CHAPTER 5

Physically educated: Developing children’s health and wellbeing through movement and motor skills

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Introduction

This chapter complements the chapter ‘Human movement and motor skills’ (Williams, 2014) published in the first edition of this text. As the title suggests, the purpose is to extend Williams’ work by investigating examples of practical human movement development embedded within the field of physical education. Thus, the chapter answers the question: What does human movement theory look like in practice? How can it be optimised for all children? Why is it vital for the advancement of ‘health and wellbeing in childhood’?

The physical dimension is significant within children’s learning because it offers powerful and meaningful connections across all learning and development areas. The socio-cultural perspective suggests that the curriculum be connected to the child’s world and everyday interests (Arthur et al., 2015). As children have a natural play structure, learning through movement heightens interest. ‘Play’ sits within the physical dimension - ‘where children are learning through their interactions, as well as adopting and working through the rules and values of their own cultural group’ (Arthur et al., pp. 99–100). The socio-cultural benefits of play enable ‘the development of imagination and intelligence, language, social skills, and perceptual-motor abilities in infants and young children’ (Frost, 1992, p. 48).

Hence, this chapter adopts the same goal as Williams’ chapter: ‘to highlight the importance of early childhood educators integrating bio-physical and socio-cultural understandings’ (2014, p. 62). This is an important goal affirmed by Callcott, Miller & Wilson-Gahan: ‘it is now evident that practice and encouragement as well as correct and quality instruction are necessary for children to become proficient in fundamental movement skills’ (2015, p. 32).
To enable a deeper understanding of the advancement of 'health and wellbeing in childhood' through 'belonging, being and becoming' physically educated, two major underpinning themes are investigated: approaching quality physical education, and human movement and motor skills in childhood.

**Approaching quality physical education**

**Health and wellbeing**

Implementing quality physical education increases the likelihood of children experiencing positive health and wellbeing outcomes. One popular and simple definition of wellbeing is 'a state of feeling good about ourselves and the way our lives are going' (Commonwealth of Australia, 2014a, p. 1). Research provides evidence that regular physical activity promotes mental and social wellbeing (Commonwealth of Australia, 2014a; Lynch, 2015a; Parkinson, 2015; Public Health England, 2015; Richards, 2016; Salmon et al., 2011). For social, emotional, intellectual and health benefits, it is recommended that toddlers and preschoolers have at least three hours of physical activity per day, and children aged 5 to 12 years 60 minutes a day of moderate-to-vigorous intensity physical activity (Commonwealth of Australia, 2014b).

The marriage of human movement and the socio-cultural approach promotes quality physical education which has driven the last two Australian Curriculum reforms (1994 and 2013) for the learning area of 'Health and Physical Education' (HPE) (Lynch, 2016b; 2014). Thus, the HPE Australian Curriculum offers a national policy balanced in theory and pedagogy, one that is inclusive, promotes social justice and where students are assisted to make well-judged decisions in relation to good health and wellbeing (Queensland School Curriculum Council [QSCC], 1999).

The connections between the physical dimension and wellbeing are evident in the Early Years Foundation Stage (EYFS) in the National Curriculum of England and Wales. The EYFS consists of six areas of learning and development which are equally important and connected. Social and Emotional Learning (SEL) has a strong presence relating to the first of the six areas listed:

- Personal, Social and Emotional Development
- Communication, Language and Literacy
- Problem Solving, Reasoning and Numeracy
- Knowledge and Understanding of the World
- Physical Development
- Creative Development (Department for Children, Schools and Families, 2008, p. 11).

It is stated that 'none of these areas can be delivered in isolation from the others. They are equally important and depend on each other to support a rounded approach to child development' (2008, p. 11). Furthermore, 'all the areas must be delivered through planned, purposeful play, with a balance of adult-led and child-initiated activities' (2008, p. 11).
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Figure 5.1 A child's personal, social and emotional development is interconnected with their physical development.

wellbeing into two aspects: childbearing. In New Zealand, the Health and Wellbeing Education Act 2012 (Part 1 of the Education Act 2009) includes an important aspect of the EFTYS, defined as the information, advice and resources available to all children from birth to five years. The Victoria Early Years and Development Framework (VEYDF) as the Victoria Early Years and Development Framework (VEYDF) (DEYRAF) (Department of Education, Early.
with being physically educated is the key wellbeing development responsibility of HPE. An example of where this occurs is Hellison’s Teaching Personal and Social Responsibility (TPSR) model (2011) which ‘offers a primary emphasis on the often under-represented affective domain without devaluing or limiting the physical activity taught in physical education’ (Walsh, 2016, p. 8). The model consists of five levels: (1) respecting the rights and feelings of others; (2) self-motivation; (3) self-direction; (4) leadership; and (5) transfer outside of physical education.

