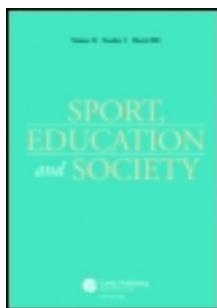


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# Beyond games and sports: a socio-ecological approach to physical education

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Acknowledging the performative sporting discourses which continue to dominate physical education, and the emerging focus on disease prevention within this context, this paper presents a socio-ecological framework for physical education that aims to shift the focus towards more multidimensional understandings of what it means to be ‘physically educated’. In doing so, we hope to prompt physical educators in schools and undergraduate programmes to more confidently employ intra-personal, inter-personal and environmental lenses through which to view and understand physical education, and therefore extend the gaze beyond activity-driven practice and ‘downstream’ exercise for health. The proposed framework draws upon established socio-ecological models and encompasses functional, recreational, health-related and performance-related physical activities. The multi-layered complexity associated with the field of physical education is reflected within the proposed socio-ecological framework. Through embracing complexity, particularly the interactions between layers of influence, the framework encourages exploration of the ‘physical’ beyond its subordinate components like fitness, body mass index, tactical awareness or motor skills. The framework is inclusive of games and sports but questions how these activities can be connected in the everyday lives of the learners. Importantly, the framework provided is not an approach to teaching and learning and, on its own, will do little to address the ongoing critique about the privileging of performative and health discourses within physical education. As they have in other fields, socio-ecological frames can provide a useful reference for the teaching and learning of physical education. To produce physically educated citizens in the broadest sense, teachers need to be supported, across multiple levels, to reposition their field to that of a connected specialism contributing to the whole curriculum and the communities within which they are located. It is our contention that socio-ecological frames can serve as useful tools to facilitate such a repositioning.

**Keywords:** *Physical education; Social ecology; Teachers; Meaning*

## Introduction

Unremitting critiques of the dominant performative sporting discourse in physical education (Penney & Evans, 1997; Tinning, 1997; Penney & Chandler, 2000; Penney & Jess, 2004; Penney & lisahunter, 2006; Rossi, 2006), coupled with emerging critiques of recent public health agendas associated with hypokinetic disease (Tinning & Glasby, 2002; Gard & Wright, 2005; Culpan & Bruce, 2007),

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continue to call attention to an uncertainty that exists at the foundation of physical education. This paper seeks to prompt a discussion about the value of a socio-ecological framework<sup>1</sup> for physical education that has potential to help practitioners negotiate the biophysical and social constructivist divide, and in-turn, progress thinking beyond an enduring adherence to traditional sports and competitive games, or for that matter, an interventionist health logic. Cale and Harris (2005) note that the physical education curriculum is virtually powerless in its capacity to address the wider environmental influences on physical activity behaviour. We hope to encourage more comprehensive and critical understandings of physical education through augmenting recent attempts to conceptualise socio-ecological models as frameworks for curriculum (Culpan & Bruce, 2007; New Zealand Ministry of Education, 2009), as models for 'active schools' (Cale, 1997; Naylor *et al.*, 2008) or as potentially significant theoretical drivers for healthy, active lifestyles (Stokols, 1996; Sallis *et al.*, 2006). Our claim is that through teaching a socio-ecological physical education curriculum, we can address the hidden curriculum (including policy, culture, environment) which reinforces or undermines opportunities for sustainable physical activity.

Our modest aim is to work towards a socio-ecological framework for physical education that can encourage educators and learners to critique and take necessary action to improve their own physical education and the physical education of others. We argue that socio-ecological frames provide a lens, or rather multiple lenses, that can promote different teacher and learner understandings of their own and other's physical engagement within and beyond their school community and across their lifespan. Our hope is that physical educators in schools and undergraduate programmes can make use of this framework to extend beyond performance-driven practice (Penney & Jess, 2004; Cale & Harris, 2005), and lift the gaze from 'downstream' exercise for health, through incorporating intra-personal, inter-personal and environmental considerations for physical activity within an educational context.

### Beyond games and sports

Kirk (2006) stated that '...physical education, in the USA, UK, and Australia, at least, has consisted of little else but sport in teachers' practices since the 1950's' (p. 256). Similarly, the work of Cale (2000a) and Alfrey *et al.* (in press), has highlighted that, despite a curriculum framework open to non-performative movements, sports and competitive team games continued to dominate both curricular and extra-curricular activities. The perpetuation of the activity-based structure within physical education, with a distinct focus on performative games, is a historically rooted cultural practice. Concerns have consistently been raised about the privileging of competitive team games within physical education, and it is recognised that such privileging is often at the expense of providing a more inclusive and balanced education for all children (Alfrey *et al.*, (in press); Penney & Evans, 1997; Tinning,

1997; Penney & Chandler, 2000; Fairclough *et al.*, 2002; Penney & Jess, 2004; Penney & lisahunter, 2006).

