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Curriculum, pedagogy and assessment: three message systems of schooling and dimensions of quality physical education

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This paper identifies ‘quality’ as an internationally relevant concept to be problematised in contemporary debates about physical education (PE). Drawing on the conceptualisation of curriculum by B. Bernstein in 1977, pedagogy and assessment as three inter-related message systems of schooling, the paper presents and explores curriculum, pedagogy and assessment as three fundamental dimensions of ‘quality PE’. Discussion addresses what quality in each dimension may mean in PE, and demand in practice. Contemporary initiatives in Australia and New Zealand provide a reference point for exploring the prospective application of quality conceptualised in terms of the three inter-related dimensions. Attention is drawn to frameworks in mainstream education that may be utilised in endeavours to critically review current practices, and inform developments directed towards achieving quality in PE. It is argued that achieving quality in PE requires that quality is pursued and demonstrated within and across curriculum, pedagogy and assessment, and that meanings of quality always need to be contextualised in cultural, social and institutional terms.

Keywords: *Quality physical education; Curriculum; Pedagogy; Assessment; Productive pedagogies*

Introducing the quality debate

In 2000, Siedentop and Tannehill made the observation that the attention being directed towards physically active lifestyles ‘has begun to put the spotlight on school physical education programs and what they do or do not accomplish’ (pp. 13–14). In recent years, internationally, professionals have been endeavouring to protect and/or enhance the position of physical education (PE) within schools (and therefore, within and beyond the formal curriculum). The allocation of time and other resources to PE has remained a matter of world-wide professional concern and a significant focus for research and advocacy directed towards legislative change and government investment

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(Hardman, 2000, 2001). The so called 'Berlin Declaration' explicitly called upon governments world wide to 'recognize that *quality* Physical Education depends on well-qualified educators and scheduled time within the curriculum, both of which are possible to provide even when other resources like equipment are in short supply' (our emphasis) and to 'support research to improve the effectiveness and *quality* of Physical Education' (International Council of Sport Science and Physical Education (ICSSPE), 1999, our emphasis).

Since the Berlin Declaration there has been some recognition that legislative change and particularly, stipulations regarding allocated time for PE and school sport, by no means guarantee advances in learning or in the extent of interest and engagement in physical activity within and beyond schools. Ensuring 'quality' amidst moves to secure a certain minimum time allocation and level of resourcing, has been acknowledged as a crucial matter for curriculum agencies, professional associations, schools and individual teachers to address. Recent developments in England, initiated by the Qualification and Curriculum Authority (QCA), illustrate the significance of the concept of quality in political arenas, but also the way in which developments seeking to ensure and/or enhance quality in PE are being advanced from particular perspectives. In England, achieving what is termed 'high quality PE and sport' has been a focus of new guidance materials for schools and an evaluation and improvement programme centring on school-based self-evaluation and action-research framework (Casbon *et al.*, 2003; DfES/DCMS, 2004). The QCA framework rests on three principles; namely that 'high quality PE and sport' will:

- enable all young people, whatever their circumstances and ability, to take part in and enjoy PE and sport;
- promote young people's health, safety and well-being; and
- enable all young people to improve and achieve in line with their age and potential (DfES/DCMS, 2004, p. 1).

'High quality PE and sport' is defined by the QCA in terms of 10 outcomes that are expressed as characteristics of young people as learners and participants in PE and sport. Notably, there is no accompanying commentary in the QCA documentation to explicitly address *how* the outcomes can be achieved or ensured. The framework does not encompass the essential components of a programme capable of delivering the desired outcomes.

Meanwhile, in Australia 'quality' is an explicit focus of federal education policy developments which simultaneously foreground discourses of standards, performativity and economic efficiency. This was recently evidenced in the publication of the Senate Standing Committee on Employment, Workplace Relations and Education Committee report entitled '*Quality of School Education*' (Commonwealth of Australia, 2007). The terms of reference for the Senate Inquiry reveal that the Committee's remit was specifically to:

... conduct an inquiry into the *current level of academic standards of school education*, with particular reference to:

- (1) Whether school education prepares students adequately for further education, training and employment, including, but not limited to:
 - (a) the extent to which each stage of schooling (early primary; middle schooling; senior secondary) equips students with the required knowledge and skills to progress successfully through to the next stage; and
 - (b) the extent to which schools provide students with the core knowledge and skills they need to participate in further education and training, and as members of the community.
- (2) The *standards of academic achievement* expected of students qualifying for the senior secondary school certificate in each state and territory.
- (3) How such *academic standards* compare between states and territories and with those of other countries (Commonwealth of Australia, 2007, p. x, our emphasis).

