

Assessment in senior outdoor education: A catalyst for change?

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Abstract

In recent times issues of sustainability and place, and human connectedness and care for outdoor environments, have been the subject of increasing professional dialogue in outdoor education in Aotearoa New Zealand. Attention has been drawn to the ways in which traditional, adventure-based conceptualisations of outdoor education shape pedagogical practice in particular ways, potentially obscuring opportunities to explicitly promote student connectedness to, and learning about and for the outdoors. This paper contributes to this evolving dialogue about the greening of outdoor education by specifically targeting assessment in senior school outdoor education. By initially establishing the interdependence of curriculum, pedagogy, and assessment, the potential that assessment has to constrain and/or drive this recent curriculum and pedagogical re-prioritising in outdoor education is made evident. We argue that it is possible for assessment to be a productive engine for student learning about sustainable relationships with the outdoors. Five interconnected catalysts are highlighted as being central to this: (i) the alignment process, (ii) using fresh eyes with current achievement standards, (iii) taking another look at curriculum in relation to assessment, (iv) writing programme-specific assessments, and (v) reflective decision making. These are suggested to be key considerations for outdoor educators for the potential of school-based outdoor education to be fully harnessed.

Key words: outdoor education, assessment, education for sustainability.

Setting the scene

If professional publications are indicative of what is topical in outdoor education in Aotearoa New Zealand currently, it can be seen that matters to do with curriculum, pedagogy, and assessment are in the professional spotlight. For example, the first special issue of this journal with its focus on place-based outdoor education (see for example Hill, 2010a; Irwin, 2010; Legge, 2010) illustrated some contemporary responses to calls for increased

curriculum and pedagogical attention for educating for sustainability, place-connectedness, and biculturally inclusive pedagogies. Furthermore, the attention recently afforded to alternative senior assessment practices and possibilities in another national publication (Campbell-Price, 2010; Major, 2010; Taylor, 2010) described some of the ways that such moves to green outdoor education have influenced assessment practices in senior programmes. This paper picks up on threads of this emerging professional dialogue and debate by specifically considering aspects of assessment in senior outdoor education. In bringing “fresh eyes” (Gillespie & McBain, 2009) to current assessment practice, we seek to prompt consideration of the ways that teachers can further harness the potential of senior outdoor education to explicitly facilitate student learning about their relationships with, and responsibilities for, the outdoor world.

Given Zink and Boyes’ (2007) observation that the term outdoor education is understood in “multiple ways” by teachers in Aotearoa New Zealand (p. 77), it is important to clarify that in this paper, outdoor education is broadly conceived in relation to health and physical education (HPE). We contend however that the curricula, pedagogical, and assessment messages pursued in this paper have relevance and meaning to the practice of curriculum-based outdoor education in general. Furthermore, we suggest that the philosophical “heart” of HPE – the four interdependent concepts of Hauora, attitudes and values, the socio-ecological perspective, and health promotion (Ministry of Education, 2007) – also provides a productive and arguably important reference point for the practice of outdoor education in subject domains other than HPE.

Just over a decade ago the then new HPE curriculum (Ministry of Education, 1999) established outdoor education as one of seven key areas of learning¹ in health and physical education. Outdoor education set out to provide students with “...opportunities to develop personal and social skills, to become active, safe, and skilled in the outdoors, and to protect and care for the environment” (p. 46). Suggested learning opportunities were: adventure activities and outdoor pursuits for “physical”, “personal”, and “interpersonal” skill development and enjoyment; learning about the “traditions, values, and heritages of their own and other cultural groups” as well as the “environmental impact” of activities; planning to care for the environment and to manage safety; and “how to access recreation opportunities within the community” (Ministry of Education, 1999, p. 47). While outdoor education remains a key area of learning in the abbreviated

1 The seven key areas of learning in HPE (Ministry of Education, 2007) are mental health, sexuality education, food and nutrition, body care and physical safety, physical activity, sports studies, and outdoor education.

two-page HPE learning area statement in the revised New Zealand Curriculum (NZC) (Ministry of Education, 2007), no extended description of its intent or nature is given. Looking to definitions in other documents such as the *Education Outside the Classroom Guidelines*² (Ministry of Education, 2009) illustrates however, that the sentiments of learning about self and others through outdoor and adventure activities and learning about caring relationships with the outdoor environment as outlined in the HPE curriculum (Ministry of Education, 1999), have not dramatically changed. Although the relative programmatic emphasis accorded learning about self, others, and the environment has clearly fluctuated over the years (see Boyes, 2000 for discussion in relation to HPE and Lynch, 2006), outdoor education within physical education arguably focuses on learning *in, about* and *through* movement (Arnold, 1979) and learning in, about, and for the outdoors. Such a conceptualisation holds the two interdependent aspects of movement and the outdoors in balance. In other words, while the movement part or doing part of outdoor education is absolutely central, so too is student learning about and for the outdoor environment.