There is an emphasis on approaches to physical education that devote large chunks of time to a ‘... multi-activity program, comprising units of work each relating to a specific activity’ (Penney & Jess, 2004, p. 278). It is important to acknowledge that we are not challenging the inclusion of games and sports within the physical education curriculum, as these have a legitimate place (Kirk, 2006), rather the issue lies with the purpose of their inclusion and their capacity to exclude. We are not suggesting that a performative-based agenda prevents the opportunity for educational experiences, indeed, we feel that well conceived and socially constructed sport-based lessons provide valuable learning opportunities. Our concern is that a limited and performative activities-based agenda, often itself an ‘outcome’, has potential to overwhelm broader educational experiences related to the yet-to-be realised full potential of many physical education programmes. With sports as the focus, there remains a tendency to zoom in on the subordinate components (such as fitness, agility, technique, tactics) at the expense of developing meaning (Penney & Evans, 1997; Penney & Chandler, 2000; Tinning & Glasby, 2002; Penney & Jess, 2004; Brown, 2008). Performativity, reflected in the heavy emphasis on a limited number of performance-based activities, constitutes a reduction in the potential of students to connect more broadly to different contexts of play, movement and physical activity within different learning environments (curricula) and connected social-ecologies in which the ‘physically educated’ live. Len Almond (1997) pointed to the possibilities for physical education to move beyond the transmission of culturally relevant sports, games and experiences, to a physical education that developed a lifelong commitment to the joy and challenge of physical activity for both groups and individuals. As Kirk (2006) argues, there is a place for games and sport in physical education but only as part of a broad and balanced curriculum with an educative focus. By providing frames of reference, socio-ecological models can help illuminate for teachers and students broader contexts for physical education whilst retaining a place for sports and games.

### Beyond healthism

In search of meaning, beyond the playing of games and sport, physical education has consistently looked to health and wellness as a point of legitimisation (Kirk, 1990; Tinning, 2000; Gard & Wright, 2001; Tinning & Glasby, 2002). Physical education has historically been championed as a vehicle through which to develop healthy citizens, with ‘crises’ linked to obesity placing increased responsibility on schools, and in particular physical educators, to play a role in public health (Evans *et al.*, 2008; Tinning & Glasby, 2002; Gard & Wright, 2005). It has been argued by Green (2003) that physical education teachers’ ideas about their subject are often characterised by an ideology of healthism which, according to Garrett and Wrench (2008), is manifested in a tendency to, amongst other things, individualise health

and encourage a culture of self-regulation. It is hoped that a social-ecological framework for physical education could broaden this individualised focus and begin to address the broader social contexts which can both constrain and enable lifelong physical activity. Like sport, the danger with healthism is that particular subordinate components of health (i.e. physical fitness) emerge as priorities in a manner that ultimately disconnects the learner from any meaning associated with the experience (Hawkins, 2008). Indeed, Culpan and Bruce (2007) argue that the current push to combat ill-health through enhancing physical activity may result in the dilution of physical education to the extent that education is no longer the focus. Tinning and Glasby (2002) suggest that ‘if HPE (Health and Physical Education) is really to help students as future citizens negotiate “healthy lifestyle” practices in the “risk society”, then it must open itself up to the challenges offered by other ways of knowing about the body and health’. To achieve this, physical education teachers might be better served with a frame of reference that goes well beyond the body as machine.

### **Towards a socio-ecological curriculum**

The question we ask is how does the physical education profession embrace alternative conceptions of physical activities, play and movement beyond its subsidiaries (such as fundamental skills and tactics), whilst accommodating the significance of meaning we derive from movement as a consequence of being healthy and well? Wattchow and O’Connor (2003) suggest that ‘the emergence of the socio-ecological perspective, explicit in the New Zealand curriculum and implied in others, provides a significant opportunity to extend conceptualisations of the “physical” and “healthy lifestyle” beyond personal development, public health and socially critical approaches’ (p. 4). Such an extended framework in the conceptualisation and contextualisation of physical education discourse draws attention to both the individual and ‘the other’ to develop movement opportunities. According to Gorely (2005), ‘ecological approaches provide a framework for understanding the complex interplay between the many personal and environmental influences on behavior’ (p. 85). In promoting a potentially important transition towards a social ecology of physical education, we highlight that movement experiences in physical education, and for that matter, in related fields like outdoor education and environmental education, are not limited to performance, nor are they a slave to healthism or ecologism. We remain inclusive of the historical and cultural ideologies and practices related to games, sports and fitness, yet provide an opening in which to respond to questions of how learning in, through and of our moving bodies, occurs in various movement experiences, in a range of social and urban environments, and ‘open’ spaces.

Penney and Jess (2004) presented a particular view for physical education which centred on people’s future lives and the communities and societies to which they will belong. They presented four streams of an ‘all encompassing’ view for a lifelong physical activity agenda for physical education: (1) functional physical activity; (2)

recreational physical activity; (3) health-related physical activity; and (4) performance-related physical activity which offered an excellent starting point for progressing discussion about physical education. Their argument for an ‘all encompassing’ education aimed at continuing participation in a wide array of physical activities across the lifespan, regardless of reason, presents a compelling attempt to lead discussion away from the question of, what activities should be included in the curriculum?, towards attempts to answer what does it mean to be ‘physically educated?’ and how does this relate to lifelong learning? This shift takes the focus off the activity (for example, an invasion game) and its subordinate components (such as speed, power, motor skills, tactics) and places it back onto the learner and their movement context. Contextualising an individual’s movement experiences automatically becomes complex and multi-layered, as an individuals’ movement experiences and opportunities are shaped by not only intrapersonal influences (such as biology and psychology) but by their interpersonal relationships (including social climate, norms and culture), their immediate and more distal environments (settings and characteristics for living) and by policy (regulations for behaviour).