These examples highlight that interests in and conceptualisations of quality vary across educational arenas and beyond, and furthermore, that understandings of quality are destined to be framed in relation to dominant policy and political discourses. This paper is a response to arguably significant limitations inherent in contemporary political and professional thinking about quality in PE. It also reflects that amidst a global prominence of ‘standards discourses’ in education policy arenas, where education has been re-conceptualised as a commodity in a consumer and market context (see for example, Gewirtz *et al.*, 1995; Gorard *et al.*, 2003), there is a heightened need for more attention to be directed towards articulating, and being able to demonstrate quality. This paper seeks to promote a discourse around quality that is distinct from, and that goes beyond standards discourses. It prompts critical thinking about contemporary developments initiated by governments, government agencies and also by teachers and teacher educators concerned to enhance quality in PE. While pressures may be mounting in Australia and elsewhere for easily measurable markers of quality to be generated, we contend that ‘quality’ is a concept to be problematised and always contextualised in relation to PE. As Marsden and Weston (2007, p. 384) recently observed, ‘the term “quality physical education” is used as if it has a universally understood meaning’, while ‘a definition of what in fact constitutes good quality physical education is harder to find as it appears to be a much disputed territory and subject to differing agendas’. We suggest that attempts to promote a universal notion of quality may be neither appropriate nor helpful. As is the case with many concepts in education, context has a fundamental importance, such that considering quality in the absence of discussion of contextual factors seems inherently problematic. In the case of PE, contextual factors are multiple and diverse, including national and local culture, school organisation, timetable arrangements, professional learning opportunities, school demographics, human and physical resources and teachers’ own beliefs and values. Furthermore, the varied positioning, conceptualisation and representation of PE in national or state-based curriculum frameworks is a key reference point in considering context. National and State/local frameworks highlight that engaging with the notion of ‘quality’ in PE necessarily requires reference to

differing and shifting perceptions of what constitutes ‘a physically educated person’. The stance taken in this paper is that visions of what constitutes quality PE will appropriately embrace cultural, national and local variations in visions of a physically educated person. We do not wish to impose an arguably flawed uniformity in debate. To the contrary, we emphasise the need for professional debate about quality PE to acknowledge that the contemporary social, cultural and policy contexts in which perceptions about PE and about being physically educated are formed (and by which they are framed) are both varied and fluid. At the time of writing, events in Tasmania, Australia, provide a vivid illustration of that fluidity, as PE has been re-presented and re-positioned within a modified learning area entitled ‘Health and well-being’ (Department of Education, 2008).¹ The discursive terrain (Penney & Evans, 1997) upon which notions of ‘quality PE’ can be grounded is, therefore, acknowledged as a diverse, shifting and inevitably political terrain. From this backdrop, the paper seeks to extend discussion and debate around how ‘quality PE’ can be conceptualised and advanced locally, nationally and internationally.

As a catalyst for our own thinking and discussion, we have critically engaged with a framework presented by Pill (2004). Readers familiar with Bernstein’s work will recognise that our adaptation of Pill’s framework centres on what Bernstein (1977) termed the three inter-related message systems of schooling; namely, curriculum, pedagogy and assessment. We present these as inherently linked dimensions of quality PE. Each of the three dimensions could clearly be seen within Pill’s (2004) 10-pronged configuration of ‘quality learning in PE’ (see Figure 1). Positioned as distinct yet fundamentally linked foci, we contend that they present a strong (and much needed) framework for curriculum and pedagogical critique and development in PE. In addressing each of the three dimensions in turn, we explore prospective quality criteria. In doing so, we re-affirm the crucial inter-relationships between the three dimensions. Throughout the paper we also endeavour to direct attention to the inherent and educationally unique worth of PE, encompassing learning distinct to the curriculum area and learning ‘beyond’ the curriculum area that arises in and from PE. In our view both dimensions of learning (i.e. distinct and generic learning) need to be a reference point in contemporary discussion about quality PE. Thus, we contend that deliberations about curriculum, pedagogy and assessment in PE need to always engage with

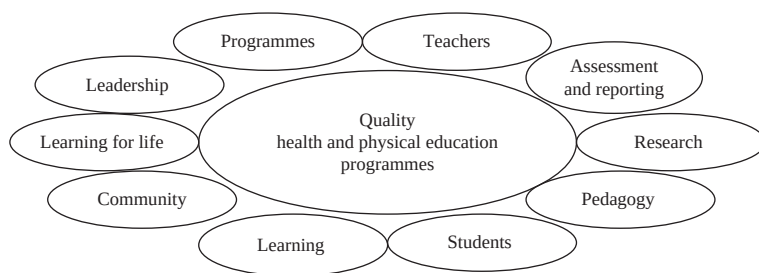


Figure 1. Quality health and physical education programmes (adapted from Pill, 2004)

learning that is clearly distinct to PE, *and* the particular contribution that PE can also make to ‘other’ learning that is not be regarded as the sole domain of any particular learning area or subject, but rather, demands collective coverage.

As a final point of introduction, it is also important to signal our concern to move discussion about quality PE beyond the abstract and in so doing, re-affirm the need for debates to be contextually grounded. We also see worth in bringing advances in relation to quality PE to the fore of debates. Accordingly, this paper draws on and makes direct reference to contemporary developments in Australia and New Zealand which variously, relate to our own professional experiences. The examples presented are emphasised as illustrative examples, with acknowledgement that they are far from exhaustive. Readers with experiences of contemporary developments in other places will have comparable examples of their own to draw on in reflectively engaging with the points we raise. Our discussion also seeks to demonstrate that professional collaboration has an important role to play in advancing understanding of an issue that has national and international relevance. Quality is a matter that in our view, we can better understand and more fully engage with through such collaboration.

Quality curriculum

Under the headings of ‘learning outcomes’ and ‘programmes’, Pill (2004, p. 13) included several points relevant to consideration of ‘quality’ in relation to curriculum:

- programmes are aligned with curriculum and standards frameworks;
- programmes are based on student-centred outcomes;
- learning outcomes are developmentally appropriate and considerate of individual student learning needs and styles;
- all areas of the programme (including, for example, PE, health, outdoor education, dance, home economics) are integrated; and
- the programmes support student choice in content, assessment and reporting of achievement.

