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Citation for published version:

Thorburn, M, Jess, M & Atencio, M 2009, 'Connecting policy aspirations with principled progress? An analysis of current physical education challenges in Scotland' Irish Educational Studies, vol 28, no. 2, pp. 209-223. DOI: 10.1080/03323310902884334

Digital Object Identifier (DOI):

[10.1080/03323310902884334](https://doi.org/10.1080/03323310902884334)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Irish Educational Studies

Publisher Rights Statement:

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Connecting policy aspirations with principled progress? An analysis of current physical education challenges in Scotland.

Various recent politically driven policy interventions have outlined the increased importance of school physical education programmes as a contributor towards realizing active lifelong learning targets. This paper explains the origins of the new policy emphasis and describes some of the opportunities which now exist for reviewing many curriculum orientation and fragmentation concerns. However, in reviewing the possibilities for policy aspirations to achieve transformative educational benefits, the paper also outlines how a commitment towards principled progress and educational realignment could founder on the rock of its own ambition unless various critical conceptual questions and associated pedagogical issues are thoroughly addressed. Following analysis of the barriers to progress which exist, the encouraging signs of a more coherent future are discussed. This occurs through analysing the progress of developmental based programmes, which aim to improve the quality and authenticity of pupils' learning experiences in physical education, and by analysis of the new professional development opportunities that are available to teachers.

Policy Curriculum Pedagogy Innovation Physical Education

Introduction

How best to link pupils' experiences together into some form of coherent integrated education is an enduring feature of curriculum reviews. And, it is making decisions about 'how' to achieve the desired linkage which appears the most problematic; for as many educationalists agree, traditional or progressive educationalists alike, there is often little difference in definitions about what it means to be educated (Carr, 2007). Therefore, while there is a relative consensus about the need for an education to be illuminative, meaningful and to encourage pupils' to take responsibility for their own learning, there is much more frequent discussion and critique about the best methods for achieving these aspirations in the modern world.

Historically, a frequent axis for general discussion of educational worthiness has been for advocates of subject centred curriculum to be contrasted with those of a more holistic inclination who aspire to educate pupils through experiences which are active, integrated, personal and realistic. Past curriculum reviews in Scotland have reflected these types of discussions with primary age schooling arrangements generally advancing a more holistic form of curriculum integration relative to secondary schools where there has been a continued preference for more subject based teaching and learning. The policy process informing these curriculum developments has been largely free from direct political influence, with the preferred consensual style of policy making consisting of representatives from HM Inspectorate of Education (HMIE), national examination authorities and curriculum organizations combined with a few selected Head teachers and teachers, producing the required reports. However, when the post 16 curriculum was reviewed during the 1990's, the programme of reform was much more centrally controlled by policy representatives. Raffe et. al. (2002, p. 181) reports that even though there was consensus about the educational merits of changing curriculum, the management of change was designed to be a top down process, Corresponding author. Malcolm Thorburn Malcolm.thorburn@ed.ac.uk

which was as ‘teacher proof’ as possible. Accordingly, teachers were often ostracized from discussions about curriculum design arrangements with leadership concerns often focusing on accountability issues rather than teachers professional development requirements.

When further curriculum changes were recently planned, the newly devolved Scottish legislature which governs policy and expenditure on most domestic affairs, including health and education, was keen to recognise that a return to a more consensual style of policy development might work better (Ozga, 2005). The current policy emphasis is on achieving coherence across the complete 3-18 age range through a programme titled a ‘Curriculum for Excellence’ (CfE), with learning goals framed by intentions for pupils to become ‘successful learners’, ‘confident individuals’, ‘effective contributors’ and ‘responsible citizens’ (Scottish Executive, 2004b). The priority is for greater learning transfer across the ages and stages of child development and between primary and secondary schools. This process has been evolving since 2000 when the Scottish Parliament identified five national priorities for education with a collective emphasis on improving equality and inclusion with lifelong learning aspirations becoming the driver for generating educational improvements. Consequently, a brighter future might conceivably beckon as increased political interest and investment in education is matched by returning autonomy to teachers to exercise their decision-making responsibilities in trying to achieve generically framed educational aims. Yet, despite these encouraging signs, Raffe et. al., (2007) reminds us through reviewing the implementation of post-16 education changes in Scotland, that reform agendas can be adversely by a mix of political, institutional and epistemological barriers. Thus, given the pertinence of this review for curriculum systems, both within Scotland and internationally, later discussion will make selected reference to these identified barriers to change.