The common physical education practice of teaching a child how to ‘invade space’ in a Teaching Games for Understanding (TGFU) activity becomes far more problematic when, socio-ecologically, we consider and deliberate pedagogically on a range of connected multi-layered factors. If the intent is to teach a child a ‘tactic’ or ‘skill’ in order to participate successfully in a team sport, then the outcome remains subordinate and the pedagogical practice limited. Socio-ecological frames encourage the educator to make connections to the broader influences on this activity within the child’s experience, and the meaning the child might make from these experiences (Hawkins, 2008). The socio-ecological framework in this sense becomes transformative as its multiple lenses aid to critique practice. If it is too ‘unsafe’ to play field games on the street; if local football or school grounds are gated after hours; if no equipment, line markings or space is available on the school grounds at lunch time; if there is no one else to play with; if the lunch space is being dominated by older children; if they cannot afford the registration fee for the football club; if the family culturally prioritises other activities over sports; if a drought or heavy rain banishes the child from the sports field; if the child does not experience a ‘rush of movement’ from the activity; if they live too far away from the a practice space or; if the child is not allowed to independently negotiate their neighbourhood to practice at the park, then the potential to extend understandings of ‘invading space’ in sport from the lesson and into the lifespan are diminished.

We acknowledge that most of the issues raised in the above example can be educationally dealt with through adopting a constructivist approach to TGFU. Indeed Kirk and Macdonald (1998) highlight that TGFU approaches may be situated in social and cultural contexts and that learning is influenced by these contexts. In this case, the socio-ecological framework is not an approach to teaching and learning, *per se*. Rather, the role of the socio-ecological framework is to provide multi-layered and connected lenses through which teacher and learner can begin to

explore and critique experiences in ways that broaden opportunities for learning. It is the interaction between multiple layers of influence that is illuminated by the framework and prompts a shift in focus beyond the immediate problems of the immediate task. This may indeed be through a social constructivist approach that explores an issue of access, or a phenomenological approach that explores embodied meaning-making.

While well-conceived HPE programmes centred on games and sports can arguably produce critical thinkers, these experiences alone are often inadequate in educational terms because the pedagogical assumptions are inconsistent with the built, cultural, natural or social environments that support the practical application, or vice versa. Indeed, as Penney and Jess (2004) acknowledge, ‘... physical education curriculum as it has traditionally been conceptualised and organised is destined to have partial and short-lived relevance for many’. If so, lifelong possibilities are diminished and it may well be the case that after repeated bouts of frustration and failure to ‘transfer’ the newly acquired subsidiaries (e.g. ability to move to open space within a game situation) to the whole (e.g. applying this game with friends outside of physical education), that students are learning about the irrelevance and lack of meaning of these activities to their real and future lives. As opportunities to engage in meaningful sports or recreations are diminished over time by additional environmental, interpersonal and personal constraints, this curriculum disconnects with reality. Socio-ecological frames bring these issues to the surface and invite educators to consider how their unit objective of teaching ‘moving into space’ might be applied more broadly to the learner’s lifelong engagement in a much wider range of spaces and places. It asks the educator, as Penney and Chandler (2000) note, to make connections rather than focus on differences.

There have been repeated suggestions to shift the delivery of physical education away from performativity and healthism by using a social-critical approach (Kirk, 1988; Penney & Chandler, 2000; Macdonald, 2002; Tinning & Glasby, 2002). The problem, as Sparkes (1991) points out, is that this approach is almost in contrast to the dominant biophysical frame:

In essence, the positivist paradigm adopts a realist ontology; a dualistic, objective epistemology; and an interventionist methodology. In contrast, the social constructivist paradigm adopts a relativist ontology; a monistic-subjectivist epistemology, and a hermeneutic methodology (p. 106).

The result is a biophysical/socio-cultural dualism that is difficult to reconcile and is often met with opposition (Swan, 1995; Wattchow & O'Connor, 2003). Socio-ecological frameworks however are drawn from a number of related socio-ecological approaches that exist in health (McLeroy *et al.*, 1988; Stokols, 1996; Stokols *et al.*, 1996; Stokols *et al.*, 2003; Huang *et al.*, 2009), physical activity (Sallis *et al.*, 1998; Spence & Lee, 2003; Foster & Hillsdon, 2004; Timperio *et al.*, 2004; Sallis *et al.*, 2006) and healthy, active schools (National Health and Medical Research Council, 1996; Cale, 1997; Colquhoun *et al.*, 1997; Jones *et al.*, 2003; Cale & Harris, 2005; Naylor *et al.*, 2008). Despite the health pedigree, socio-ecological frameworks are readily able

to incorporate socio-critical and ecocentric or place responsive discourses. Glass and McAtee (2006) have proposed an ecological framework as a mechanism for uniting the social and behavioural sciences within public health. Within the context of health, Gorely (2005, pp. 83–84) notes that ‘the ecological approach provides a general framework for explaining behaviour . . . Because of this generality, other theories and models that have been used in the exercise domain can be incorporated to increase specificity’. As is the case in health, the over-arching nature of socio-ecological frames means they do not lock teachers into particular ways of teaching. It is precisely because of the encompassing framework, its history and common language between different fields, that socio-ecological frames are less likely to meet resistance and can provide a means to work across the paradigmatic divide.