In considering what he termed the ‘community’ dimension, Pill (2004, p. 14) also drew attention to the need for programmes to ‘link into community initiatives and activities’. As we discuss further below, we similarly advocate for curriculum relevance framed in terms of connections to learning and activities beyond schools and beyond school years (Penney & Jess, 2004).

In relation to the first two points above, it is notable that a key agenda in Australia and New Zealand has been the need for PE curriculum (and curriculum relating to the broader learning area of health and physical education (HPE) or its equivalent)² to be firmly directed towards learning outcomes specified within statutory frameworks. This positioning of outcomes as the focus of alignment with State/Territory and/or national frameworks has posed challenging questions of and for PE/HPE curriculum. In many instances, the perceived curriculum relevance and simultaneously, perceived ‘quality’

of PE/HPE can be seen to rest on its connection with a specified set of learning area outcomes *and* accompanying (or overlying) more generic learning outcomes identified as a focus of frameworks. The respective balance in emphasis between specific and generic outcomes (i.e. the respective attention to learning that can be developed in and through the learning area) has varied amidst framework developments across Australia and in New Zealand. A clear point of commonality has, however, emerged; that the notion of an 'educated' as well as distinctly 'physically educated' person is an important focus for curriculum development in PE. Increasingly, securing a curriculum presence (and other resourcing) requires that the PE/HPE curriculum demonstrates alignment with the overlying educational orientation of the whole curriculum and embraces (and ultimately, can 'deliver') a diverse range of learning outcomes. For example, The New Zealand Curriculum (in draft form at the time of writing) aims to 'set the direction for learning for all students while at school and will ensure when they leave, they are equipped for lifelong learning and for living in a world where continual change is the norm' (Ministry of Education, 2006, p. 7) and as we discuss below, has accorded each learning area just two pages in the new curriculum document.

This contemporary curriculum context presents a particular frame for thinking about the notion of 'quality curriculum' from a learning area standpoint. From one perspective, the outcomes focus can be seen as a productive pressure for enhanced integration across various aspects (strands or subjects) integral to the HPE learning area. Agreement on the range of specific and generic learning outcomes that PE can legitimately and feasibly seek to engage with necessarily precedes articulation of what could be deemed 'key' or 'core' content. Yet, as critics of outcomes-based education emphasise, amidst an outcomes focus in curriculum development, searching questions can be posed about quality in relation to curriculum content. We therefore emphasise that the scope and sequencing of content to enable achievement of progressively demanding outcomes represents a crucial component of quality curriculum. Furthermore, we see a need for the inclusion and mapping of content that aligns with learning that may be deemed distinct or unique to PE and secondly, more generic learning to be addressed and advanced 'through' PE together with other learning areas. In the latter instance, the content incorporated within PE clearly needs to complement and connect with curriculum content that is incorporated in other learning areas, with identified generic learning(s) the focus of connectivity.

Reaching agreement about what might be designated 'core curriculum content' for PE has been and is destined to remain a contentious matter. In this respect, PE is no different to other curriculum subjects. As Goodson (1994, p. 42) highlighted, 'subjects are not monolithic entities but shifting amalgamations of sub-groups and traditions which through contestation and compromise influence the direction of change'. We contend that amidst these shifts, being able to articulate a specified minimal content is an unavoidable 'quality issue' in curriculum design and development. Somewhat ironically, it appears a stark omission in the draft New Zealand Curriculum documentation (Ministry of Education, 2006). In Australia, however, attention to content is undoubtedly important in the current political context. In his own words, the immediate past Prime Minister was 'an avowed

educational traditionalist', a point re-affirmed in his stated beliefs about contemporary education in Australia:

I believe in high academic standards, competitive examinations, teacher-directed lessons based on traditional disciplines, clear and readable curriculum material and strong but fair policies on school discipline . . . I believe English lessons should teach grammar. I believe history is History, not Society and the Environment or Time, Continuity and Change and I believe geography is Geography, not Place and Space. (Howard, 2007)

The Adelaide Declaration on National Goals for Schooling in the Twenty-first century (Department of Education, Science and Training (DEST), 1991) remains, however, a prime and entirely legitimate reference point for curriculum development across the States and Territories. It explicitly stated that students should have:

. . . attained high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum in the compulsory years of schooling encompassing the agreed eight key learning areas:

- the arts;
- English;
- health and physical education;
- languages other than English;
- mathematics;
- science;
- studies of society and environment;
- technology; and
- the interrelationship between them. (DEST, 1991, p. 2)

From an Australian perspective, the 'statement on health and physical education for Australian schools' (Curriculum Corporation, 1994) that was subsequently designed as a framework for curriculum development by education systems and schools throughout Australia is still highly pertinent to debates about core curriculum content for the learning area. The statement articulated 'the knowledge, skills and processes *distinctive* to the learning area' (Curriculum Corporation, 1994, p. 8, our emphasis) in terms of three strands each with a number of components (see Table 1).

In more than a decade of curriculum development across Australia, various derivatives of the strands and their components have emerged and in some instances, been re-formed as curriculum structures and/or content have been re-visited in particular states. It is not our intention to attempt to detail those developments. Rather, we point to a need for renewed consideration of what may now be recognised and accepted in professional and political arenas, as core curriculum content for the learning area and/or its identified component parts/subjects. Furthermore, we suggest that in re-visiting matters of content, we should look at *and beyond* the text of various curriculum documents.