Given this conceptualisation, an array of pertinent questions arise about contemporary senior outdoor education including assessment practice. For example, what are some of the current assessment practices in senior outdoor education? How do these assessment practices parallel curricular and pedagogical intentions of learning in, through, and about movement and in, about, and for the outdoors? Furthermore, what are some possible ways to ensure that assessment practices value the environmental aspects of outdoor education inherent in the curricular expectations?

This paper aims to begin to address these questions. Initially we highlight the interdependent and dynamic relationship that exists between curriculum, pedagogy, and assessment. Situating assessment within this relationship serves as a powerful reminder that assessment is not a “neutral element” (Barnes, Clarke, & Stephens, 2000, p. 625), and emphasises the need for assessment practices to closely link to the goals of curriculum, and for teaching and learning practices that support these. The paper then presents a snapshot overview of the current state of play in senior outdoor education as we see it, including a brief discussion of assessment frameworks and some current practices (e.g. Campbell-Price, 2010; Hill, 2010b; Major, 2010; Taylor, 2010). Although this may be familiar ground for many readers, it provides a contextual platform for further discussion

2 In *EOTC guidelines: Bringing the curriculum alive* (Ministry of Education, 2009), outdoor education is said to focus “...on particular aspects of outdoor learning, such as adventure activities, outdoor pursuits and relevant aspects of education for sustainability (Boyes, 2000, p. 71)”. These arguably relate to the learning opportunities described in the HPE curriculum (Ministry of Education, 1999).

and also may prove useful to those unfamiliar with the nuances of senior school programmes in Aotearoa New Zealand. Positioning assessment as a potentially productive “engine” (Barnes, Clarke, & Stephens, 2000, p. 623) for student learning, about and for the outdoors, rather than as a constraining force, allowed five key catalysts for change to be identified. We contend that these may provide realistic and relevant prompts for outdoor educators endeavouring to align pedagogical practice and assessment processes in ways that explicitly promote student learning about, connectedness to, and care for, the outdoors.

Curriculum, pedagogy, and assessment

An underlying and widely accepted premise in both general and discipline-specific educational research is that curriculum, pedagogy, and assessment are inextricably interlinked (see for example Bernstein, 1977; Penney, Brooker, Hay, & Gillespie, 2009; Pill, 2004). In complex cyclical and reciprocal ways, curriculum decision-making shapes and enables/constrains pedagogical decision-making and practice, which in turn shapes and enables/constrains assessment practices and vice versa. Within physical education the relationship between these discrete yet interrelated foci has been increasingly articulated; with Penney, Brooker, Hay, and Gillespie (2009) for example arguing that any conceptualisation of quality physical education requires attention be directed to quality within each of these three dimensions. Campbell-Price (2010) also hints at the dynamic relationship between curriculum, pedagogy, and assessment when she ponders how recent critiques of outdoor education contexts and pedagogies have actually “played out” in senior school programmes and questions how much the currently available assessment standards “enable” and “constrain” student learning (p. 10).

Redelius and Hay (2009) draw on the work of Bernstein when suggesting that curriculum, pedagogy, and assessment are powerful “message systems” (p. 276) that in and of themselves contour and shape student learning in both expected and unpredicted ways. From the point of view of pedagogy, Leach and Moon’s (1999) assertion that “pedagogy is never innocent” (p. 1) clearly reiterates this point. Furthermore as Penney and Waring (2000) note, adopting a broad conceptualisation of pedagogy as being “...not only about the ‘**how**’ of teaching, but also the ‘**what**’ and ‘**why**’ ” (p. 6, emphasis in original) necessitates acknowledging that “...no aspect of education nor our teaching is neutral, but rather, is inevitably and unavoidably selective” (p. 6). Educators’ pedagogical decisions and choices in regards to programme aims, the learning outcomes that are sought, the skills and knowledge prioritised in lessons, the learning contexts and content employed, and what is accepted as learning all reflect and express

particular beliefs and assumptions and in turn convey messages about how learning and learners are viewed (Penney and Waring, 2000). In addition, teacher concerns about curriculum coverage and available time further reflects the complexity of influences on pedagogy and pedagogical decisions (see Mortimer, 1999). Furthermore, as outlined in the NZC (Ministry of Education, 2007), effective pedagogy requires that teachers inquire into the teaching-learning relationship (p. 35), continuously and closely examining teaching practice, curriculum decision-making, and uses of assessment.