Noting an established interdisciplinary history that emerged from the work of Lewin in the 1930s, Skinner in the 1950s, Barker in the 1960s and Bronfenbrenner in the 1970s, our framework (see Figure 1) is based on the Active School framework developed by Cale and Harris (2005) and the model provided by Sallis *et al.* (2006). With additional guidance and support, this framework can assist teachers and learners to imagine a more ecological conception of physical activity and its interactions across the multiple layers of influence. It shifts the focus from the activity per-se and its subordinates, towards a consideration for physical activity that has multiple interactions between the intrapersonal, interpersonal, physical, policy and natural environments, irrespective of whether the activity is functional, performance, recreational or health-related. It is different from previous models for Active Schools (Cale & Harris, 2005) in that physical education is repositioned from the role of activity provider to a more integrated and central role that drives change both within the school community and beyond (in partnership with a range of other stakeholders).

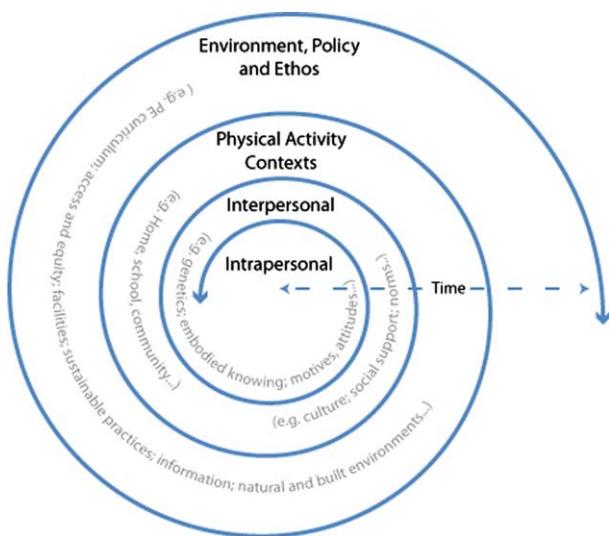


Figure 1. Socio-ecological framework for physical education

The framework presented here is unapologetically complex, it is because of this complexity that it can resonate with the multi-faceted influences on lifelong activity. Like ecological models presented within health (Glass & McAtee, 2006), we do not shy away from the idea that sustaining a lifetime of physical activity is a multifaceted proposition. Our contention is that by providing a framework that illuminates possibilities rather than reducing them, we can facilitate a broadening of the focus for what it might mean to be physically educated. Even if physical education students do not pursue a lifetime of sport participation, having a good understanding of physical activity across different layers of influence and within different domains of living (for example, home, work, school, recreational, transit) can mean they advocate for and even facilitate physical activity opportunities for themselves and others throughout their lives. The spiral in the framework acknowledges a blurring of the boundaries between the proximal and distal factors that influence behaviour. The frame also acknowledges how influences are historically rooted and develop over time. The degree of messiness and uncertainty that comes with the framework reflects the messiness of life, the mundane of the everyday and the confounding mix of intra-personal and extra-personal factors which compel us to consider what Penney and Jess (2004) refer to as an 'all encompassing' approach to physical education and physical activity in people's lives (both in and beyond the classroom).

The proposed framework encompasses functional, recreational, health-related and performance-related physical activities that are socially constructed whilst accommodating what has phenomenologically been referred to as the 'lived experience', embodied knowing and meaning-making that occurs through movement (Brown & Payne, 2009). The framework is inclusive of play, games and sports but asks the educator and learner to consider how these activities and their subsidiaries can be meaningful (connected) in the everyday lives of the participants. In considering the health of individuals or communities, it is also capable of drawing attention to the health of natural systems. Despite the apparent complexity of the framework, (physical) educators and students that draw from its concepts can begin to look beyond subordinate components of sport, health and exercise to become drivers for change both within the physical education curriculum, their school and connected communities. The intention is that the school and its curriculum reach outwards to impact home, community sport, local infrastructure, parks and play spaces. This 'spill over' into other living domains reinforces the ecological, multilayered and multidimensional aspects of the approach. In doing so, it opens up possibilities to connect across the curriculum and explore play, movement, physical activity, recreation and leisure in new and diverse ways.

### **Between frameworks and practice**

As outlined, socio-ecological frames for health and physical activity are now increasingly common at the societal level (Stokols, 1996; Stokols *et al.*, 1996; King *et al.*, 2002; Spence & Lee, 2003; Glass & McAtee, 2006; Sallis *et al.*, 2006).

