



## Recent Research into the Value of Quality Physical Education and School Sports

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### Abstract

This paper provides an overview of the findings and implications of recent research that is relevant in considering the prospective benefits and thus, the value, of Physical Education. The paper acknowledges physical activity and sports as central to Physical Education and therefore also discusses research examining physical activity and sports in schools. Physical Education is emphasised as being 'an educational endeavour and experience', focusing on the provision of learning experiences that potentially have a key role to play in providing young people with skills, knowledge, understanding, values and attitudes that are fundamental to their health and lifestyles. The paper draws on international research to specifically explore the benefits of physical education in relation to young people's: physical development and well-being; social and emotional development and well-being; and their cognitive/academic development and achievement.

**Key Words:** Specific Goals, Physical Activity, Academic Achievement, Regular Physical Activity, Item Response Theory.

### **Introduction:**

This paper provides an overview of the findings and implications of recent research that is relevant in considering the prospective benefits and thus, the value, of Physical Education. The paper acknowledges physical activity and sports as central to Physical Education and therefore also discusses research examining physical activity and sports in schools. Physical Education is emphasised as being '**an educational endeavour and experience**', focusing on the provision of learning experiences that potentially have a key role to play in providing young people with skills, knowledge, understanding, values and attitudes that are fundamental to their health and lifestyles. The paper draws on international research to specifically explore the benefits of physical education in relation to young people's:

- Physical development and well-being;
- Social and emotional development and well-being; and their
- Cognitive/academic development and achievement.

'Potentially' remains a crucial proviso, however, in addressing the benefits of Physical Education. The prospective and previously claimed benefits of Physical Education are many and varied, and this is reflected in the sections that follow. The paper emphasises that achievement of any specific outcomes requires that curriculum, pedagogy and assessment in Physical Education are aligned to those outcomes. In short, achieving any of the potential benefits relies upon Physical Education being directed towards specific goals. Different curriculum content, pedagogical approaches, assessment tasks and approaches will be effective in achieving different 'ends', and no single model or approach can be expected to support achievement of a diverse array of outcomes. Research focusing on various curriculum and pedagogical initiatives in Physical Education points to the success that can be achieved through strategically focused development.

### **Physical Education, Physical Development and Wellbeing:**

Bailey's (2006, p.398) review clarified that 'for many children, school is the main environment for being physically active, through either PES programs or after-school activities'. That provision of Physical Education and sports in schools is the only means of assuring that all children will experience physical activity and more specifically, physical activity experiences appropriate to their developmental and learning needs, is a key premise in considering many of the prospective benefits of Physical Education, but particularly, physical development and wellbeing.

### **Physical Education: An Essential Foundation for Lifelong Physical Activity and Health:**

Physical Education represents a 'window of opportunity' not merely for an immediate involvement in activity, but also for the development of skills, knowledge, understandings, values and attitudes that underpin children's ability to access and enjoy physical activity and sports in childhood and in later life. Bailey's (2006) review stressed the need to consider the consequences of children not developing what we might term basic physical and movement literacy and specifically acknowledge that children face the prospect of exclusion from physical activity and sports thus denying them of the physical, social and emotional benefits that can (but will no means always or automatically) arise from participation. Physical Education can be invaluable in providing for the structured development of movement skills that are fundamental to participation in physical activity and sport. The widespread development of Fundamental Motor Skills (FMS) programs across Australia and internationally has been directed to precisely this outcome. The work just published by Bailey et al. (2009) reaffirmed that 'there is suggestive evidence of a distinctive role for PESS in the acquisition and development of children's movement skills and physical competence' (p.1). Bailey et al. (2009) also stated that 'It can be argued that these are necessary, if not deterministic conditions of engagement in lifelong physical activity' (p.1). But as Bailey (2006) previously identified, further research is needed to explore the extent to which Physical Education positively influences patterns of participation in physical activity and sports during and beyond the school years. Bailey (2006) reported that while there is some evidence pointing to the likely maintenance of health-related behaviours that are established in childhood, evidence relating to the maintenance of physical activity patterns overtime is mixed. Physical Education and school sports will ultimately be one influence among many that can impact positively or negatively upon current and long-term patterns of behaviour and participation in physical activity and sport. An ongoing challenge for all physical educators is to seek to ensure that all children feel that they are valued in physical education, physical activity and sports contexts.

### **Physical Education, Social and Emotional Development and Well-Being:**

Addressing mental health and attaining enhanced social and emotional well-being amongst young people clearly remains a major contemporary challenge in India. This is another area in which further research is certainly needed – particularly to pursue, whether improvements seen to arise from school-based interventions and curriculum initiatives can be sustained beyond them and over time. The development and implementation of the MindMatters resources has undoubtedly provided welcome support for curriculum provision directed towards mental health and well being in many schools. A commissioned evaluation of the classroom implementation of the curriculum resource 'Understanding Mental Illness' (UMI) pointed to improvements in students' knowledge, attitudes and behavioural intentions that could arise from the teaching of the UMI module, particularly immediately post-teaching. In relation to the more sustained benefits, it was noted that: At delayed post-teaching, with cautionary interpretation due to a small number of participant responses, students' knowledge showed a predictable decline (due to cessation of teaching and/or revision), whilst attitude and behavioural intentions continued to improve. (Askill-Williams, Lawson, Harvey & Slee, 2005, p.7) Encouragingly, Bailey's (2006) review identified that while we may not fully understand the mechanisms that underpin effects, 'there is now fairly consistent evidence that regular activity can have a positive effect upon the psychological well-being of children and young people' (p.398). More specifically, he reported that 'the evidence is particularly strong with regards to children's self-esteem' and that research has also associated regular activity with reduced stress, anxiety, and depression. In his view, evidence is thus growing to support claims that 'well-planned and presented PES can contribute to the improvement of psychological health in young people' (p.398).