In progressing towards a more rounded understanding of the Scottish context, it is important to note that no major structural changes are planned. School education continues to be dominated by

two large sectors; primary schooling for pupils between 5-12 years and secondary schooling, which lasts for all pupils until 16 years old, with three fifths of pupils (60%) opting to stay in secondary schools until 18 years old, with a further fifth (20%) entering Further Education. In England, the number of pupils transferring to Further Education at age 16 is higher (41%) with fewer pupils (37%) remaining at secondary school (DCSF, 2008). In Ireland, a similar percentage of pupils (84%) complete a Second Level education, although this figure does not include pupils completing apprenticeship training with various private institutes (DES, 2008). In 2006, a comparatively modest 12.3% of pupils left school with only a lower secondary education (CS0, 2007). In Scotland, the vast majority of secondary schools (95%) are comprehensive schools. This is in marked contrast to the situation in England, where just over four-fifths of secondary schools (83%) are considered in some way to be specialist schools (DCSF, 2008). In Ireland the post primary sector 'comprises secondary, vocational community and comprehensive schools' (MacPhail et.al., p. 189, 2008).

The CfE policy emphasis has arisen due to a general unease about the subject-based orientation in secondary schools being of marginal value as the traditional arrangements for school certification have 'best served those who pursue subjects at university at the expense of learning for citizenry' (Humes and Bryce, 1999, p.1014). Within this type of curriculum, '... practical abilities, investigative skills, problem-solving, oral abilities and so forth got into the secondary curriculum, within subjects, but the strain they create for assessment and certification means they remain somewhat curtailed, indeed are under pressure to be reduced' (Bryce and Humes, 1999, p. 42). Therefore, policy makers are now promoting support for increased curriculum flexibility and breadth, with the priority across the age range being to empower teachers to make full use of the opportunities available to design programmes, which reflect well- founded educational reasoning and which meet the policy ambitions of CfE.

In the specific case of physical education, the direct and positive endorsement of various government health and education Ministers has directly influenced the policy construction process as CfE contains a compulsory ‘health and well-being mode ... (which) ...reflects new thinking about the strong links between well-being and learning’ (Munro, 2006, p.1). This enhanced policy position made it necessary to clarify the purposes of physical education to a greater extent than previously as the subject ‘is an area of the curriculum which, exceptionally, needs greater priority to support the health and well-being of young people in Scotland’ (Scottish Executive, 2004c, p.1). Thus, even though the overarching policy ambitions are for a de-cluttering of the curriculum and an increase in school-based decision-making, the politically-driven policy process has also insisted that the centrality of physical education to a balanced education is recognized for its health and well-being contribution. For a subject which has often displayed a sense of unease over its position at the margins of curriculum (Green, 2000), physical education now has the opportunity to recast itself as a subject which is responsive and sensitized to the here and now of political thinking and associated policy directives, as well as a subject which has the capacity to adopt principled educational positions. However, in order for progress to be sustained in the longer term and for physical education to complement the realization of broader education outcomes, policy makers will need to overtake some of the curriculum orientation and fragmentation problems which have so often limited the contribution of physical education to a balanced education in Scotland (Penney et. al., 2006).

In summary, Hayward (2007, p. 266) considers that CfE represents ‘a brave vision’, and one where success is likely to be defined by the extent to which research, policy and practice communities can work productively together. One particularly pressing challenge in this respect is how can the aforementioned communities review international debates about aims and values of physical education, when seeking to identify and explain how a revised conception of physical

education can be integrated with active lifelong learning agendas with all that this entails pedagogically for how pupils experience learning? Accordingly, the remainder of this paper will address three of the most pressing critical questions which present themselves at this time with these questions being referenced and discussed alongside the political, institutional and epistemological barriers to change identified by Raffle et.al., (2007). Therefore, the research approach adopted is one of critical inquiry; where following a detailed review of literature, advocacy of defensible solutions are outlined in ways that attempt to be free from bias and prejudice and which address the critical questions raised. In this way the ethical protocols for completing research are duly recognized. The three critical questions are:

- How can critical debates in physical education identify principled positions which reflect well founded educational reasoning in the longer term as well as being responsive and sensitized to political thinking and policy directives in the short term?
- How can policy makers review the curriculum orientation and fragmentation concerns which have so frequently served to limit the contribution of physical education to a balanced education both within Scotland and internationally?
- How can a revised conception of physical education articulate with active lifelong learning agendas, both epistemologically in considering conceptions of integration and pedagogically in terms of how the learning process is enacted?