In the same way socio-ecological models are being applied to whole communities, Figure 1 highlights how they might be overlaid on the school as a nested community (Culpan & Bruce, 2007). The framework acts as a point of reference from which the physical educator can facilitate the exploration of a range of physical education agendas (see Table 1) using a range of approaches while drawing resources from other curriculum areas. The framework lends itself to social constructivist approaches to teaching and learning in which knowledge and beliefs are mediated by historical, social, institutional and economic conditions. Comprehending how

Table 1. Towards a social ecology of physical education

Sport Education / Teaching Games for Understanding / Fundamental Motor Skills	Active Schools: Cale and Harris (2005). Promoting physical activity within schools	All encompassing Physical Education: Penney and Jess (2004)	Physical Education as a Socio-ecological curriculum
Children learn to play performative games and sports through developing tactical, technical and affective understandings of them. These can be extended to model community sport through Sport Education.	'Active schools make a commitment to physical activity and promote active living through...curriculum, environment and the wider community are important...' (Cale & Harris, 2005, p. 174)	'Our aim is to be promoting an all encompassing view of physical activity in people's lives and recognising the diverse types of activity we become involved in, for many and varied reasons'. (Penney & Jess, 2004, p. 273)	Ecological approaches provide a framework for understanding the complex interplay between the many personal, social and environmental influences on behaviour.
As a dominant focus, remains limited in its capacity to create physically educated citizens within a community context and across the lifespan. Sits within a competitive sports based paradigm. Fails to acknowledge other forms of 'physicality'. PE to sit as one component within an existing community sporting programs.	The Active Schools concept crosses multiple levels and employs a whole of school approach to health and physical activity. Shifts focus to include a broader range of activities.	Shifts the frame of PE into a multi-dimensional conceptualisation of lifelong physical activity and embraces messiness. Despite remaining human centered and limited in notions of embodied movement, it steps outside of the school and explores connections with communities across the lifespan.	Capacity to consider various affordances and constraints shaping the spatiality of movement experiences and, therefore, geographies of physical activities. Encompasses the complex interaction between intra-personal, inter-personal, and the environment. Asks that PE becomes an integral driver of the active school agenda through experiential and place based pedagogies both within the school and extending into its broader community.

human agents experience movements in ways that make us feel good, elated or proud, and then attempting to unpack the meaning behind these experiences is an important consideration for HPE. At the intrapersonal level, the framework provides a place for the primacy of practice and in doing so can serve to legitimise a focus on embodied ways of meaning-making in movement (Snyder, 1999; Archer, 2006; Smith, 2007; Brown, 2008). When exploring the policy, environmental or interpersonal levels of the framework, learners can become agents of change through adopting socially critical approaches to tackling issues that limit their access to movement.

In addition to engaging with structured activities like Sport Education or TGFU, physical educators can be empowered to explore unstructured physical activity (including play), active transport, independent mobility, natural play spaces and street sport, constructed through the everyday lives or lived experience of what it means to be part of that community (Wattchow & O'Connor, 2003). Because community in this sense is a fluid term, education is dispersed from the school and into its extended communities acknowledging contributions from local sporting coaches, older siblings and parents, as well as natural or built environments as facilitators of movement. These community-driven 'geographies' of physical activity offer an alternative to traditional physical education that prioritise the gymnasium over homes, gardens and streets as urban scapes where equally legitimate activity can occur with greater regularity. The argument that this change in focus would result in a loss of time to 'do' physical activity becomes less important when it is recognised that the net result of the education process ought to result in increased activity opportunities outside of scheduled class time and transfer across the lifespan.

As opposed to a dose-response approach to physical activity, a socio-ecological approach acknowledges that behaviour can be shaped by multiple levels of influence, some of which 'sit below the surface' as embodied, routinised practice played out in the everyday. It is clearly ambitious to expect early primary school students to make meaning of incidental physical activity for the sake of preventing heart disease. Yet walking to and from school with friends as potentially a legitimate outcome of a physical education class project, can offer substantial opportunities for learning and meaning-making through movement without reference to its obvious health affirming attributes. This accommodates Hawkins' (2008) concerns about a curriculum that focuses on movement solely as a means to become healthy. A socio-ecological approach to physical education may offer, we believe, the warrant for a broader discussion about the health, environmental and social benefits of physical activity in a way that is holistic and not necessarily individually focused. In this way, physical education has the potential to impact the community and invite more of its constituents to benefit from the experience.

It is important to note that we are not proposing an 'approach to education', rather the purpose of the socio-ecological framework is to alert teachers about opportunities to develop knowledge, skills and understandings outside of performative (technical, tactical) and fitness foci. This can encourage the learners themselves the learners themselves to create greater opportunities for expanding their own 'physical activity

repertoire' (Green, 2003, 2008) outside of the scheduled class time, both within and beyond their own school communities. By linking physical education across curriculum areas and viewing the school as a connected community (Cale & Harris, 2005) in which movement occurs at a number of levels, the socio-ecological framework presented in Figure 1 can establish physical education as much more than comprising a collection of activities, operating in isolation, with a preference for competitive sports.

As we have stressed, games and sport remain a key component of a socio-ecological approach to physical education (Kirk, 2006), providing the experience is meaningful to the participants and there is a real possibility of it being transferred beyond the immediate context. Setting aside time in physical education class (and in other curriculum areas) to experientially identify, problematise and set about developing the school communities' (inclusive of policy, environment, programmes, resources) capacity to accommodate games and sport before during and after school, will add value to any tactical and technical content already covered in class. In this example, the framework is used to locate and highlight the issue through its multiple lenses, and the students then engage in constructivist and critical pedagogy to explore inequity, lobby school council (perhaps to invest in line markings or making play equipment more accessible) and engage in the process of opening up previously locked down play spaces (Cale, 2000b; Bradley & O'Connor, 2009). In accommodating demands for more natural play settings (both at school and in the surrounding school environments) it may also free up opportunities for spontaneous, self directed play and everyday physical activities (Malone & Tranter, 2003; Tranter & Malone, 2004). Through exploring their own school as a connected community, physical education can extend into the lived experiences of participants homes and reach into the broader social and natural spaces of their lives. As Penney and Jess (2004) state:

We can readily recognise that learning and involvement in physical activity and sport happens in many places and various times-in schools but also in communities, in families, amongst friends, in workplaces and in our connections with digital and 'virtual' worlds.