Given the focus on assessment in this paper, Barnes, Clarke, and Stephens' (2000) assertion that "assessment can be the engine of curriculum reform, or the principal impediment to its implementation" (p. 623) is of particular relevance. Assessment clearly can be a powerful catalyst that has the potential to productively drive curriculum and instructional change. Considering how we might exploit it to do so in regards to student learning about and for the outdoors is one of the key aims of this paper. Furthermore, if teacher and student practices do indeed "...derive from an anticipation of what will be assessed and the form the assessments will take" (Barnes, Clarke, & Stephens, 2000, p. 626), the importance of aligning assessment practice, curricular intent and expectations, and pedagogical practice becomes even more evident. What might this mean for outdoor education?

Snapshots of senior outdoor education

What's happening in curriculum and pedagogy?

As an elective senior subject, outdoor education is currently packaged in a range of ways in secondary schools in Aotearoa New Zealand. For example, in some schools outdoor education features as a stand alone curriculum-based course in years 11 through 13, and in other settings it is a module or a learning context within a senior physical education course. Courses entitled 'Outdoor Pursuits', 'Outdoor Recreation', or similar appear as subjects offered in year 12 and 13, presenting a range of skill learning, adventure, and life skill development opportunities. Outdoor education also finds expression in co-curricula and extracurricular courses such as outdoor leadership camps for senior students, senior sport and recreation programmes, outdoor education academies marketed to attract both domestic and international students (Lynch, 2006), outdoor clubs, and programmes with an outdoor education component such as Duke of Edinburgh Award schemes. The broad range of learning potentially available within these courses is assessed in equally diverse ways. In short, assessment of learning currently includes the use of Physical Education

achievement standards³ from the physical education matrix, unit standards from a variety of National Qualifications Framework fields, and in some cases, Education for Sustainability achievement standards.

This packaging of outdoor education in itself can be seen to be illustrative of Lynch's (2006) conclusion that contemporary outdoor education "takes a diversity of forms" (p. 217). Given this diversity, and in the absence of a substantive body of research about the practice of outdoor education in schools, it is important to note that we are not suggesting that the snapshot overview of school-based practice presented here is a definitive or necessarily nationally representative picture. However, consideration of contemporary home grown literature and outdoor sector communication reveals that several curricula, pedagogical, and assessment-related themes are increasingly noted in professional discourse.

Firstly, a number of commentators have identified the historical dominance of personal and social development learning outcomes in programmes (Cosgriff, 2008; Lynch, 2006; Zink, 2003; Zink & Boyes, 2007). A second and related theme is the use of outdoor pursuits and adventure activities, what Brown and Fraser (2010) called " 'risky' pursuits" (p. 9), for achieving these desired outcomes. A myriad of outdoor pursuits activities have traditionally been utilised in school programmes, including rock climbing, tramping, kayaking, camping, and mountain biking (Zink & Boyes, 2007). This privileging of performance in outdoor pursuits over alternative learning outcomes, potentially results in the overshadowing of other curriculum imperatives, including those related to care for the environment or education for sustainability (e.g. Cosgriff, 2008). It may also result in safety and risk discourses remaining at the forefront of curriculum and pedagogical decision-making (Zink, 2003). Brown and Fraser (2010) note that student learning is potentially limited by some of the pedagogical approaches employed in the teaching of "risky" activities. Requisite safety requirements mean that at times "...experts provide specialist advice and controls on participation..." with the resultant paradoxical effect being the removal "...of agency and authentic decision making from students" (Brown & Fraser, 2010, p. 12). It is from this basis that calls for more holistic and contextualised pedagogies that deliberately and explicitly centre environmental, place-based, and sustainability education (Brown, 2008; Irwin, 2007/2008, 2010; Hill, 2008, 2010a) have proliferated.

