

Recent research into the value of quality physical education and school sport

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Introduction

This chapter 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 chapter acknowledges physical activity and sport as central to Physical Education and therefore also discusses research examining physical activity and sport in schools. In line with the clarification recently articulated in ACHPER's National Statement on the curriculum future of Health and Physical Education in Australia (ACHPER, 2009), 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 chapter draws on international and Australian 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 chapter 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.

Key research reviews

For anyone concerned with the prospective benefits and outcomes of Physical Education and sport, Professor Richard Bailey's recent work stemming from a major international research project undertaken 2003-2004 investigating the Role of Physical Education and Sport in Education, represents an invaluable contribution to the field. The 'SpinED' research was supported by the International Olympic Committee and was a central reference point in the formulation of the Athens Declaration1. Bailey subsequently undertook a comprehensive review of research addressing the benefits and outcomes of Physical Education and school sport, published in 2006. Bailey's work considered the outcomes of Physical Education and sport in terms of five domains: physical, lifestyle; affective; social; and cognitive. Bailey's (2006) review, together with a more recent review (Bailey et



al., 2009), is used as a key point of reference throughout this chapter. In Bailey's work, the term Physical Education and sport, abbreviated to PES, was used 'to refer to those structured, supervised physical activities that take place at school and during the school day' (p.398). Notably, Bailey concluded that

...there is evidence that PES can have a positive and profound effect. In some respects, such an effect is unique, owing to the distinctive contexts in which PES take place. Consequently, there is a duty for those who teach and acknowledge the value of PES to act as advocates for its place as a necessary feature of the general education of all children.

(Bailey, 2006 p.399)

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 sport 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 sport 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 sport 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 'the explore the 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 sport during and beyond the school years. Bailey (2006) reported that while there is some evidence pointing to the likely maintenance of physical activity patterns overtime is mixed. Physical Education and school sport 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 sport contexts.

Physical Education, physical activity and children's health

Amidst inactivity and its negative consequences for future health assuming such prominence in popular media, it is important to consider the health-related benefits that may arise by virtue of children experiencing physical activity in the context of Physical Education. As Bailey (2006) identified, research evidence is compelling in relation to the significant role of physical activity in reducing risk factors associated with many chronic diseases. Bailey (2006, p.398) reported that 'Evidence is starting to appear suggesting a favorable relationship between physical activity and a host of factors affecting children's physical health, including diabetes, blood pressure, bone health, and obesity'. Furthermore, physical activity has been identified as enhancing health in physiological, psychological and emotional terms (Bailey, 2006).

The most recent review reaffirmed an ongoing need for research and therefore, for caution in relation to claimed significance of physical activity experienced in Physical Education and school sport for children's health and wellbeing. Notably it is stated that:

...high levels of adolescent physical fitness (aerobic capacity, strength, flexibility and body composition) appear to relate to positive adult cardiovascular health profiles (Boreham et al., 2002; Janz, Dawson, and Mahoney 2002).

...there is evidence of a clear link between childhood physical activity and bone strength, with its potential impact on osteoporosis later in life (Bass, 2000).

...the relationship with cardiovascular disease risk factors is less apparent, with physical activity seemingly having little impact on children's blood pressure (Tolfrey, Jones, and Campbell, 2000) or blood lipid levels (Despres, Bouchard, and Malina, 1990).

...the role PESS can play in combating the well-documented increase in childhood obesity is unclear (Reilly and Dorotsky, 1999; Baur, 2001). There is some cross-sectional evidence that physical inactivity is linked to the development of obesity (Steinbeck, 2001) but, as yet, studies investigating the role of physical activity in childhood obesity have been 'uninspiring' (Biddle, Gorely, and Stensel, 2004).

(Bailey et al., 2009, p.7)

From a physical education perspective, current research evidence should prompt us to consider a number of questions, including:

how physically active children are in Physical Education lessons; whether they are active for sufficient periods of time and/or at sufficient intensities for physiological and/or health benefits to be achieved; and the sort of activities and pedagogical approaches that need to feature in Physical Education in order for children to achieve these benefits, while not losing sight of the other educational outcomes being sought in and through Physical Education.

Bailey (2006) acknowledged that:

There have been frequent claims that school PES create important contexts in which physical



activity levels are influenced. Studies have found that school-based programs can contribute to physical activity levels, both during youth and later in life. The potency of PES' influence on physical activity seems to be greatest when programs combine classroom study with activity, when they allow students' experiences of self-determination and feelings of competence in their own abilities, and when they emphasised enjoyment and positive experiences.