Specifically, we see value in referring to learning theories and frameworks that have provided invaluable underpinnings for contemporary curriculum development in

Table 1. Strands and components in the statement for health and physical education (Curriculum Corporation, 1994)

Strand 1	Strand 2	Strand 3
Communication, investigation and application	Human functioning and physical activity	Community structures and practices
• Communication • Finding and analysing information • Planning and action • Reflection and evaluation	• Patterns of human growth and development • Movement and participation • People and food • States of health • Identity • Interaction, relationships and groups • Challenge, risk and safety	• Consumer and community • Environmental interaction • Community practices • Health of populations

various parts of Australia and in New Zealand. Arnold's (1988) learning 'in, through and about' movement stands out as a common basis for curriculum development across state, national and international jurisdictions. Arnold proposed that learning in PE occurred in, through and about physical activity, thereby foregrounding the possibility of the engagement of discipline knowledge more broadly than the enactment of a physical activity. Notably, Arnold's framework has informed the recent drafting of revised curriculum documentation for HPE in New Zealand, with the PE statement³ seeking to highlight:

- movement as the unique context for learning in PE;
- the importance of learning in, through and about movement;
- the breadth of outcomes for learning, for human development through PE;
- the range of contexts for learning;
- the importance of developing skills, knowledge and attitudes and values;
- the importance of PE in the development of a more critical perspective; and
- the concept of learning to gain understanding of, and to contribute to self, others and society. (Ministry of Education, 2006, pp. 16–17)

Arguably, Arnold's framework provides a clear and focused basis for mapping the curriculum content required to address learning that is agreed as distinct to the learning area, and to also engage with selected generic learning. Thus, a framework whereby curriculum content is identified in relation to each of learning *in, through and about* emerges as *one possible* framework that might be deemed a sound basis for 'quality curriculum'. Certainly, there are other possibilities and we support more debate. We emphasise, however, the merits of a framework that has a sound theoretical basis and importantly, will be recognised by many involved in PE curriculum development work. Learning domains (Kirk, 1993; Laker, 2000) may present an alternative with

considerable appeal, with curriculum content identified as, respectively, relating to psychomotor, cognitive, affective and social learning outcomes.

Yet, irrespective of any particular framework (and whether we explore curriculum from an outcomes or content perspective), political and public perceptions about the curriculum and furthermore, lifelong, relevance of PE will be critical to any attempts to advance quality curriculum. Arguably, they will serve to seal recognition of the learning area as a fundamental element of lifelong education and health (Penney, 2008) and represent a constant reminder of the extent to which thinking about quality PE is framed by perceptions about the many and varied outcomes that can and/or should be advanced in and through PE. Undoubtedly, political and public perceptions about these matters pose key challenges for curriculum developers⁴ who are working amidst (and need curriculum to connect with) rapidly changing social, economic, technological and knowledge contexts. An ongoing curriculum project in New Zealand is notable in attempting to 'incorporate international understandings about the key competencies deemed necessary for lifelong learning into a reshaped curriculum framework' (Hipkins *et al.*, 2005, p. 1). Such re-shaping involves acknowledging a need to think beyond established conceptualisations of curriculum and specifically, adopt conceptualisations that embrace visions of learning as 'lifewide' (West, 2004) as well as lifelong (Penney, 2008). Re-thinking and re-forming PE then requires partnership-based development within which 'quality curriculum' is conceived as co-ordinated, coherent curricular and co-curricular opportunities for young people (Gillespie, 2006; see Figure 2), and which simultaneously ties notions of curriculum relevance with those of lifelong relevance.

From a learning perspective, however, curriculum outcomes and content can never be considered independently of pedagogy. Nor can any meaningful judgement of/on 'quality PE' be made in the absence of insights into the pedagogical expression and enactment of curriculum. The inter-relationships between the three dimensions of curriculum, pedagogy and assessment emerge as themselves fundamental to a conceptualisation of quality conceived in terms of the three dimensions. The discussion of pedagogy that follows therefore seeks to re-affirm alignment between curriculum, pedagogy and assessment.

Quality pedagogy

In some respects, PE appears notable for pedagogical innovation, with internationally recognised developments focusing on pedagogy and furthermore, driven by concerns regarding 'quality'. *Teaching games for understanding* (TGfU; Bunker & Thorpe, 1982) along with a number of variations developed for particular cultural and educational contexts (Butler, 1997; Griffin *et al.*, 1997; Launder, 2001; Tan *et al.*, 2002; Grehaigue *et al.*, 2005); *Sport education* (Siedentop, 1994) and *Teaching for personal and social responsibility* (Hellison, 1995) are pertinent examples. Yet, as Penney and Waring (2000) discussed, pedagogy can also be regarded as something of a 'missing ingredient' (Almond, 1997) in the development of PE internationally and certainly, means