3 While we note that changes in terminology are part of aligning national assessment with NZC (2007), in this paper we are using the term achievement standard in reference to those standards that assess curriculum and can be found on a subject matrix - the table of achievement standards from Level 1 -3. These can be accessed at: <http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/CurriculumAndNCEA/NCEA/NCEAAchievementStandards/NCEAAchievementStandardsAndMatrices.aspx>

What's happening in assessment?

The way in which outdoor education is situated as a subject or part of a subject has traditionally influenced what is assessed, how it is assessed, and who does the assessing. As a key area of learning within the HPE curriculum, senior outdoor education has (until recently) been bound to utilise either the curriculum-based Physical Education achievement standards, or unit standards from the National Qualifications Framework. Unit standards are comprised of two groups, those that preceded achievement standards and were linked to curriculum and those that are also accessible for school use (with some limitations) but intended for industry training and qualifications such as National Certificate in Outdoor Recreation (Group Leadership Level 3). All physical education achievement standards are internally assessed within the school context. Additionally, exemplar assessment resources developed by the Ministry of Education are provided to guide teachers in developing assessment materials for their specific teaching and learning programmes.

This gives rise to a range of scenarios in terms of assessment. For example, if a school offers outdoor education as a senior subject and wishes to enable students to study both physical education and outdoor education, the practical realities of both subjects having the same 'bucket' of physical education achievement standards to call on, means that one subject has often sought assessments in the form of unit standards. Alternatively, both subjects have utilised the achievement standards that allow assessment in more than one context, namely the standard that assesses performance in movement contexts. Over the last decade the apparent lack of national assessments for curriculum-based outdoor education, when considered within the dynamic interplay of curriculum, pedagogy, and assessment, has been a factor influencing the range of ways that courses involving learning in the outdoors have evolved.

In terms of specific assessment practice, the curricular and pedagogical priorities highlighted in the previous section are arguably reflected in teachers' classroom practice. For example, Jones (2004/2005) suggested that health and safety legislation and the uptake of vocationally-focused unit standards in schools were not only key changes that teachers identified in outdoor education, but also worked in tandem to privilege risky activities like outdoor pursuits in school programmes. Furthermore, outdoor pursuits and "pursuing" had become "...ends in themselves", leading to performance in pursuits being the "criteria for achievement" (p. 30). Hill's more recent study (2010b) of the beliefs and values of four New Zealand outdoor educators identified that "tension" was felt between individuals' strongly-held environmental beliefs and their consistent enactment in pedagogical practice, given the constraints and realities

of secondary schools. The “domination” of assessment, in particular the “pursuit activity focus of unit standard assessment tools” (p. 37) was similarly noted by teachers. To some extent, it appears that teachers in both studies considered that the “assessment tail [was] wagging the curriculum dog” (Barnes, Clarke, & Stephens, 2000, p. 624) in ways that constrained curricula and pedagogical possibilities supporting student learning about and for the outdoors.

However this is not always the case, as can be seen by Campbell-Price’s (2010) finding that the three teachers she interviewed not only “highly valued” (p. 12) the achievement standards assessing performance or technical proficiency, but also considered them to be a means for “students to gain an understanding of the dynamic nature of the setting they are in, and opportunities to ‘really take notice’ of their surroundings” (p. 12). While assessment of movement performance is clearly integral to senior outdoor education, questions appear to remain about assessment practices that reflect student learning about and for the outdoors.

Outdoor education assessment practice has been broadened through the utilisation of achievement standards from education for sustainability (EfS) by some outdoor educators (Campbell-Price, 2010; Major, 2010; Taylor, 2010). Although a variety of challenges with using EfS standards in outdoor education have been reported, it appears that EfS assessments may offer considerable potential for enabling integrated and holistic teaching and learning approaches, student involvement within and beyond the school community, and critical thinking. Clearly, the focus of the achievement standards on sustainability helps keep the pedagogical spotlight on student learning about and for the outdoors. However given that the extent of EfS achievement standard usage in outdoor education currently appears limited, and that the practical realities of working interdepartmentally⁴ may moderate their uptake in some schools, we now consider alternatives for re-positioning assessment as a catalyst for student learning about and for the outdoors.

4 Schools have made decisions as to which departments the EfS standards are sited in, and which subjects utilise them for assessment. In some cases this is science departments, sometimes social sciences or outdoor education.