(p.398)

The latter comment signals a point that we will return to later in the chapter and that research stresses repeatedly – that the skills of teachers are key in all of this.

Research in the United States spanning more than a decade is heavily cited in relation to the physical benefits of Physical Education and sport and reaffirms the above point. The over-riding message is that if appropriately orientated and resourced, physical education can result in improved physical health for children.

Fairclough and Stratton (2006) usefully undertook a systematic review of literature on physical activity levels during elementary grade physical education, with the specific aim of extending understanding of physical education's contribution to elementary school children's physical activity profiles. Elementary school physical education was defined as curricular physical education involving children aged 5 to 11 years.

They highlighted that evidence relating to the significance of elementary Physical Education in terms of promoting physical activity was inconclusive, explaining that:

In support, Welk and Corbin (1995) found that during physical education fourth and fifth-grade children produced higher accelerometer counts than in other parts of the school day or during the period after school. Similarly, Dale, Corbin, and

Dale (2000) reported that third and fourth graders were significantly more active on days when they attended physical education class compared to non-physical education days. Furthermore, this study demonstrated how children did not compensate after school or in the evenings when school-based activity, such as physical education, was restricted.

(p.240)

In Fairclough and Stratton's (2006) view, though not conclusive, these findings could be deemed to 'lend support to the argument that elementary school physical education enhances children's activity levels, and that it may be important as a regularly occurring "window of opportunity" for physical activity participation (p.240).

Fairclough and Stratton (2006) identified a lack of detailed knowledge about the activity levels of children in physical education classes and the duration of time spent at particular levels. Their review therefore specifically addressed the extent to which elementary school physical education specifically contributes to recommended levels of moderate-to-vigorous physical activity (MPVA); that is; 'physical activity with a minimum intensity similar to that experienced during brisk walking, through to high-intensity activity such as that found during running or team games' (p.242).

The review included 44 studies. Across all of the reviewed studies, the mean MVPA value was $37.4 \pm 15.7\%$ of physical education class time, a figure well short of the 50% target established in the United States with the publication of Healthy People 2010 (USDHHS,2000). For the reviewed studies, the average lesson duration was calculated to be 33.7 minutes, meaning that 'across the studies,



students spent 12.6 minutes per lesson in MVPA' (p.249).

Notably, Fairclough and Stratton's (2006) review clearly identified the success of targeted pedagogical interventions designed to increase student MVPA time. 18 of the studies reviewed addressed purposefully designed interventions. They found that in instances of physical education being taught under intervention conditions, 'students spent an average of 13.5% more time in MVPA compared to during regular classes' (p.250-251). The difference was an average of $34.2 \pm 12.8\%$ of class time spent in MVPA compared to $47.7 \pm 17.9\%$ (p.247).

Fairclough and Stratton (2006) stated that the 'shortfall' in the time spent in MVPA in comparison to the US objective, may 'reflect the educational characteristics of physical education, where the focus is on using physical activity as a vehicle for learning in different domains' and where activity is necessarily interspersed with instruction and organisation. In their view:

It is these pedagogical episodes that can make improving and maintaining high levels of MVPA in physical education challenging for teachers. Notwithstanding this, simple strategies can be employed to maximise the number of students who engage in active learning for the maximum amount of available time. (p.248)

From Fairclough and Stratton's (2006) review, two programs stood out as effective in increasing time spent at MVPA while still retaining the core educational orientation of physical education; the Child and Adolescent Trial for Cardiovascular Health (CATCH) program, designed to increase physical activity during physical education), education (McKenzie et al., 1996); and the Sports, Play, and Active Recreation for Kids (SPARK) program also designed to increase physical activity during physical education).

Fairclough and Stratton (2006, p.251) reported that:

The CATCH and SPARK projects consistently engaged students in MVPA for around 50% of class time. These programs incorporated vigorous yet enjoyable episodes of physical activity into physical education classes, which were balanced by learning in other areas, such as motor skill acquisition (McKenzie et al., 1996; Sallis et al., 1997).

Furthermore Fairclough and Stratton (2006), identified McKenzie et al.'s (1996) and Sallis et al.'s (1997) work as providing 'models of good practice' that have been replicated and adapted in more recent studies undertaken by De Bourdeaudhuij, De Clercq, & Cardon, (2004); Going et al., (2003).