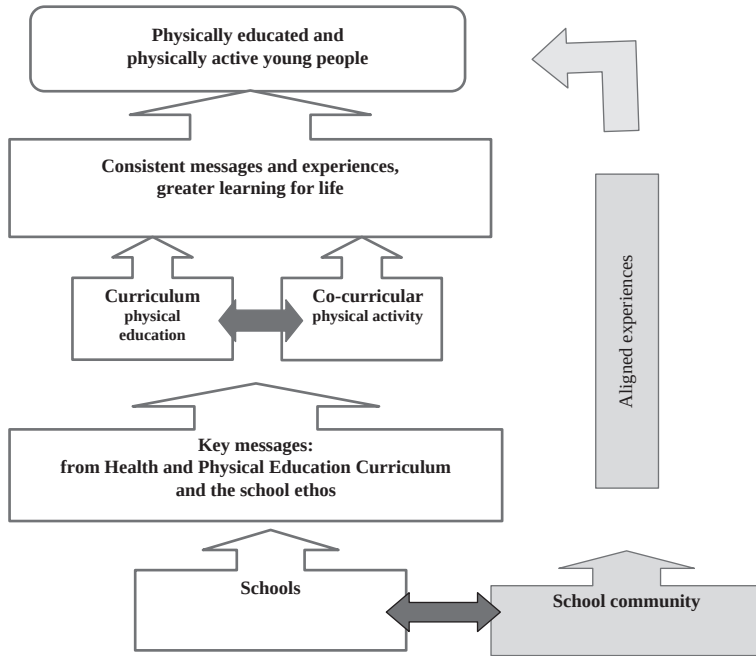


Figure 2. Co-ordinated, coherent curricular and co-curricular opportunities for young people (Gillespie, 2006)

‘different things to different people’ (Tinning, 1992, p. 24). This is an observation equally applicable to the concept of ‘critical pedagogy’ (Fernandez-Balboa, 1997; Macdonald, 2002). Drawing on Watkins and Mortimore’s (1999, p. 8) emphasis of a need for developments focusing on pedagogy to adopt ‘an increasingly integrated conceptualisation which specifies relations between its elements: the teacher, the classroom or other context, content, the view of learning and learning about learning’, Penney and Waring (2000) argued that we should therefore view pedagogy as ‘a concept that simultaneously embraces and informs rationale, curriculum design, teaching and learning in and of physical education’ (p. 6). We re-affirm that view and also emphasise assessment as an integral element in the conceptualisation. In our view ‘quality’ in PE demands attention to each dimension, of curriculum, pedagogy and assessment and to the linkages between them. Such a stance has also been reflected in others’ endeavours to articulate the concept of pedagogy in practical terms and thereby promote pedagogical advances in PE. For example, Metzler’s (2000) presentation of ‘instructional models’ as ‘coherent frameworks’ for teachers to employ in helping students to achieve particular goals, is a case in point, with a model identified as encompassing,

... a theoretical foundation, statements of intended learning outcomes, teacher’s content knowledge expertise, developmentally appropriate and sequenced learning activities, expectations for teacher and student behaviors, unique task structures,

assessment of learning outcomes, and ways to verify the faithful implementation of the model itself. (Metzler, 2000, p. 14)

As we have suggested, there are a number of pedagogical ‘innovations’ that are specific to PE and as such contribute to quality teaching and learning in PE. Yet, such approaches do not necessarily contain inherent criteria for making informed judgements about pedagogical quality. Pill’s (2004) framework alludes to such criteria in presenting points under the headings of ‘pedagogy’, ‘learning for life’, ‘learning’, ‘students’, ‘teachers’, ‘community’ and ‘assessment’ (see Figure 1) that variously have pedagogical implications. For example, Pill (2004, p. 14) identifies that in ‘quality’ HPE programmes, pedagogy is ‘the prime consideration for planning and programming’ and that ‘students are provided with opportunities to set and assess learning goals, and reflect on personal growth and performance’. Extending Pill’s insights and building upon points highlighted in the discussion of ‘quality curriculum’ above, we might further contend that achieving quality from a pedagogical perspective requires that:

- choice of pedagogic approach supports the pursuit of learning outcomes and reflects identified learning needs;
- learning, teaching and assessment are viewed as integrated;
- learning and assessment tasks are authentic from a learner perspective and inclusive of individual learning needs and interests; and
- development of pedagogy draws on research and wider professional communities.

We are still left, however, with statements at a level of generality that are arguably not entirely helpful for making judgements about quality pedagogy. To advance discussions about what constitutes quality pedagogy and more particularly, advance thinking in relation to the practical development and realisation of quality pedagogy, we focus on the ‘*Quality teaching in NSW public schools*’ model for thinking about quality pedagogy in the school context, developed by researchers (Jennifer Gore and James Ladwig) at the University of Newcastle for the New South Wales Department of Education and Training (2003). Drawing on national and international pedagogical research (e.g. Newmann *et al.*, 1996; Lingard *et al.*, 2001), the model identifies ‘generic qualities of pedagogy that have been successfully applied in range of school contexts and are shown to lead to improved student learning’ (pp. 4–5). In addition, the model has been designed to ‘cater for a wide variety of student and teacher individual differences’ (p. 4). Underpinning the model is the view that pedagogy is the ‘core business of the profession of teaching’ and is ‘evident both in the activity that takes place in classrooms or other educational settings and in the nature or quality of the tasks set by teachers to guide and develop student learning’ (p. 4). Recalling our concern to retain a view of curriculum, pedagogy and assessment as fundamentally linked, the comment from the NSW Department of Education and Training that, ‘Crucially, the term pedagogy recognises that how one teaches is inseparable from what one teaches, from what and how one assesses and from how one learns’ (p. 4), is very pertinent.