Assessment as a catalyst for change in senior outdoor education

If the inconsistencies and tensions between teachers' belief in, and pedagogical commitments to environmental awareness and care and the actualities of assessment practices noted by Hill (2010b) are in any way indicative of those experienced by other outdoor educators in school-based programmes, then re-positioning assessment so that it explicitly values student learning for and about the outdoors is a matter of some urgency. We propose that the five catalysts highlighted below may be integral to supporting outdoor educators to consistently align their assessment practice with contemporary environmentally-focused curricular and pedagogical goals.

Catalyst one: The alignment process

The alignment process currently being undertaken by the Ministry of Education and New Zealand Qualifications Authority (NZQA) is a process of review and revision of national assessment to align assessment with the NZC (Ministry of Education, 2007). While this paper is not designed to outline these changes in detail, we consider that this development provides a very useful catalyst when repositioning assessment as an engine for green outdoor education. More specifically the increase in credits available on the updated physical education matrix⁵ (32 at level 1, 36 proposed for level 2 from 2012, and 31 proposed for level 3 from 2013), along with the expiry of curriculum-based unit standards, presents as a prime opportunity to reconsider assessment in outdoor education. With more credits on offer, the physical education matrix could now be the first 'port of call' for assessment opportunities for outdoor education. The alternative will be to utilise unit standards designed for industry training, which will require schools to be accredited or to use other providers for teaching and learning programmes and/or assessment.

A first glance at the physical education matrix may suggest that the offerings of risk/safety management, interpersonal and leadership skill development, and performance in pursuits are merely a perpetuation of the traditional privileging of personal and social development outcomes. However the increased number of achievement standards now available and breadth of options they afford, especially when explicitly harnessed to maximise their potential for student learning about and connectedness and care for the outdoors, not only goes some way to addressing the lack of curriculum-based outdoor education assessment options noted earlier but importantly suggests holistic possibilities for practice.

5 Matrix as at 5 November 2010 found at http://www.tki.org.nz/e/community/ncea/docs/physed_matrix_21oct.doc

Catalyst two: Revisit and reconsider the curriculum in relation to assessment

Scrutinising the HPE curriculum learning area (Ministry of Education, 2007) with the particular intention of explicating the possibilities that are already there in regards to learning opportunities (and by implication assessment possibilities) relating to the environment and sustainability in outdoor education is the second catalyst. A number of relevant possibilities become apparent through this critical review of the conceptual framework of the four underlying concepts, the four strands, and the achievement objectives. For example, the underlying concept of Hauora is described as a “Maori philosophy of well-being that includes the dimensions of taha wairua⁶, taha hinengaro, taha tinana, and taha whanau each one influencing and supporting the others” (Ministry of Education, 2007, p. 22). This underlying concept thus brings attention to components of wellbeing and can be clearly traced through the four strands and achievement objectives in the HPE curriculum statement. The use of the more interpretative word “includes” rather than “comprises” as in the previous curriculum statement (Ministry of Education, 1999), infers that the stated components of wellbeing are not necessarily all that there is or could be, a point that has been picked up by a number of commentators challenging the “sanitisation” of hauora (Salter, 2000, p. 5) and the absence of whenua (land) from curricula definitions (e.g. Hokowhitu, 2004). While Hokowhitu (2004) acknowledged that the “inclusion of whenua is implicit, just as land implicitly holds up the four sides of a house” (p. 77) he went on to note, “Unfortunately, the majority of physical education teachers will not comprehend the distinction and, accordingly, the notion of whenua will be largely overlooked” (p. 77). Furthermore, it is suggested that ‘re-placing’ whenua in hauora would have allowed teachers “...to provide a contextually driven pedagogy...” (Hokowhitu, p. 81). By implication, assessment practice would reflect this place-centredness as well as the relational aspects of human participation in and interaction with outdoor contexts.