Collectively, these studies reaffirm that with attention directed to curriculum design, content and pedagogy, physical education programs can serve to make a valuable contribution to achievement of recommendations relating to children's physical activity while also delivering on other educational objectives. Fairclough and Stratton (2006) confirmed that type of physical education activities may influence student activity levels but that activity type remains one of many factors potentially impacting upon physical activity, including students' psychomotor competence, pedagogical approaches employed and variations in teachers' skills, knowledge, and understanding in relation to how to maximise MVPA in physical education.

Physical Education, school sport and physical activity

In both the United States and United Kingdom, initiatives have acknowledged that the contribution



that Physical Education lessons can make in relation to recommended physical activity for children, is important but needs to be acknowledged as one of a number of contributions needed. Recess, lunchtime and activities organised before and/or after school have been positioned with Physical Education in 'whole school' approach to enhancing physical activity time through the school day and week (Lee and Solomon, 2007; QCA, 2006). Coordinated efforts are undoubtedly crucial if the prospective benefits of participation in Physical Education and school sport are to be realised.

In 2007 Evenson, Ballard, Ginny and Ammerman (2009) undertook a research project specifically focusing on the North Carolina State Board of Education's 2005 update to the Healthy Active Children Policy, to include a requirement that all kindergarten through to eighth-grade children receive at least 30 minutes of moderate-to-vigorous physical activity each school day through physical education, recess, and other creative approaches. Their study provided important insights into the ways in which and extent to which the new requirement was being met and the successes and challenges experienced in implementation.

All NC school districts were asked to complete an online survey after the first full year of implementation of the policy in 2007. Of the 106 school districts that completed the survey, 83% reported that the Healthy Active Children Policy was incorporated with their wellness policies and 67% reported it as integral to their school improvement plans (67%). Evenson et al (p.236) reported that

The 30 minutes of daily moderate to vigorous physical activity required by the NC Healthy Active Children Policy was achieved primarily through recess, physical education, and classroom Energisers for elementary schools. For middle schools, these three components were also the main contributors, with more reliance on physical education and less on recess and classroom Energisers. Based on strategies the survey queried, these data indicate that some districts did not meet the 30-minute physical activity recommendation.

The study also generated notable reports of positive effects of the policy in both elementary and middle schools; specifically:

- → greater student focus on studies (27% elementary, 15% middle school);
- → physical activity participation of students (21%, 16%);
- \rightarrow awareness of healthy habits (19%, 10%),
- → student alertness (17%, 17%);
- → student enjoyment (16%, 14%); and
- \rightarrow staff involvement (16%, 19%).

(Evenson et al., 2009)

These findings align with recent work in England that has sought to capitalise on the capacity of integrated Physical Education and school sport initiatives to have multiple benefits for children's education and development (QCA, 2006, see below).

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 Australia.

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. (Askell-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, sport and pro-social behaviour

Historically, claims have also been made about Physical Education and sport in relation to positive social development and particularly, pro-social behaviour outcomes. In relation to social outcomes arising from Physical Education and sport, and specifically, positive social development, Bailey (2006) was clear that the research evidence is 'equivocal' (p.399). A positive association between participation and pro-social behaviour is by no means assured and furthermore, 'there is evidence that in some circumstances behavior actually worsens' (Bailey, 2006, p.399). Bailey also reported, however, that 'numerous studies have demonstrated that appropriately structured and presented activities can make a contribution to the development of prosocial behavior, and can even combat antisocial and criminal behaviors in youth' (p.399), adding that 'the most encouraging findings come from school based studies, especially those focusing on PES curriculum programs' (p.399). Once again, targeted intervention studies directed towards the achievement of specific social behaviour outcomes, have proved successful:

Intervention studies have produced generally positive results, including improvements in moral reasoning, fair play and sportspersonship, and personal responsibility. It also seems that the most promising contexts for developing social skills and values are those mediated by suitably trained teachers and coaches who focus on situations that arise naturally through activities, by asking questions of students and by modeling appropriate responses though their own behavior. (Bailey, 2006, p.399)

Bailey (2006) similarly identified mixed research evidence in relation to the extent to which Physical Education and sport can be regarded as aiding social inclusion. He reported that some writers



contend that Physical Education and sport 'not only reflects but can also contribute to some groups' social exclusion' (p.399), but also acknowledged that

...positive experiences do seem to have the potential to, at least, contribute to the process of inclusion by bringing individuals from a variety of social and economic background together in a shared interest, offering a sense of belonging to a team or a club, providing opportunities for the development of valued capabilities and competencies, and developing social networks, community cohesion, and civic pride.