In advancing this useful framework as a reference point for future curriculum development, we acknowledge the constraints under which teachers are expected to work. The concern, as pointed out by Penney and Jess (2004, p. 278), is that even if a multi-dimensional framework is adopted '...the lived teaching and learning experience reverts to one that openly privileges elite performance, sport specific agendas' irrespective of guidelines or requirements. We acknowledge that if teachers are expected to challenge the status quo and further develop their pedagogies, it is imperative that they are supported in their endeavours and that they have access to relevant resources and effective professional development (Ward, 2010). Whilst professional development cannot be viewed as a panacea for all that is 'wrong' with physical education, as part of a multi-layered approach to curriculum development, there is potential in this model to go some way to supporting teachers in their

attempts to (re)connect their pupils with other areas of the curriculum and their community. What we propose is a framework that we think can be a useful tool to help facilitate this process and in doing so explore physical activity within a broader educational context that shifts thinking beyond games and sports. To be useful at the practitioner level, the model presented in this paper requires continued contextualisation and legitimisation within physical education practice and teacher education programmes. In future, examples of practice are needed that demonstrate the potential for physical education to drive a socio-ecological approach to physical activity.

## **Conclusion**

Ongoing commentary and critique about conventional views of, and approaches to physical education must be addressed. The socio-ecological framework presented in this paper challenges physical educators to extend beyond conventional, often performative and functionally pragmatic understandings of play, movement and physical activity within a physical education context. Even within current Active School frameworks, physical education is somewhat isolated, viewed as an important activity provider (Cale & Harris, 2005, 2006) within the broader concept of an 'active community'. Cale and Harris (2005) point out that in its current incarnation, physical education is not able to acknowledge the broader social, policy and built environments which hold significant influence over an individual's capacity to engage in physical activity. We feel however, that even within current international curriculum guidelines, there is scope for physical education to adopt this more socio-ecological approach. This paper calls for physical education teachers to be supported, across multiple levels, in attempts to reposition their field from one of activity provider to that of a connected specialism that can contribute to the whole curriculum and the lives of those engaged with it. We propose that a socio-ecological framework provides a meaningful reference for teachers and students to begin to locate various physical activities within and across their multiple layers of influence.

We argue that if physical educators are to physically educate citizens (read students), with more connection to the subject, other curriculum areas and to their lives and communities more generally, then a socio-ecological framework can be a useful tool for doing so. In this capacity, we seek to open discussions and reposition physical education from the periphery, to become a central driver (and partner) for healthy, active schools and communities. If there is value and potential in the socio-ecological approach, physical education teachers will need support to transition their practice from a games, sport and performative focus to one in which they drive a more inclusive and broader socio-ecological approach to physical activity and education that considers lifelong learning. As Culpan and Bruce (2007) note, '...knowledge acquisition is the easy part. Praxis is the most challenging. In order for this to occur, it is likely that both teachers and students will first have to experience a significant philosophical, paradigmatic shift'.

We feel that through engaging with this framework and by utilising a critical pedagogy, changes in values, beliefs and consequently actions, can result in students who learn to engage in actively setting the policy, environmental, interpersonal and personal agenda's for how their school community and the other multiple communities to which they belong, can positively and inclusively impact physical activity. It is our hope that through the socio-ecological repositioning of physical education, as a driver of an active community curriculum, we are providing the initial steps towards a tangible framework which could aid physical education teachers' transition from a focus on performativity and healthism towards a broader repertoire of experiences.

Acknowledging the performative agenda of sport that, arguably, dominates in the discourse of physical education, this paper outlines an alternative socio-ecological framework through which understandings of what it means to be physically educated in its broadest sense, including the potential for lifelong learning, are developed. The aim is that physical educators in schools and undergraduate programmes can make use of this framework to move beyond performance-driven practice, and shift strategies from 'downstream' exercise for health, through incorporating intra-personal, inter-personal and environmental considerations for physical activity. The proposed socio-ecological framework encompasses functional, recreational, health-related and performance-related physical activities, but can extend beyond socially and environmentally constructed forms of activity to consider what phenomenologically has been referred to as the 'lived experience', embodied knowing and meaning-making that occurs through movement. The framework accommodates various forms of play, games and sports but asks for consideration as to how these activities can be meaningfully connected to the everyday lives of the participants. Physical educators and students that utilise a socio-ecological framework can begin to look beyond subordinate components of sport, health and exercise to become drivers for change both within the physical education curriculum, the school and its connected communities, reaching far beyond the 60 minutes of scheduled physical education per week. In order to address the ongoing critique about the privileging of performative and health discourses within physical education, this paper calls for teachers to be supported, across multiple levels, to reposition their field from one of activity provider to that of a connected specialism that contributes to the whole curriculum and the communities within which they are located.