A critical review of the curriculum also casts attention on the fourth strand, commonly referred to as strand D, “Healthy communities and environments” (Ministry of Education, 2007, p. 22). A range of opportunities to promote learning about whenua, place-based approaches, or sustainable practices arise from this strand’s focus on healthy communities. Furthermore, the socio-critical nature of the 1999 HPE curriculum that is retained in NZC (Ministry of Education, 2007) is very apparent in this strand. Opportunities

6 No English translations of these “dimensions” are given in the 2007 HPE learning statement. However in the previous curriculum they were translated as taha wairua (spiritual well-being), taha hinengaro (mental and emotional well-being), taha whanau (social well-being), and taha tinana (physical well-being) (Ministry of Education, 1999, p. 31).

for teaching and learning programmes to enable students to critically engage with relevant issues in relation to community and environment-local, societal, and global- are there 'for the taking'.

Catalyst three: Viewing achievement standards with fresh eyes

Although achievement standards have a title that describes what is being assessed, as well as an intent statement and explanatory notes, the way the standards are interpreted can vary. The flexibility to address the specific needs of local contexts and particular student groups afforded by this room for interpretation reflects the intent of NZC (Ministry of Education, 2007). However, it risks not being fully realised if particular ways of reading the face value of any given standard for assessment become so taken-for-granted or 'natural', that they overshadow other possibilities. This is reflected in the way that the exemplar materials⁷ for achievement standards appear to have been unproblematically adopted in some instances, with the apparent expectation that the exemplar will provide best-fit assessment for a range of school programmes.

Bringing "fresh eyes" (Gillespie & McBain, 2009) to the achievement standards on the revised Physical Education matrix may provide a pathway to opening up previously un-seen potential for holistic learning and a greater environmental focus in outdoor education. In other words, we are suggesting that the process of carefully unpacking the existing physical education achievement standards to consider all possibilities offered for assessing student learning about and for the outdoors can be a powerful mechanism for aligning assessment with curricular intentions in this regard. In turn, this prompts altering pedagogical practice to reflect this conceptual reorientation. At even a relatively superficial level, our reading of Physical Education achievement standards 1.1, 1.4, 1.7, 1.9, 2.1, 2.5, 2.6, 2.7, 2.9, 3.1, 3.5, 3.7, and 3.8⁸ for example, reveals a number of opportunities to assess outdoor education with a greater attention to environmental aspects.

The following examples illustrate this more specifically. Achievement Standard 1.1: "Participate actively in a variety of physical activities and

7 Exemplar internal assessment resources according to a note on the Te Kete Ipurangi website (the bilingual education portal) "provide guidance for teachers to develop their own tasks to meet the needs of their students and school curriculum" (Ministry of Education, 2010) retrieved December 6 2010 from <http://www.tki.org.nz/e/community/ncea/resources.php>

8 The numbers used here refer to the numbers of the achievement standard as on the revised and newly numbered versions on the physical education matrix as at 5 November 2010. See footnote 5 for where to retrieve this matrix.

explain factors that influence own participation,” and Achievement Standard 2.1: “Explain the role and significance of physical activity in the lives of young people in New Zealand”, could be utilised to assess students’ understanding of themselves in relation to a range of outdoor contexts and activities, and the significance of both ‘doing’ and ‘being’ in the outdoors for themselves and other young people. Tailoring assessment to target this focus on connections with the outdoors and the personal, cultural, and spiritual significance of these connections, in turn prompts pedagogical reflection about the teaching and learning approaches that may best support this student learning.

Achievement standard 2.7: “Explain the application of risk management strategies to a challenging outdoor activity”, and its counterparts 1.7 and 3.7, provides an assessment focus on various aspects of risk management in outdoor education. In practice, many of the tools and processes historically associated with identifying, analysing, and managing risk appear to be human-centred, meaning that physical and emotional risk management considerations are given precedence. Over a decade ago, Law (1998) posed a challenge to outdoor educators to “focus your programmes more on environmental education” (p. 18), and gave the example of adapting the oft-used risk analysis and management systems tool (RAMS) as one tangible way to do this. While Law’s suggestion at the time was to design and use an environment-focused RAMS, even the apparently small act of considering human interaction with, impact on, and damage to the outdoor environment as an undesirable programmatic outcome or risk ⁹, draws students’ attention to the need to consider how to promote sustainable human interaction with the environment.