Critical debates in physical education

In the later part of the last century, physical education internationally was often perceived to be in decline due to unease about the availability of facilities and concerns over lack of curriculum time. The Berlin World Summit on Physical Education in 1999 was important in alerting governments of the need to implement policies that were based on high quality physical education

programmes and which were supported by improved training opportunities for teachers (Hardman and Marshall, 2005). However, due to the short term nature of many planned interventions, the increased political prominence of physical education is not necessarily the same as a sustained commitment towards enhanced educational recognition (Gard, 2004; Kirk, 2006). Penney (2008, p.37) has advised, for example, that for physical education to align itself with agendas geared towards reducing obesity rates and increasing physical activity levels ‘may prove a costly sidetrack for the profession’; who in any event have only ever displayed a partial interest in the pragmatics of achieving such limited aims and in making a direct biomedical connection between levels of exercise and levels of obesity (Johns, 2005). Thus, there is a need for policy makers to avoid being narrowly ‘drawn into the obesity vortex’ (Gard, 2004, p.76) and to recognize instead that to be properly physically educated involves being experienced in practical learning, which is filled with personal meaning and clear educational relevance rather than being primarily involved in passively receiving teaching interventions which focus instead on merely improving physical fitness and reducing obesity rates. In short, improved physical fitness should be more of an associated benefit of participation, rather than a reason for participation in itself (Kretchmar, 2000), even though it remains widely assumed as Green (2008, p. 100) notes that physical education in a number of ways ‘provides an appropriate setting for health promotion through physical activity and exercise’.

The complexities and uncertainty of current times have been further highlighted by Kirk (1999) who argues that young people encounter a wide range of physical culture discourses associated with health, sport, and physical activity according to their unique social, cultural, and geographic backgrounds. These general points are endorsed by Johns (2005) who argues specifically that placing a priority on health and fitness improvements in schools might not necessarily be perceived by pupils to be relevant, as physical education messages often fail to resonate as effectively as the advertising messages linked with modern day youth culture with its advocacy of personal freedom rather than a discipline attached to regular exercise. Therefore, the

ways in which pupils understand health and the values and meanings associated with physical activity and sport are not static and fixed, but rather are filtered down to pupils according to a diverse range of social-cultural influences. On this basis, it has been suggested that physical education must now rethink curriculum and pedagogical practices because many pupils are missing out on the benefits of practical learning due to the fragmented organisation of curriculum and the piecemeal nature of much physical education teaching (Penney, 2008). Accordingly, Fernandez-Balboa (1997) argues that pupils must be encouraged to construct personal meanings around physical activity by contextualising physical education programmes around cultural, community and personal contexts.

Yet, policy makers might not be sympathetic to the more wide ranging perspective sketched above, preferring instead to consider that there is a clear link between poor physical health, increased child obesity rates and the ineffectiveness of physical education programmes in schools. Therefore, quite how to square the circle on these issues is a complex task and one which is added to by recognising that physical education is influenced by many contrasting and competing agendas; noteworthy among these is resolving issues about how you can develop the talent of particularly able pupils without compromising broader educational principles, especially at a time when preparations are underway for the hosting of the Olympic Games in 2012 in London and the Commonwealth Games in Glasgow in 2014. In Scotland, the national strategy for improving physical activity contains frequent references to school physical education (Sport Scotland, 2003) whereas the national sports strategy makes relatively few links between sport and education (Scottish Executive, 2007). Thus, the prevailing educational policy view appears to be that it would be misguided and disingenuous to pursue sport-based strategies when a crisis exists in the basic fitness and movement competence levels of so many school age pupils. However, changes may be afoot, as sporting success at national level has the capacity to nourish nationalistic pride. Therefore, the Scottish National Party as the majority partner in the current coalition government, has made a

commitment to create six regionally based specialist sport academies with entry by application and ability; an innovation, which by itself, would be something of a challenge to the entitlement for all principles at the heart of the Scottish comprehensive school.