### **Physical Education, Cognitive Development and Academic Achievement:**

The relationship between Physical Education and Sports and students' attitudes towards schooling, academic development and/or academic achievements are all matters of growing interest.

### **Physical Education, Sports and Attitudes towards Schooling:**

In relation to attitudes towards schooling, Bailey (2006) identified that evidence of Physical Education and sports having any positive influence is limited and has arisen from small-scale studies and/or is based on anecdotal evidence. Bailey (2006) also reported, however, that in some studies improvements in attendance have been shown to follow the

introduction of Physical Education and sports initiatives, and 'there is evidence from studies of pupils at risk of exclusion from school that an increase in the availability of PES programs would make the school experience more attractive' (p.398). The Physical Education and School Sports (PESS) project in England, developed by the Qualifications and Curriculum Authority in partnership with primary, secondary, special schools and community sports providers has pursued affective outcomes of PESS. The QCA report that case studies of schools and partnerships have shown that as a result of investing in PESS, 'schools are happier, healthier and more successful: pupils have greater confidence and self-esteem'<sup>2</sup>. The QCA (2006) identified that the greatest strengths identified in students experiencing quality physical education and school sport were: 'commitment, skilfulness, willingness to get involved and enjoyment'. The QCA (2006) also reported that development of PESS has been successfully linked to efforts to specifically increase attendance at school and to targeting behavioural issues. Further, all of the schools involved in the PESS investigation are reported to have seen improvements in pupils' confidence, self-esteem, desire to learn, concentration and time on task as a result of investing in PESS. Afternoon lessons are identified as more productive after an active lunchtime, with less disruption and students ready to learn (QCA, 2006). The significance of the PESS findings is their relevance to whole schools and all teachers – not only those in Physical Education! There remains, however, a need for caution in relation to claims about psycho-social and attitudinal outcomes arising from Physical Education and sports experiences. It is essential to acknowledge the individuality of experiences and thus, their effect. As Bailey (2006) has highlighted, it would be misleading to suggest any assured impact of Physical Education in terms of attitudes towards school and/or learning on the part of all children, simply because provision, and particularly inappropriate provision, can have precisely the opposite outcomes to those intended, including disengagement and/or disillusionment.

#### **Physical Education, Sports and Academic Achievement:**

Bailey (2006) discussed physiological changes relevant to a prospective relationship between Physical Education and sports and academic performance. He explained that it has been suggested that by increasing blood flow to the brain, Physical Education and sports may enhance mood, mental alertness and self-esteem. 'The evidence base of such claims is varied and more research is still required. However, existing studies do suggest a positive relationship between intellectual functioning and regular physical activity, both for adults and children' (p.399). Effects rather than the underlying mechanisms are arguably of greater interest here. Results of a sustained study undertaken in the United States of the relationship between the time students spent in Physical Education and academic performance were published in 2008. Carlson et al (2008) identified that grade-point averages, scores on standardised tests can be regarded as direct indicators of academic achievement and that grades in specific courses; measures of concentration, memory, and classroom behaviour can be deemed indirect indicators. Their study was a longitudinal study of students in kindergarten through to fifth grade, and involved a nationally representative sample group. Measurement of academic achievement was a standardised test administered at 5 time points (the fall of kindergarten, spring of kindergarten, spring of first grade, spring of third grade, and spring of fifth grade). Time spent in physical education (calculated in minutes per week) was ascertained and used as a basis for categorising children as involved in low (0-35 minutes per week), medium (36-69 minutes per week), or high (70-300 minutes per week) amounts of physical education. Academic achievement in terms of performance in mathematics and reading tests was scored on an item response theory (IRT) scale.

#### **Conclusion, the Bottom Line is...**

The research evidence discussed in this paper is compelling; Physical Education and sports in schools can result in many very significant benefits for young people. Equally apparent, however, is that the benefits are far from inevitable or assured and certainly, not for all students. Repeatedly, research studies stress that achieving the benefits relies upon targeted investment, carefully planned curricula implemented by skillful, knowledgeable professionals who have the support of colleagues, parents, and education authorities. (Bailey, 2006, p.399) The actions and interactions of teachers and coaches largely determine whether or not children and young people experience these positive aspects of PES and whether or not they realise its great potential. The impact of high quality teaching on children's physical activity experiences should be emphasized to influence policy makers and teacher education providers to increase the number of physical education specialists teaching in elementary grades. (Fairclough and Straaton, 2006, p.252). The frequently cited

challenges of inadequate time and limited support from teachers can only be addressed through strong commitment from local and state school personnel who view physical activity as a vital part of the school day and a contributor to academic achievement. (Evenson et al., 2009, p.237) This paper hopefully helps health and physical educators in India to similarly be ready with well founded conversational inputs and formal statements addressing the benefits and value of Physical Education and sports in schools.

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