research Stocktake (Booth & Lynch, 2010) and which focused on management and delivery. Part two of this article will cover the remaining two themes of the stocktake, providing an overview of outdoor recreation-related education research relating to resources (places, services), impacts and participation. It will also summarise the state of the outdoor recreation-related outdoor education research literature overall, with regard to scope.

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