Thus, as can be noted, there is a tendency for agendas in physical education to ‘sway back and forth’ (Brewer, 2003, p. 590) as arguments for different forms of programmes for physical education are advanced. The frequency of policy change and counter change, inevitably invokes questions about whether this is a suitable time for those involved in the research, policy and practice communities to pursue a further change agenda. Nevertheless, in due course, one innovation based on a developmentally appropriate physical education curriculum, which attempts to fulfil the ‘brave vision’ outlined earlier is discussed. However, for the present, a brief review is provided on the most pressing curriculum orientation and fragmentation concerns which have curtailed coherent progress to date.

Curriculum orientation and fragmentation concerns for physical education

Historically physical education has lacked clear progression as various phases of the curriculum have been created out of sequence and independently in terms of curriculum aims (Penney et. al., 2006). This coupled with the retention of a clear primary and secondary divide has meant that the transfer between these stages of schooling has rarely been as productive as intended with consequently lifelong learning discourses remaining undeveloped. Furthermore, the bias towards curriculum prominence in secondary schools has been apparent through the marked imbalance in staffing with the vast majority of specialist physical education teachers employed in secondary rather than primary schools; a situation which has been exacerbated further by the limited and inconsistent professional development opportunities available to primary physical education teachers. Accordingly, these teachers find themselves both marginalised within primary schools and within their subject.

In addition, the top down influences of sport have adversely affected curriculum; as the bias towards team games with their focus on winning and the frequent overuse of narrow reproductive performance improvement pedagogical approaches has often been disengaging and ostracizing for pupils, and has collectively achieved little in indicating the centrality and importance of physical education within contemporary definitions of schooling (Siedentop and Tannehill, 2000). In this setting, curriculum have typically consisted of compartmentalized activity blocks lasting a short number of weeks with little evidence of transfer of learning across lessons and of connective lifelong learning discourses becoming embedded in curriculum delivery. The limitations of this approach have been further exposed by the modest time allocations available, where on average pupils (5-11 years) in Scotland only receive 70 minutes of curriculum time per week in primary schools and 90 minutes per week for most pupils in the early (12-14 years) and middle years (14-16 years) of secondary schools (Scottish Executive, 2006).

One of the biggest problems resulting from the mix of multi activity sampling and limited curriculum time has been the poor rate of transfer from in-school learning to out of school participation. Evidence from the first stage review of the Active Schools programme (Scottish Executive, 2007) indicates that despite the creation of 680 posts (more than half of whom worked as Active School Coordinators in secondary schools) improvements in physical activity levels remain modest and considerably below national targets which indicate that 85% of 13-17 year old pupils are expected to participate in out of school hours sport each week (Sport Scotland, 2003). Similarly, in Ireland, MacPhail, et.al., (2008, p. 198) has noted for various reasons ‘the promotion of after-school sport in schools is quite fragmented’ and in England, Flintoff (2003) has reported on the difficulties of physical education teachers establishing new partnership arrangements with the health and sporting communities at a time when teachers were concerned about ratifying their own status and employment conditions. This state of affairs matches the situation apparent in Scotland,

where the Active Schools programme has had to recognize the potential limitations of ever more precisely described teacher employment agreements and ‘a heavily unionized workforce’ (Ozga, 2005, p. 216) when trying to improve out of school hours active participation levels.

Furthermore, there is little evidence that programmes designed to improve school and community based provision are considered by teachers to be a particularly worthwhile part of their professional remit or contributor towards career development. Therefore, what often occurs is a low level sporting supplement, lacking in lifelong progression with only relatively few examples of rich task learning episodes providing transformative experiences for pupils (Coalter and Thorburn, 2003). Overall, such evidence provides an indication of how challenging it will be to equip pupils with the tools, motivation and opportunities to be more active throughout their school years and beyond. In addition, it provides a Scottish-based reminder of an acknowledged problem within a politically driven policy process; namely that national governments can gain kudos from the announcement of policy, but where on the ground improvements in schools and local communities remain much more difficult to deliver. For example, policy makers remain pleased with their endeavours to support school age pupils having two hours of physical education per week even though to date, less than 10% of schools meet the target set (Audit Scotland, 2008).