### Note

1. For the purpose of this paper the term 'socio-ecological frame' is used to refer to an approach which explores the complex interplay between the many personal and environmental influences on behaviour. 'Ecological models are distinguished by their explicit inclusion of environmental and policy variables that are expected to influence behavior. Rather than positing that behavior is influenced by a narrow range of psychosocial variables, ecological models incorporate a wide range of influences at multiple levels' (Sallis *et al.*, 2006).

## References

- Alfrey, L., Cale, L., Webb, L. (in press). Physical education teachers' continuing professional development in Health Related Exercise: What a conundrum! *Physical Education and Sport Pedagogy*.
- Almond, L. (1997). Sport education in schools. In: *Physical education in schools*. (London: Kogan Page), 34–51.
- Archer, M. S. (2006) *Being human: the problem of agency* (New York, Cambridge University Press).
- Bradley, V. & O'Connor, J. P. (2009) The development of a resource for physically active school settings, *ACHPER Healthy Lifestyles Journal*, 56(2), 11–16.
- Brown, T. D. (2008) Movement and meaning-making in physical education, *ACHPER Healthy Lifestyles Journal*, 55(2), 5–9.
- Brown, T. & Payne, P. (2009) Conceptualizing the phenomenology of movement in physical education: implications for pedagogical inquiry and development, *Quest*, 61(4), 418–441.
- Cale, L. (1997) Promoting physical activity through the Active School, *British Journal of Physical Education*, 28(1), 19–21.
- Cale, L. (2000a) Physical activity promotion in schools-PE teachers' views, *European Journal of Physical Education*, 5, 158–168.
- Cale, L. (2000b) Physical activity promotion in secondary schools, *European Physical Education Review*, 6(1), 71–90.
- Cale, L. & Harris, J. (2005) *Exercise and young people* (Hampshire, Palgrave).
- Cale, L. & Harris, J. (2006) School-based physical activity interventions: effectiveness, trends, issues, implications and recommendations for practice, *Sport, Education and Society*, 11(4), 401–420.
- Colquhoun, D., Goltz, K. & Sheehan, M. (1997) *The health promoting school: policy, programmes and practice in Australia* (Marrickville, Harcourt Brace & Company).
- Culpan, I. & Bruce, J. (2007) New Zealand physical education and critical pedagogy: refocusing the curriculum, *International Journal of Sport and Health Science*, 5, 1–11.
- Evans, J., Rich, E., Davies, B. & Allwood, R. (2008) *Education, disordered eating and obesity discourse: fat fabrications* (London, Routledge).
- Fairclough, S., Stratton, G. & Baldwin, G. (2002) The contribution of secondary school physical education to lifetime physical activity, *European Physical Education Review*, 8(1), 69–84.
- Foster, C. & Hillsdon, M. (2004) Changing the environment to promote health enhancing physical activity, *Journal of Sports Science*, 22, 755–769.
- Gard, M. & Wright, J. (2001) Managing uncertainty: obesity discourses and physical education in a risk society, *Studies in Philosophy and Education*, 20(6), 535–549.
- Gard, M. & Wright, J. (2005) *The obesity epidemic: science, morality and ideology* (London, Routledge).
- Garrett, R. & Wrench, A. (2008) Fitness Testing: The Pleasure and Pain of it, *ACHPER Healthy Lifestyles Journal*, 55(4), 17–22.
- Glass, T. A. & McAtee, M. J. (2006) Behavioral science at the crossroads in public health: extending horizons, envisioning the future, *Social Science & Medicine*, 62, 1650–1671.
- Gorley, T. (2005) The determinants of physical activity and inactivity in young people, in: L. Cale & J. Harris (Eds) *Exercise and young people. Issues, implications and limitations* (New York, Palgrave McMillan), 81–105.
- Green, K. (2003) *Physical education teachers on physical education: a sociological study of philosophies and ideologies* (Chester, Chester Academic Press).
- Green, K. (2008) *Understanding physical education* (London, Sage).
- Hawkins, A. (2008) Pragmatism, purpose, and play: struggle for the soul of physical education, *Quest*, 60, 345–356.