The ‘Quality Teaching’ model is constructed around three dimensions of pedagogy: intellectual quality; quality learning environment; and significance. *Intellectual quality* ‘refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas’. *Quality learning environment* ‘refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning’. *Significance* ‘refers to pedagogy that helps make learning meaningful and important to students’ (NSW Department of Education and Training, 2003, p. 9). The model identifies intellectual quality as being ‘central to pedagogy that produces high quality student learning outcomes’ (p. 8). Each dimension is further described by six elements, as presented in Table 2.

The model provides a conceptualisation of pedagogy that can be used by teachers and schools to ‘focus discussion and critical reflection on the teaching and assessment practices that take place in classrooms’ (New South Wales Department of Education and Training, 2003, p. 4). It provides a framework for teachers, individually and collaboratively, to look forward (as a planning tool) and to look back (as a basis for making informed judgements about the success of their teaching practice in promoting student learning). The framework presents both a challenge and an analytic tool for PE teachers to examine the extent to which the design and implementation of their teaching and assessment practices are enhancing learning outcomes for their students. From a ‘quality’ perspective, therefore, we can reasonably pose the question: *to what extent are the dimensions and elements in the model evident in contemporary pedagogical practices in PE?*

It is beyond the scope of this paper to provide a comprehensive analysis of the extent to which each of the dimensions and elements outlined above are evident in the various pedagogical approaches utilised and available to be employed in PE teaching. An illustrative analysis of one approach, TGfU (Bunker & Thorpe, 1982) serves, however, to highlight the capacity of the framework as a tool for teachers to employ in seeking pedagogical advances in PE. In addition, it provides a degree of optimism that some of the contemporary developments seen in PE may be justifiably regarded as promoting quality pedagogical practices. Table 3 identifies that some of the principles embedded in TGfU as discussed by Griffin *et al.* (2005) align well with elements from the Quality Teaching model.

Table 2. Elements identified with dimensions of quality teaching (for further explanation of each of the elements, see New South Wales Department of Education and Training, 2003, pp. 11, 13 and 15)

	Intellectual quality	Quality learning environment	Significance
Elements	Deep knowledge	Explicit quality criteria	Background knowledge
	Deep understanding	Engagement	Cultural knowledge
	Problematic knowledge	High expectations	Knowledge integration
	Higher-order thinking	Social support	Inclusivity
	Meta-language	Students’ self-regulation	Connectedness
	Substantive communication	Student direction	Narrative

Table 3. An analysis of teaching games for understanding as 'Quality Teaching'

Teaching games for understanding (Griffin <i>et al.</i> , 2005)	Quality teaching framework (New South Wales Department of Education and Training, 2003)	
	Dimension	Element
A student-centred approach in which learning takes place in a participation framework	Quality learning environment	Engagement Students' self-regulation Student direction
Learning activities have the potential to include social, cultural, physical and cognitive learning outcomes	Intellectual quality	Deep knowledge Deep understanding Problematic knowledge Higher-order thinking
	Significance	Background knowledge Cultural knowledge Knowledge integration
Students work in small groups ... and rely on each other (positive inter-dependence)	Quality learning environment	Engagement Social support
The teacher facilitates learning activities, which shifts responsibility to students in which the learning activities are designed to hold students accountable	Quality learning environment	Explicit quality criteria High expectations Students' self-regulation Student direction
Emphasises active learning within a social practice and involve the processes of decision making, social interaction and cognitive understanding of various physical activities	Quality learning environment	Engagement Social support
	Intellectual quality	Deep knowledge Deep understanding Problematic knowledge Higher-order thinking
	Significance	Inclusivity Connectedness
Considers developmental factors, which involve the modification of activities to meet the needs of the learners and optimise the potential for success	Significance	Background knowledge Knowledge integration Inclusivity

We acknowledge that the Quality Teaching model is by no means the only possible reference point for health and physical educators to utilise in endeavours to better understand and more routinely enact quality pedagogy. Yet, the NSW framework arguably stands out for its rigour, grounding in research and applicability across curriculum areas. In a section entitled 'Effective Pedagogy', the draft New Zealand

document identifies several points that clearly align with elements in the NSW framework. The Ministry of Education's emphasis is that:

... current research shows that students learn best when teachers

- Encourage reflective thought and action
- Make connections
- Provide multiple opportunities to learn
- Facilitate shared learning
- Enhance the relevance of new learning
- Create a supportive learning environment. (Ministry of Education, 2006, p. 24)

Furthermore, the view of the Ministry is that the new (and arguably minimalist) curriculum 'gives more flexibility to design learning experiences that will motivate and engage students' (Ministry of Education, 2006, p. 26). In this context it is arguably all the more important that teachers have sound frameworks and support to develop quality pedagogy in the HPE learning area.

The final section of our discussion focuses on a matter that we stress as integral to quality pedagogy. Attention is on the third of Bernstein's three message systems, assessment.