One further example illustrates the utility of systematically unpacking the assessment standards with fresh eyes so that alignment with curricula and pedagogical goals occurs. Achievement standard 3.5: “Examine a current physical activity event or trend or issue and explain its impact on New Zealand society”, opens the door to strand D (Ministry of Education, 2007) which as noted, emphasises both the environment and critical thinking. Drawing on processes currently used in senior physical education such as the Critical Analysis Process (Gillespie & McBain, 2009), students are encouraged to deconstruct and un-pack experiences and issues in such a way that they can better understand and recognise assumptions, power, and competing societal influences. In senior outdoor education, a myriad of possible topics to focus on exist including the possible commodification of

9 The RAMS planning tool identifies learning goals and then the potential risks (undesirable outcomes) associated with the learning experiences designed to achieve these.

the outdoor environment, the environmental impacts of a particular school trip through the lens of sustainable practice, the ways that technological advances in outdoor clothing and equipment mediate human relationships with the outdoors, and adventure racing cultures. Building in critical and practical analysis of the outdoors world, may facilitate the development of critical and discerning students better able to recognise how, when, and why to take some form of action.

Catalyst four: Writing programme-specific assessment materials

As has been noted, the mode of assessment used provides a strong message about the way we view learners, our beliefs about learning, and what we value as knowledge. Given the high-stakes nature of assessment in the senior school, teachers' concerns about students only being motivated by credits and the disconnect between industry-based assessments and what it being taught in school programmes (Hill, 2010b, p. 37), and the limited focus on outdoor education in much of the physical education exemplar material¹⁰ to date, the question of why not develop our own assessment materials arises.

Time, confidence, and expertise may restrict teachers from formulating their own assessment tasks for a particular achievement standard. Anecdotal evidence suggests that some teachers several years on from the introduction of NCEA are unaware they are allowed to and encouraged to develop their own assessment materials. Every outdoor education programme is unique in a number of ways – the students, contexts, the local environment – hence the desirability of ensuring that assessment tasks align constructively with teaching and learning programmes. As teachers increasingly develop tailor made place-based programmes that reflect the for and about components of the outdoors for their particular group of students, the teaching and learning programme will be strengthened by appropriate, well aligned assessment tasks that assess what is most valued in that particular programme of outdoor education.

Catalyst five: Reflective practice and teacher decision-making

As Hill (2010b) identified, a range of pressures and conflicts serve to make it challenging for teachers to create change within the complex environment of the secondary school. Time, energy, and resource constraints compound the curriculum and assessment pressures some teachers have identified. They also may reduce opportunities for teacher reflection and the sense

10 There has been limited emphasis in previous level 1 assessment task exemplars on outdoor education contexts, with level 2 and 3 outdoor-related exemplar material primarily focusing on leadership, safety management, planning and performance of outdoor pursuits.

that individual teachers have some control over curriculum, pedagogical, and assessment issues. This catalyst brings the spotlight onto the choices available to encourage focused and critical consideration be given to decision-making regarding curriculum, pedagogy, and assessment. While we acknowledge that decision making of this nature is influenced by numerous factors, there is much that remains for us to critically consider. Educators make decisions about: contexts, content, achievement standards, assessment tasks, modes of assessment, whether to assess formatively, ongoing or summatively, the timing of assessment, who assesses our students, and more. Each of these decisions creates waves in the curriculum-assessment-pedagogy 'lake'. Hence the importance of carefully considering our decisions about curriculum, pedagogy, and assessment, and what sits behind our decisions and the potential outcomes on student learning.

Conclusion

If contemporary endeavours in outdoor education to promote student understanding of, connectedness to, and willingness to take action to sustain particular places are to be more fully realised and widely reflected in senior school programmes, it is clear that assessment needs to value these curricular and pedagogical goals. This paper has targeted five catalysts that we propose may be integral to supporting teachers endeavouring to reposition assessment so that it more fully aligns with teaching and learning programmes promoting student learning about and for the outdoors. More particularly we have broadly argued the value of tapping into the potential of existing physical education curriculum and assessment frameworks, teachers constructing their own tailor-made assessments, and critical decision making about curriculum, pedagogy, and assessment.

While we have specifically foregrounded assessment in this paper, we have done so within a broader context of affirming the dynamic and potent interlinking between curriculum, pedagogy, and assessment. We continue to advocate that teaching and learning programmes are best planned from curriculum, student needs, and department philosophy, however acknowledge that in many instances in current practice, assessment strongly influences decision making about programmes. This paper therefore signals that a considered reflective look at assessment, alongside ongoing recognition of the interplay and the influence of curriculum, pedagogy and assessment on one another, may enable the development of programmes that not only have strong synergy between each component but are able to fully provide for student learning about and for the outdoors.

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