Nevertheless, despite the difficulties of merging policies with effective implementation plans, the political prominence of interrelated developments in health, education and sport has continued to trigger debates about the capacity of physical education to bring about beneficial changes to pupils’ health and well-being. In Scotland, the predominant health focus arose out of concerns about low participation levels (especially among girls) and about how best to link sporting experiences with improving school ethos. These concerns dominated thinking on the ‘Review Group on Physical Education’ (Scottish Executive, 2004a) which discussed how physical education and school sport should respond to the interests and changing lifestyles of pupils. The Review

Group findings presented the case that all pupils needed physical education as the foundation for a physically active life as the subject can enhance social inclusion and engagement in school life, develop confidence and self-esteem and help pupils focus on learning about the body and its development. Schools are considered pivotal to the future of the subject as they are ‘the only place where equity of access and opportunity to good quality’ physical education programmes can be achieved (Scottish Executive, 2004a, p. 27). Policy recommendations specify that the early education experiences of pupils should focus on ‘the *development of basic movement skills* [emphasis added] and the exploration of *the links between physical activity, health and well-being*’ [emphasis added], for without them ‘pupils will be excluded from participation in many activities, or may find their enjoyment compromised’ in later school years (Scottish Executive, 2004a, p. 27).

In reviewing ‘the development of basic movement skills’ the difficult issue for policy makers to resolve is that if the focus on developing skills is pursued in reproductive teaching environments through familiar pedagogical practices, then it might make the achievement of broader cognitive, social and emotional development objectives more difficult to achieve. The Review Group were ‘convinced that extending choice beyond the traditional games’ would be helpful (Scottish Executive, 2004a, p. 29). Yet, merely increasing choice runs the risk of modest benefits if pupils experience a ‘learning to move’ selection of new activities relative to a ‘moving to learn’ curriculum, which more overtly addresses the lifelong learning priorities considered fundamental for longer term gains (Penney and Jess, 2004). The Chairman’s Forward in the Review Group report alluded to the difficulty there was in gaining consensus on this point, when it was recorded that many hours were spent in ‘robust discussion of what is a very complex area’ (Scottish Executive, 2004a, p. 3). The level of discussion can be viewed as both a strength and a weakness of the policy process; a strength in that the wide ranging membership of the group (including representatives from the education, health and sporting communities) ensured that the plurality of

possible aims were explored, but also a weakness in that reaching agreement placed an excessive strain on achieving consensus within the policy community.

Whether viewed predominantly as a strength or a weakness, the potential appears to exist that the usually high level of ‘continuity and personal relationship within the policy community’ in Scotland (Menter et. al., 2004, p. 197) could become eroded, unless viable epistemological and pedagogical answers are found for the concerns raised by those directly involved in the policy construction and implementation process. Thus, without exemplification of how progress could occur, supported as necessary by accompanying professional development opportunities for teachers, a state of policy inertia could exist. In this environment, there is a risk that rather than appreciating the complexities of policy discussions teachers could use it as an opportunity to repeat for longer time intervals the types of curriculum content and pedagogical approaches they have deployed for many years.

Nevertheless, for the present, it is the multi-activity model appears which remains firmly entrenched and representative of what constitutes a physical education curriculum both in Scotland and internationally (Penney and Jess, 2004). Thus, there remains a point of tension and unease regarding pupils’ ability to exercise a degree of choice within physical education at the same time as the subject can reasonably articulate a commitment towards fulfilling a lifelong learning remit. Clearly, there are many complex issues to analyse if epistemologically and pedagogically physical education is to contribute towards a transformative educational agenda, which is geared towards highlighting how pupils’ critical engagement with the learning process could challenge much of the ‘docility-utility’ of current schooling (Kirk, 2004, p. 200), and which avoids the curriculum fragmentation associated with the unconnected sampling of activities for modest amounts of time.