Quality assessment

The NSW Quality Teaching framework emphasises that quality teaching is directed towards, will support and will promote, quality learning. The same can be said of quality assessment. Given the recognition within mainstream education literature of the inter-dependence of curriculum, pedagogy and assessment (Shepard, 2000; Hayes, 2003), the relative dearth of assessment literature in PE is both somewhat surprising and a concern. While some important work has been done to counter traditional de-contextualised, shallow and at times superfluous (Matanin & Tannehill, 1994) assessment in PE (e.g. Veal, 1992, 1995), it is also evident that PE faces notable challenges in relation to assessment practices. A decade ago, in the context of research focusing on the senior secondary curriculum, Macdonald and Brooker (1997) identified three clear needs in relation to development of assessment in PE:

... the need for assessment programmes and practices to be underpinned by fairness and equity principles, and for teacher judgements about student performances to be comparable within and across schools ... the need for assessment to be a legitimate extension of the appropriate teaching and learning process for the particular subject area and consistent with knowledge for that subject. (p. 84)

Macdonald and Brooker (1997, p. 99) went on to identify a challenge for PE to develop assessment that 'is characterised by relevant, applied and substantial tasks; is regular and ongoing; draws on a broad disciplinary base; and, is primarily student centred'. Consistent with Macdonald and Brooker's (1997) observations, we are of the opinion

that quality assessment practices in PE should focus on intended student learning; be authentic from a learner perspective; be inclusive in construction and enactment, and be defensible in relation to validity and reliability. In the discussion that follows we expand upon these points and conclude by once again presenting a framework that may provide a useful reference point in endeavours to advance quality in PE.

Traditional assessment approaches in PE have often been product oriented, focusing on components of fitness, or de-contextualised, as in the case of assessment of isolated skills. Other established techniques include tests of rules, tactics and history, and psychometric scales and inventories (Metzler, 2000). Furthermore, teachers have often been reported as grading students on arguably superfluous factors such as attitudes, effort, participation and attendance. These approaches to assessment highlight that assessment in PE has often had a product focus and an interest in student management rather than specific learning. For assessment to have a learning focus, the where and how of learning in the subject (as compared to a singular focus on the 'what') must necessarily be articulated, consolidating the inter-dependence of assessment with curriculum and pedagogy. In relation to our concern with quality assessment, this directs attention to the context of assessment and the construct characteristics of the field. In talking specifically to *authentic* assessment, we are concerned with learning content, contexts and the relationship between them. According to Shepard (2000) authentic assessment refers to connectedness to the world. That is, the learning experiences that form the medium for information gathering have application and meaning for students lives and are not abstract or disassociated. They are contextually meaningful, replicating the manner in which the knowledge and processes being assessed are utilised in real life contexts, be they contexts of day to day activity or knowledges and processes that may be used in a particular vocational context (Wiggins, 1998). Authentic assessment has been previously advocated for in PE (Melograno, 1994; Mohnsen, 1997, 2003; Smith, 1997; Smith & Cestaro, 1998) and has had considerable support from those academics actively pursuing contextual and games-based curriculum approaches including TGfU (Bunker & Thorpe, 1982), Tactical Games (Griffin *et al.*, 1997) and Sport Education (Siedentop, 1994; Taggart *et al.*, 1995). Authenticity has been a key assertion of the TGfU and tactical games approaches in the sense that assessment focuses on the game performance within its context, emphasising assessment of tactical awareness, decision making and the contextually appropriate execution of sport-specific skills (Oslin *et al.*, 1998; Oslin, 2003). The validity of the approach has been defended on the basis of the 'objective' data of student performance generated through the use of observation instruments, such as the game performance assessment instrument (GPAI; Oslin *et al.*, 1998). In the case of Sport Education, notions of authenticity have been expressed in the development of tasks linked to various roles that are integral to the model (coach, captain, etc.) and to preparation for and/or performance in formal competition (Siedentop, Hastei, & van der Mars, 2004; Penney *et al.*, 2005).

While recognising the need to avoid uncritical engagement with the notion of authenticity, we nevertheless see it as providing a useful prompt to pose searching questions of PE in relation to what, where and how subject matter should be assessed

to enhance quality in PE. We can question, for example, whether assessment should always be situated in a movement context? Are skills and strategies as well as content knowledge (of movement-related concepts) assessable in these contexts? Are contextually specific conditions, such as competition necessary for authentic assessment? Hay (2006, p. 317) proposed that:

... authentic assessment in PE should be based in movement and capture the cognitive and psychomotor processes involved in the competent performance of physical activities. Furthermore, assessment should redress the mind/body dualism propagated by traditional approaches to assessment, curriculum and pedagogies in PE, through tasks that acknowledge and bring to the fore the interrelatedness of knowledge, process (cognitive and motor), skills and the affective domain.

To this end, Hay (2006) has suggested that authentic assessment in PE should occur in physical activity contexts *and* consider domain-relevant movement concepts (biophysical and sociocultural) in the field. This condition of authenticity promotes a comprehensive view of the subject, but also raises the question of whether it is possible for students to adequately engage with the full breadth of PE subject matter in a movement context. Thus, authentic assessment will necessarily require judgements to be made by teachers across a learning period rather than a point in time assessment 'episode' or culminating event (Hay, 2006), and require teachers to reference students' performances against criteria and standards (or rubrics) that reflect the conditions of authenticity proposed above. Such criteria and standards need to be explicit, well-articulated and understood and internalised (Pitman *et al.*, 2002) in order that both teachers and students are sufficiently aware of the basis of assessment judgements and the learning imperatives of the focus unit.