(Bailey, 2006, p.399)

Undoubtedly, some of the most significant research and curriculum development work to be undertaken in relation to these issues is that associated with Sport Education and derivatives of it. Since Siedentop's original work in 1994, a comprehensive international body of research, with many contributions from Australia, has demonstrated that Sport Education can provide a curriculum and pedagogical model via which self-management and inter-personal skills, personal and social responsibility can be very effectively addressed – while at the same time, also linkages are made to learning in other areas of the curriculum. At the heart of Sport Education is a focus on positive learning and participation experiences and inclusivity (Siedentop, 1994). With this emphasis, it has proved a means via which to effectively enhance students' sense of belonging, personal and social responsibility, and perceived competency. Notably, these positive outcomes are reported in relation to students who would otherwise be disengaged and/or excluded from physical education, sport or schooling (see for example, Hastie, 1998; Hastie & Buchanen, 2000; Hastie & Sharpe, 1999).

Physical education, cognitive development and academic achievement

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

Physical Education, sport and attitudes towards schooling

In relation to attitudes towards schooling, Bailey (2006) identified that evidence of Physical Education and sport 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 sport 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 Sport (PESS) project in England, developed by the Qualifications and Curriculum Authority in partnership with primary, secondary, special schools and community sport 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'2. 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

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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 sport 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, sport and academic achievement

Bailey (2006) discussed physiological changes relevant to a prospective relationship between Physical Education and sport and academic performance. He explained that it has been suggested that by increasing blood flow to the brain, Physical Education and sport 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.

Gender differences were observed in this research. For girls, there was some evidence of a positive association between time engaged in physical education and academic achievement:

Girls in all grades who were in the low physical education category had the lowest IRT scale scores for mathematics and reading, although only in kindergarten and first grade were these differences significant for reading and mathematics (in kindergarten, only the difference between the low and medium category was significant). In fifth grade differences were significant for reading only.

(Carlson et al, 2008, p.723)



No association (positive or negative) between time engaged in physical education and academic achievement was found for boys. Similar results arose when the researchers pursued longitudinal associations.

From kindergarten through fifth grade, girls with the highest exposure to physical education scored on average 2,4 points higher on the IRT reading scale and on average 1,5 points higher on the IRT mathematics scale than did those in the low physical education category. (Carlson et al, 2008, p.724)

Again, no association was found for boys.

Carlson et al (2008) concluded that their study supported other research in identifying that time spent in physical education does not adversely affect academic achievement and that 'fear of negatively affecting academic achievement does not seem to be a legitimate reason for reducing or eliminating programs in physical education' (p.726). Further, the findings for girls suggest that more time in physical education, may have a positive impact on academic performance.

Similarly, Bailey (2006, p.399) concluded that:

Overall, the available research evidence suggests that increased levels of physical activity in school—such as through increasing the amount of time dedicated to PES—does not interfere with pupils' achievement in other subjects (although the time available for these subjects in consequently reduced) and in many instances is associated with improved academic performance.

The QCA's (2006) report on the PESS project in England has provided further positive indications in relation to these issues. Specifically, the QCA (2006) reported that the targeted investments in Physical Education and Sport have positively impacted upon student attainment in Physical Education at the end of primary schooling and in terms of examination course results in Physical Education and dance. As the QCA (2006) have acknowledged, attributing broader academic improvement to participation in PESS is problematic, but the indications of impact arising in the project are nevertheless encouraging. Specifically, all of the schools involved in the PESS investigation from the outset have seen improvements in their national curriculum test and GCSE results.

Many school principals feel that PESS has had a significant impact on learning achievements across the curriculum and teachers have reported improvements in students' confidence, concentration and achievement.

(QCA, 2006)

Improvements in all of these respects are clearly fundamental to advancing student learning and are relevant to students' social well-being.

Conclusion, the bottom line is...

The research evidence discussed in this chapter is compelling; Physical Education and sport 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)

In 2007, Wilson-Graham reminded physical educators in the United States that 'Opportunities for advocacy may be impromptu or carefully planned; so be READY!' (p.31), specifically with prospective inputs to conversations and formal statements that draw on and effectively utilise research findings relevant to Physical Education.

This chapter hopefully helps health and physical educators in Australia to similarly be ready with well founded conversational inputs and formal statements addressing the benefits and value of Physical Education and sport in schools.

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