- Huang, T. T., Drewnowski, A., Kumanyika, S. K. & Glass, T. A. (2009) A systems-oriented multilevel framework for addressing obesity in the 21st century, *Preventing Chronic Disease*, 6(3), 1–10.
- Jones, S. E., Brener, N. & McManus, T. (2003) Prevalence of school policies, programs, and facilities that promote a healthy physical school environment, *American Journal of Public Health*, 93(9), 1570–1575.
- King, A. C., Stokols, D., Talen, E., Brasington, G. S. & Killingsworth, R. (2002) Theoretical approaches to the promotion of physical activity: forging a transdisciplinary paradigm, *American Journal of Preventative Medicine*, 23(2S), 15–25.
- Kirk, D. (1988) *Physical education and curriculum study: a critical introduction* (London, Croom Helm).
- Kirk, D. (1990) Knowledge, science and the rise and rise of human movement studies, *ACHPER Healthy Lifestyles Journal National Journal*, 127, 8–11.
- Kirk, D. (2006) Sport education, critical pedagogy, and learning theory: toward an intrinsic justification for physical education and youth sport, *Quest*, 58, 255–264.
- Kirk, D. & Macdonald, D. (1998) Situated learning in physical education, *Journal of Teaching in Physical Education*, 17(3), 376–387.
- Macdonald, D. (2002) *Critical pedagogy: what might it look like and why does it matter?* (London, Routledge).
- Malone, K. & Tranter, P. (2003) Children's environmental learning and the use, design and management of schoolgrounds, *Children, Youth and Environments*, 13(2), 36.
- McLeroy, K. R., Bibeau, D., Steckler, A. & Glanz, K. (1988) An ecological perspective on health promotion programs, *Health Education Quarterly*, 15, 351–377.
- National Health and Medical Research Council (NHMRC) (1996) *Effective school health promotion: toward health promoting schools* (Canberra, NHMRC).
- Naylor, P. J., Macdonald, H. M., Warburton, D. E. R., Reed, K. E. & McKay, H. A. (2008) An active school model to promote physical activity in elementary schools: Action Schools! BC, *British Journal of Sports Medicine*, 42, 338–343.
- New Zealand Ministry of Education (2009) The socio-ecological perspective and health promotion in Health and Physical Education in the New Zealand Curriculum, *The Curriculum in Action*. Available online at: [http://www.tki.org.nz/r/health/cia/make\\_meaning/socio\\_perspect\\_e.php](http://www.tki.org.nz/r/health/cia/make_meaning/socio_perspect_e.php) (accessed 8 February 2009).
- Penney, D. & Chandler, T. (2000) Physical education: what future(s)? *Sport Education and Society*, 5(1), 71–87.
- Penney, D. & Evans, J. (1997) Naming the game: discourse and domination in physical education and sport in England and Wales, *European Physical Education Review*, 3(1), 21–32.
- Penney, D. & Jess, M. (2004) Physical education and physically active lives: a lifelong approach to curriculum development, *Sport, Education and Society*, 9(2), 269–287.
- Penney, D. & lisahunter, (2006) (Dis)Abling the (health and) physical in education: ability, curriculum and pedagogy, *Sport, Education and Society*, 11(3), 205–209.
- Rossi, A. J. (2006) An educational rationale for movement in education, in: R. Tinning, L. McCuaig & lisahunter (Eds) *Teaching health and physical education in Australian schools* (French Forest, Pearson Education Australia), 9–16.
- Sallis, J., Bauman, A. & Pratt, M. (1998) Environmental and policy interventions to promote physical activity, *American Journal of Preventative Medicine*, 15(4), 379–397.
- Sallis, J. F., Cervero, R. B., Ascher, W., Henderson, K. A., Kraft, K. M. & Kerr, J. (2006) An ecological approach to creating active living communities, *Annual Review of Public Health*, 27, 297–322.
- Smith, J. (2007) The first rush of movement: a phenomenological preface to movement education, *Phenomenology and Practice*, 1, 47–75.
- Snyder, G. (1999) *The etiquette of freedom. In Prose, poetry and translations* (New York, Counterpoint).

- Sparkes, A. (1991) Toward understating, dialogue, and polyvocality in the research community: extending the boundaries of the paradigm debate, *Journal of Teaching in Physical Education and Sport Pedagogy*, 10, 103–133.
- Spence, J. & Lee, R. (2003) Toward a comprehensive model of physical activity, *Psychology of Sport and Exercise*, 4, 7–24.
- Stokols, D. (1996) Translating social ecological theory into guidelines for community health promotion, *American Journal of Health Promotion*, 10(4), 282–298.
- Stokols, D., Allen, J. & Bellingham, R. L. (1996) The social ecology of health promotion: implications for research and practice, *American Journal of Health Promotion*, 10(4), 247–251.
- Stokols, D., Grzywacz, J., McMahan, S. & Phillips, K. (2003) Increasing the health promotive capacity of human environments, *American Journal of Health Promotion*, 18, 4–13.
- Swan, P. (1995) *Studentship and oppositional behaviour within physical education teacher education: a case study* (Unpublished Doctoral, Deakin University, Melbourne).
- Timperio, A., Salmon, J. & Ball, K. (2004) Evidence-based strategies to promote physical activity among children, adolescents and young adults: review and update, *Journal of Science and Medicine in Sport*, 7(1 Supplement), 20–29.
- Tinning, R. (1997) Performance and participation discourses in human movement: toward a socially critical physical education, in: J. Fernandez-Balboa (Ed.) *Critical postmodernism in human movement, physical education and sport* (New York, State University of New York Press), 99–120.
- Tinning, R. (2000) Seeking a realistic contribution: considering physical education within HPE in New Zealand and Australia, *Journal of Physical Education New Zealand*, 33(3), 8–21.
- Tinning, R. & Glasby, T. (2002) Pedagogical work and the ‘cult of the bBody’: considering the role of HPE in the context of the ‘new public health’, *Sport, Education and Society*, 7(2), 109–119.
- Tranter, P. & Malone, K. (2004) Geographies of environmental learning: an exploration of children’s use of school grounds, *Childrens Geographies*, 2(1), 131–155.
- Ward, L. (2010) *Physical education teachers’ engagement with health-related exercise and health-related continuing professional development: a healthy profile?* (Unpublished doctoral thesis, Loughborough University).
- Wattchow, B. & O’Connor, J. P. (2003) re(Forming) the ‘Physical’ in a curriculum/pedagogy for health and well-being: a socio-ecological perspective, paper presented at the NZARE/AARE, Auckland New Zealand, 29 November.