Hay's (2006) and Hay and Macdonald's (in press) work has highlighted that there is an imperative upon teachers that the validity and reliability of judgements are considered, with it being revealed that internalised criteria and standards can serve as *alternative* criteria and standards, constituted by elements of the official criteria and standards, but embellished to varying extents by the teachers' values, beliefs and expectations. Notably, the internalised criteria and standards were qualitatively and substantially different to the constitution of the syllabus or task-specific criteria and standards and assessment on this basis was shown to undermine the validity of the teacher's grading decisions (Hay, 2006; Hay & Macdonald, in press). These findings re-affirm the need stressed in our introduction, for understandings of quality in PE to be acknowledged as framed by many factors, including personal beliefs and values of teachers and other stakeholders. Hay and Macdonald's (in press) research also points, however, to a need for efforts to advance quality in PE to critically engage with these beliefs and values and their influence upon professional practice.

In seeking to inform and advance understandings of quality assessment, in line with our discussion of quality pedagogy, we consider the prospective value in utilising frameworks from mainstream education. The 'productive assessment' framework (Hayes *et al.*, 2006), inspired by the work of Newmann and Associates (1996) on authentic and formative assessment and the 'productive pedagogies' framework

(Lingard *et al.*, 2001), appears a potentially useful reference point in efforts to develop quality assessment in PE. The elements of the 'Productive assessment' framework are outlined in Table 4. The rigour and depth inherent in the *Productive Assessment* framework is, in our view, its strength as a prospective tool for use in PE. Notably, the framework raises questions of the breadth of assessable content in the domain of PE, the authenticity of associated learnings, and their display in movement contexts. Many matters incorporated in the framework, we suggest, are worthy of professional debate. For example, what constitutes intellectual quality in PE (and should this even be a concern)? What knowledges and understandings characterise the domain? Should such thinking be valued and thus judged in and concerning the movement context? What connections can be made to previous learning and learning in other domains and contexts? Can the framework be utilised to enhance learning in, through and about movement (Arnold, 1988) as a focus in seeking quality PE as conceptualised in this paper? The learning imperative of quality assessment that is captured in and prospectively advanced via the Productive Assessment framework demands that greater attention and debate be given to the nature of subject matter and how it may be engaged with in the field of PE. Once again, the inter-linked nature of curriculum, pedagogy and assessment as all essential and inseparable dimensions of quality is re-affirmed.

Returning to contemporary developments in Australasia, it is notable that the development of a National Certificate of Educational Achievement in New Zealand is designed to encourage:

Table 4. The productive assessment framework (Hayes *et al.*, 2006)

Intellectual quality	Connectedness
– Higher-order thinking – Problematic knowledge (consideration of alternative knowledges) – Problematic knowledge (construction of alternative knowledges) – Depth of knowledge (disciplinary content) – Depth of knowledge (disciplinary processes)	– Integrated school knowledge – Connectedness (link to knowledge background) – Connectedness (problem linked to world beyond classroom) – Connectedness (audience beyond school) – Problem-based tasks
Elaborate communication	
Supportive classroom environments	Working with and valuing difference
– Student direction of assessment tasks – Explicit quality performance criteria	– Cultural knowledges are valued – Group identities – Active citizenship

- a better alignment of curriculum and assessment that enhances positive learning effects;
- a move to assess against standards and criteria; and
- an increased use of school-based assessment. (Ministry of Education, 2001)

Achieving the alignment explicit in the opening point and secondly, that is required in relation to the simultaneous move to assessment against standards and criteria, and increased use of school-based assessment, will demand that pedagogy is a central point of reference in discussions about curriculum and assessment.

Conclusion: advancing quality in physical education (PE)

This paper has been written at a time when health and physical educationalists internationally are actively talking about and seeking 'quality PE' and yet, appear to lack a sound conceptual basis from which to engage in critical review and development of current practices. We have therefore sought to advance a conceptualisation of quality PE as encompassing three fundamentally inter-linked dimensions; quality curriculum, quality pedagogy and quality assessment. Our view is that achieving quality in PE demands that quality in each dimension is pursued and attention is directed towards the linkages that will ultimately be a key to achieving overall quality of PE. We recognise that variously, curriculum, pedagogy or assessment may be foregrounded as a focus and catalyst for engaging with quality, but that ultimately, a singular focus will be inadequate.

Our discussion has also reflected the view that frameworks from mainstream education may be useful tools via which to pursue and evidence the unique contribution that PE can make to a child's holistic education and well-being. Engaging with such frameworks can usefully highlight areas of weakness in the field that demand further research and theoretical exploration. Necessarily such review and research need to be contextualised and as such, should pursue the contextually specific ways in which quality curriculum, pedagogy and assessment can and should be advanced. As we stressed in our introduction, PE represents a varied and fluid field. The conceptualisation and frameworks that we have presented have the scope to accommodate that variety and fluidity. Quality will necessarily have different meanings and quality PE will appropriately 'look different' in different educational contexts. The critical commonality lies, however, in that routinely, quality will be pursued and demonstrated within and across curriculum, pedagogy and assessment.

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Notes

1. *Health and Wellbeing* has replaced the nomenclature of *Health and Physical Education* in an ongoing revision to the school curriculum in Tasmania.
2. Terminology varies across Australia in relation to the name of the learning area. For example, Personal Development, Health and Physical Education (PDHPE) is the terminology in New South Wales. HPE is used in this paper as a term inclusive of variants.
3. The new curriculum document includes statements about the learning area (HPE) as a whole, and 'subject' statements for Physical education, Health, and Home Economics.
4. The term curriculum developers acknowledges the work of individuals in government agencies, education systems and in schools, all of which are sites within which curriculum is actively shaped.

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