When exploring ‘the links between physical education experiences and health and well-being’ more generally, the policy expectation in Scotland is that individual schools can design solutions to problems (Scottish Executive, 2004a), despite the lack of ‘research associated with young peoples’ views on physical activity’ Brewer (2003, p. 592). Therefore, implicit in any analysis of change are questions about whether teachers can adapt from directly instructional to more participatory pedagogical practices in order that meaningful gains towards physically educated citizens are achieved; and that recent financial investment and policy commitments does not become a missed opportunity. It is therefore, disappointing to note that contemporary developments internationally such as Sport Education (Penney, 2003), Teaching Games for Understanding (TGfU) (Gray et.al., 2008) and the pursuit of models of personal and social responsibility (Hellison, 1995) have yet to become part of practice in Scotland to any great extent. This is disappointing because these developments are all consistent with following constructivist principles of learning (Rovegno and Dolly, 2006), where there is a recognition that learning is an active process based on pupils constructing knowledge in relation to their prior knowledge and experiences and where knowledge is to some extent socially constructed (Derry, 1996); in short, the type of learning approaches which might lead to the realization of a broader range of cognitive, social and emotional objectives rather than improvements in performance alone.

The re-conceptualization of physical education

The final critical question focuses on attempts to advocate a revised conception of physical education which can articulate with active lifelong learning agendas; both epistemologically in terms of how integration between the different domains of learning is achieved and pedagogically in terms of how the learning process is enacted. In this respect, it is encouraging that much physical education literature from around the world corresponds with the challenges currently informing education developments in Scotland. Various authors have made the case for changing both the content and the delivery of curriculum (Locke, 1992; Penney and Chandler, 2000; Cothran, 2001),

but it is only recently that increasing attention is being directed towards lifelong learning and lifelong physical activity agendas (Green, 2004; Penney and Jess, 2004). In addition, efforts are also being made to explore different approaches to learning which relate to cognitive, social and emotional outcomes alongside the more traditional focus on physical performance (Rink, 2006). As such, physical education texts now regularly engage with notions of constructivism (Azzarito and Ennis, 2003; Wright et. al., 2004) situated learning (Kirk and Kinchin, 2003) and complexity theory (Light, 2008). However, internationally there remains limited evidence so far that this new thinking has percolated into the substance of the physical education curriculum and its related pedagogy. Accordingly, the next section of the paper outlines how recent re-conceptualizations of physical education in Scotland have led to the construction of developmentally appropriate curriculum and to innovative programmes of professional development being designed.

It is within this context of an emergent 'brave (Scottish) vision' that the Developmental Physical Education Group (DPEG) at the University of Edinburgh set out, in 2001, to provide a revised conception of physical education. However, while radical in design, the programme recognizes the necessity of the research, policy and practice communities working productively together in order to achieve the policy aims anticipated. Crucially, relative to previous curriculum reviews in Scotland, the greater inclusion of the research community highlights that the period when the influence of research on policy making was limited is at an apparent end. Nevertheless, re-conceptualising physical education is a complex process that is both on-going and never-ending, particularly when attempting to redefine the subject from a principled perspective. Accordingly, although the next section of the paper, outlines how our recent attempts to re-conceptualize physical education have led to the construction of a developmentally appropriate curriculum and an associated professional learning programme, it is important to stress that this on-going process has been, and continues to be non-linear in nature, particularly as we attempt to disseminate our curriculum and pedagogy efforts to a wider audience. Consequently, we recognise that it will be

necessary in the longer term that continued leadership and direction is provided by the architects of this re-conceptualization, for as Raffe et al., (2007) discovered in their analysis of curriculum change in Scotland, during the 1990s, a lack of shared vision and leadership can lead to a mix of political, institutional and epistemological barriers adversely affecting the levels of change expected.

Initially, the goals of the DPEG were developed as a reaction to two main concerns: the fragmentation and top-down orientation of primary physical education curriculum and central government control of curriculum development. The work of the DPEG, therefore, logically commenced with the development of an early years programme, 'Basic Moves', as the first step in efforts to create an innovative developmental physical education programme. The framework for Basic Moves was adapted from North American elementary physical education work (Gallahue, 1982; Graham et. al., 1980), where attempts were being made to synthesise the reductionist motor development descriptions of children's 'mature' movement patterns with the more constructivist notions of movement education which had held sway in the United Kingdom in the 1960's and 1970's.