**Socio-cultural approach: Addressing hidden messages**

The introduction of the socio-cultural perspective recognises that children are influenced by the different physical, social, cultural, political, economic and environmental forces affecting their wellbeing (Queensland School Curriculum Council, 1999). Therefore, this approach offers a ‘holistic’ learning approach for physical education. Throughout history, physical education has often focused on the body as an object, in contrast to the ‘whole’ child. This occurs ‘in a society when man [and woman] has gained the capacity of looking at his [or her] own body as if it were a thing’ (Broekhoff, 1972, p. 88). Critically examining literature and taken-for-granted assumptions within the physical education field from a cultural and historical perspective illustrates the pertinence of the socio-cultural approach.

**Discourses** that have influenced the ‘body as an object’ include military, scientific, health and sport. They portray ideologies that include sexism, elitism, healthism, individualism and mesomorphism (Colquhoun, 1991; 1992; Hickey, 1995; Kirk, 1992; Kirk & Twigg 1993; Scraton, 1990; Tinning, 1990; Tinning & Fitzclarence, 1992; Tinning, Kirk & Evans, 1993). Such ideologies often pass on false messages to the child and on many occasions these are unintentional and/or the teacher is unaware of their existence. Ideologies are not recorded in curriculum documents; rather, they are traits taught and learnt through various mediums within society, in what is termed the ‘hidden curriculum’.

Military discourse involved physical education through drilling and exercising. This military-style training existed in Australian schools from 1911 to 1929 and was the first and only national system of physical training. Kirk and Spiller described this period as a time of schooling rather than education, as ‘physical education was deeply implicated in the project of schooling the docile body, in knowing it and shaping it to meet particular circumstances and fulfil particular social and political projects’ (1991, p. 108).

Science has had a major influence on physical education through technology and medicalisation, the scientific discourse having particular relevance to the bio-physical foundations of human movement. The influence of science on education began after the launch of the first Sputnik on 4 October 1957. It was thought at the time that schools were not producing enough scientists, so financial support was directed
education and sport through the school curriculum (Hockey & 1992, p. 5).

- Children get most of their understandings and interpretations about physical education and sport from outside the school and physical education
- Boys and girls receive equal opportunity and recognition in their involvement in sport and physical education
- If your child is to benefit from sport and physical education, you need to provide the necessary encouragement and support
- An appreciation of the importance of physical education and sport
- Personal development, learning and cooperation are important in the development of attitudes towards

If your child is to benefit from sport and physical education, you need to provide the necessary encouragement and support. It is argued by some that this is not possible unless they have the opportunity to participate in

**Pause and Reflect 5.1: Your experiences of physical education and sport**

Pause and reflect on your experiences of physical education and sport. What is it that you enjoy or appreciate about physical education and sport? How do you think they have helped you in your life?

A high-quality physical education curriculum inspires all pupils to succeed and excel in

Key stage 1 (5-7 years) and 2 (8-11 years):

Sports education is a part of the curriculum at key stage 1 (5-7 years) and key stage 2 (8-11 years). The curriculum is designed to provide opportunities to develop children's physical, social, and emotional skills. It aims to provide children with the skills and knowledge they need to lead active and healthy lives. The emphasis is on participation, enjoyment, and personal development. The key stage 1 curriculum focuses on physical development and social, emotional, and cognitive development. The key stage 2 curriculum builds on these foundations and includes more challenging activities. The emphasis is on improving physical performance and developing leadership skills. Children are encouraged to participate in a wide range of activities, including team sports, individual sports, and creative pursuits.
As evidenced by the literature, over the years ‘belonging, being and becoming’ physically educated has not always been achieved. In the past it has been argued that ‘where physical education is poorly or insensitively taught it is more likely to have a negative influence on learners than a positive one’ (Tinning et al., 2001, p. 181).