As such, early work was framed by three learning principles which were defined to combat our concerns and to give a clear direction to our efforts in curriculum, pedagogy and professional development. These principles emphasize that physical education provision should provide learning experiences that are:

- Developmentally appropriate by focusing on learning across the psychomotor, cognitive, social and emotional domains;
- Inclusive, so that all have the opportunity to learn and benefit;
- Connected to ensure learning experiences in physical education beyond schools were coherent.

Accordingly, Basic Moves learning experiences were framed by ‘learning to move’ and ‘moving to learn’ intentions, which were developed explicitly to scaffold the progressive acquisition of children’s basic movement foundation along with appropriate knowledge and understanding and social and emotional skills. From both a developmental and a connected perspective, therefore, Basic Moves set out to help all children develop the movement competence, adaptability and creativity needed to successfully participate in a range of increasingly complex situations. However, a further concern was the recognition that deep, as opposed to superficial, learning is only likely when children have opportunities to consolidate learning in different contexts. We had become increasingly aware that whereas teachers in the primary classroom engaged in a mixture of whole class teaching, teacher intensive group work and non-intensive consolidating group work to support children’s learning, this rarely transferred into the physical education context. Consequently, implementation arrangements made reference to ‘learning stations’ as a recurrent element of Basic Moves as these offer children the opportunity to practise and consolidate their learning over time en-route to experiencing and participating in later application-based sessions. Subsequently, the initial curriculum and pedagogy work of the DPEG developed both epistemologically in terms of how integration between the different domains of learning is achieved and in terms of how the learning process is enacted.

During this initial phase, as Basic Moves developed, two professional development approaches were employed: a traditional ‘top-down’ approach and a more collaborative school-based approach. Although both these efforts were small scale they set the foundation for the complex national development process which was soon to follow. By 2004, as the project began to extend, the group were heartened by the general thrust of the conclusions of the Review Group report (Scottish Executive, 2004a) which supported the notion of changing physical education curriculum and enhancing the professional development of primary school teachers. However, as

Basic Moves was originally developed as a reaction to concerns about curriculum fragmentation and orientation, it was apparent that more detailed scrutiny of the theory underpinning our work was needed.

In the first instance, a multi-dimensional conceptualization of lifelong physical activity (LLPA) was developed, which built upon the initial DPEG principles and was additionally informed by contemporary thinking on lifelong learning (Penney et. al., 2006). Central to this conceptualization was three key beliefs about LLPA. First, physical education must engage with the issues of lifelong learning alongside those of lifelong physical activity. Secondly, the successful fulfilment of a lifelong learning agenda must link closely with curriculum experiences across the 3-18 age range, as these are the only experiences every child is guaranteed to engage with in order to help them develop a solid foundation for lifelong physical activity involvement. And finally, learning is both a lifelong and a lifewide endeavour and, as such, there are many extra curricular and community contexts in which learning takes place and many different individuals involved in the learning process. Therefore, while focusing mostly on curriculum physical education as the basis for LLPA, the DPEG actively sought to engage in the complex task of creating cross-sector learning communities in which all stakeholders play a role in the development of these foundations. In addition, the DPEG began to actively engage with key concepts from a range of contemporary theoretical perspectives, most notably social constructivism, ecological motor development, dynamical systems and complexity theory, all of which began to influence our thinking and practice in curriculum and pedagogy (Jess et. al., in press) and professional development. Social constructivist and complexity learning theories propose that learning occurs in an evolutionary and active way; when the learner is considered as being a complex and adaptive system where ‘pupils and teachers together create, share and shape their own and each other’s meanings’ (Morrison, 2008, p. 27). The ecological motor development and dynamical systems approach declares that

children learn to move their bodies in non-linear ways; rather than learning in a pre-programmed way, they develop movement abilities through exploration and discovery (Thelen and Smith, 1994).

From a curriculum perspective, this gradual re-orienting has seen a change in focus for Basic Moves from the traditional 'gold standard' mature movement patterns to more complex notions of self-organisation and emergence, which recognise the importance of adaptability and creativity in movement learning. This change has far reaching implications for the dominant performance-oriented physical education curriculum, with its accompanying behaviourist inclined pedagogical approaches. In addition, we have become increasingly aware of the need to move beyond the narrow age range of Basic Moves in our attempts to demonstrate how contemporary learning approaches could become fully embedded within our notion of achieving principled educational progress. Developmentally, this has led us to consider more appropriate experiences in the preschool years and also what we have defined as core learning and authentic (or situated) applications in the upper primary and early secondary (UPES) school years. In particular, it is apparent that the development of a curriculum and pedagogy approach which logically extends 'beyond Basic Moves' and which maintains integrity with contemporary learning principles is required within the UPES years. Thus, the current priority is to design interventions which can clearly indicate how the broader educational themes against which core learning and authentic assessment practices have been identified can be delivered in an integrated rather than piecemeal fashion.

Running in parallel to our curriculum and pedagogy efforts, professional development work extended onto a national stage in 2004 with the introduction of the Basic Moves Training Programme. This approach proved to be insufficient for sustained development and also problematic for some experienced primary physical education specialists who felt marginalised, rather than having the opportunity to engage in an active manner. Therefore, although the

programme successfully raised the profile of Basic Moves (Scottish Executive, 2004a), the dissatisfaction expressed by some participants highlighted the inherent problems within a ‘top-down’ professional development approach and indicated the need for professional learning experiences that are more situated, collaborative and, critically differentiated to meet the needs of various professionals. Subsequently, we have worked to create a number of localised learning ‘communities of practice’ projects which were developed following discussions with local authority managers and the training of tutors who deliver Basic Moves courses and follow up support. Over time, these projects have evolved in different ways to integrate with local aspirations and needs, with the result that robust development and support mechanisms have been effectively put in place (Jess, et. al., 2007). The emergence of this tutor programme, therefore, has symbolised the ways in which collaborative and distributed leadership structures support the development of more sustainable learning communities.

Further support for the programme has come from the Scottish Government who has commissioned the development of a postgraduate certificate in 3-14 physical education for teachers. With in excess of 200 primary teachers registered on this programme, and with these teachers increasingly adopting leadership roles within their schools and local authorities, the principled approach to developmental physical education curriculum is becoming firmly established. In addition, with further government funding in place, the next few years will see the project increasingly engaged with discussions directed towards the secondary years and transitions to adulthood and also with issues surrounding the introduction of sustainable developmental programmes in and beyond Scotland.

Conclusion

This paper has sought to review three of the main challenges which currently affect physical education in Scotland, firstly, how can critical debates in physical education identify principled

positions which reflect well founded educational reasoning in the longer term as well as being responsive and sensitized to political thinking and policy directives in the short term? Secondly, how can policy makers review the curriculum orientation and fragmentation concerns which have so frequently served to limit the contribution of physical education to a balanced education both within Scotland and internationally and thirdly, how can a revised conception of physical education articulate with active lifelong learning agendas, both epistemologically in considering conceptions of integration and pedagogically in terms of how the learning process is enacted?

The paper highlights that the current policy context is one which offers physical education the best opportunity in many years to address acknowledged barriers to progress, as politically the contribution of physical education has rarely been considered as being so central to the realisation of school and wider community lifelong learning aims. However, political aspirations can change quickly and the policy launch window, which now exists, requires to be continually critiqued in order for those in the policy making communities to review whether educational progress is principled and well-founded in the longer term rather than just convenient in the shorter term. This remains a key point because internationally concerns about the educational potential of physical education has often been overtaken, both in terms of curriculum scope and pedagogically in terms of how learning is experienced by pupils, by the need to record short term fitness improvements and/or meet activity target increases.

During the low point in the recent fortunes of physical education internationally, teachers preferred use of direct instructional teaching approaches in order to keep pupils busy and on task was largely perceived off as being responsible for the low priority afforded to pupils learning. Clearly, as Scotland now anticipates programmes of physical education which are more integrated, connected and central to the delivery of overall curriculum aims there is a need to overcome past problems. Accordingly, we have offered in this paper a re-conceptualization of physical education,

which when framed by associated discussions of developmental perspectives on learning and professional development opportunities for teachers, we believe contains the capacity to explain how a constructivist approach to teaching and learning could articulate with realizing principled educational progress. Despite the acknowledged inconsistent nature of dissemination and professional development progress to date, there is overall refreshing evidence that developmental programmes of physical education shows encouraging signs of the research, policy and practice communities beginning to work more productively together than previously.

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