**PAUSE AND REFLECT 5.2: OPTIMISING POSITIVE EXPERIENCES**

Reflecting on your experience of physical education and sport, have there been times where you have had a negative experience? What can educators do to optimise positive experiences?

The Australian HPE curriculum adopts the socio-cultural approach. It identifies that being physically educated has health and wellbeing developmental outcomes and benefits for children. It also suggests that wellbeing benefits are optimised when existing cultural messages, associated with the hidden curriculum, are addressed:

The Health and Physical Education curriculum will draw on its multi-disciplinary base with students learning to question the social, cultural and political factors that influence health and wellbeing. In doing so students will explore matters such as inclusiveness, power inequalities, taken-for-granted assumptions, diversity and social justice, and develop strategies to improve their own and others’ health and wellbeing (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2012, p. 5).

As the literature implies, it is essential for educators to adopt a holistic approach towards physical education. Adopting the socio-cultural approach has important implications, ‘because its attention to social and cultural influences on health put it in opposition to notions which locate responsibility for health almost solely in the individual and their decisions’ (Cliff, Wright & Clarke, 2009, p. 165). It is proposed that the marriage of human movement and the socio-cultural approach enables quality physical education.

**Quality physical education**

Quality Physical Education (QPE) needs to be provided for all children. Therefore, all educators must understand how to provide inclusive practice where correct movements can be mastered. QPE is defined by the United Nations Educational, Scientific Cultural Organisation (UNESCO) as:

the planned, progressive, inclusive learning experience that forms part of the curriculum in early years, primary and secondary education. In this respect, QPE acts as the foundation for a lifelong engagement in physical activity and sport. The learning experience offered to children and young people through physical education lessons should be developmentally appropriate to help them acquire the psychomotor skills, cognitive understanding, and social and emotional skills they need to lead a physically active life (2015, p. 9).
to enable students to acquire, apply, and evaluate movement skills. 

The national curriculum is to develop the knowledge, understanding, and skills that are the foundation for good physical education and physical activity. The curriculum is designed to foster the acquisition of skills, knowledge, and understanding that are essential for a healthy and active lifestyle. It is intended to be broad and balanced, covering a wide range of topics and skills.

Ideally, PE (and other physical education activities) should be taught as a separate subject, but where possible, it is important that it is integrated into other subjects. This is because many parents value the importance of sports and after-school clubs for children.

The military block of framework is designed to promote physical development and promote the importance of movement. The skills that are developed during BPK, and other physical education activities, are essential for a healthy and active lifestyle. In addition, the framework encourages the development of social, emotional, and cognitive skills.

Motor control

Childhood

Human movement and motor skills in childhood

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PAUSE AND REFLECT 5.3: DOMINANT MOVEMENT PATTERNS IN THE PLAYGROUND

Reflecting on children's activities in an adventure playground, which rides, climbing frames or activities involve landing, locomotions, swings, statics (non-movement such as balance), springs (leaps and jumps) and rotations?

and strategies to respond confidently, competently and creatively in a variety of physical activity contexts and settings' (ACARA, 2016). Similarly, the National Curriculum in England for Physical Education states in Key stage 1 that 'pupils should develop fundamental movement skills' and specifically 'master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities' (DfE, 2016, p. 2).

Research suggests that the best time for children to learn and refine their motor skills is in the pre-foundation year and early primary school years (Branta, Haubenstricker & Seefeldt, 1984; Commonwealth of Australia, 1992; Espenshade & Eckert, 1980; Lynch, 2011; 2014). During this early developmental phase, children have a natural play structure and more time to focus on developing their motor skills. Another advantage relating directly to the socio-cultural approach is the early detection of motor difficulties where subsequent intervention programs can reduce many physical and related emotional problems (Arnheim & Sinclair, 1979; Commonwealth of Australia, 1992; Johnson & Rubinson, 1983; Lynch, 2013a; Seefeldt, 1975; Smoll, 1974).

Acquisition of motor skills model

Williams refers to 'motor control' as 'the processes by which motor skills are performed' and identifies the use of models, metaphors and analogies to assist with this process. One model described by Fitts & Posner (1967) is the 'acquisition of motor skills'. The first stage of this model is the 'Cognitive Phase' where the learner receives and uses information on how the skill is to be performed; for example, when a driving instructor explains to a novice the various apparatus used for driving a car. The learner cautiously proceeds to drive the car, often with large errors such as 'kangaroo jumps' or 'bunny hops'. The second stage is the ' Associative Phase' where the learner refines the mechanics of the skill through practice, using feedback offered by the driving instructor, their own intrinsic feedback and their sense of proprioception. Errors are still common at this stage.

The third stage described by Fitts & Posner is the 'Autonomous Phase' where the learner can perform the skill automatically, that is, without having to think about the movement and just doing it when they choose to. In the example of learning to drive a car, this happens when the driver finds that they no longer have to think about the process of each action they are making. The driver in this phase may even be tempted to combine motor skills while driving the car, such as adjusting
The fact that children have access to organized sports programs does not mean they have had a sufficient amount of unstructured play. Children need to be encouraged to develop the skills required for such programs by engaging in unstructured play. This is especially important for children who are not involved in organized sports, as they may not have the opportunity to develop the necessary skills. Unstructured play can be facilitated through various activities such as team games, free play, and creative play.

Pause and Reflect 2.2: Physical Education

In a year 5 class of 27 children, 12 children play basketball regularly for a club.
Educators are therefore challenged to be creative when implementing physical education adopting a socio-cultural approach. At all times the aim should be to maintain inclusivity, by catering for the diverse needs of the class. This is easier said than done and is the greatest modern-day challenge for physical educators. The ability to implement strategies that cater for all needs, while enabling enjoyment, engagement and challenges, is evidence of a teacher’s expertise as a quality physical educator.

As the National Curriculum of England for Physical Education ‘Purpose of study’ accentuates, sport sits within the physical education curriculum. There is a misconception at times that physical education is only sport. This becomes confusing for educators in the early years when children’s motor control is not developmentally ready to combine a number of motor skills with game rules and strategies (Figure 5.2). Using the analogy of learning to read, throwing a child into a complex game is like introducing early years’ children to phonics using a novel. It is not developmentally appropriate.

The National Curriculum of England identifies this issue but also recognises that there are simple games that do play a vital role in children’s progression in becoming physically competent and confident in the early years. The curriculum policy states that in Key stage 1, children ‘should be taught to: participate in team games, developing simple tactics for attacking and defending’ (Dfe, 2016, p. 2) The Australian curriculum for HPE also espouses this essential motor development understanding for quality physical education. From Foundation stage through to Year 6, the focus area ‘Active play and minor games’ is addressed within the curriculum. On the other hand, the focus area ‘Games and sports’ is only recommended for Year 3 upwards (ACARA, 2016), after which time children have ideally mastered FMS.

Hence, embedded in QPE are quality games that include simple, developmentally appropriate games in the early years, requiring limited FMS and rules (Arthur et al., 2015). Simple games include hopscotch, tiggy, “What’s the time Mr. Wolf?” and ‘stuck in the mud’, as well as others that the children may create themselves. These simple games play an important developmental role because they lead to more complex games where variables such as space, objects, number of participants, number of games, time and speed are introduced through supplementary rules. Such rules increase the challenge for participants and the FMS required. Four guidelines are identified for implementing quality games, including both simple and more complex games:

1. Safe for all players.
2. Inclusive – all players can participate. This involves having the skill level to participate safely and at an enjoyable level.
3. Engaging – the players’ participation is optimised. Waiting time is eliminated or minimal.
4. Enjoyment is prioritised (Lynch, 2013b, p. 19).

Motor development

If educators are to use models, metaphors and analogies to enhance their understanding and the understanding of the children, then motor development is
The importance of early motor development is highlighted in this figure. Early exposure to physical education and motor activities can significantly influence a child's development. It is crucial to provide children with opportunities to engage in physical activities that promote motor skills and coordination. The figure illustrates the progression of gross motor skills from birth to age 3 years. The development of fine motor skills is also important, as they are essential for activities such as writing and dressing. The right side of the figure outlines the environmental factors that can affect motor development, such as access to play equipment and the quality of care provided. Figure 5.2: Skill Development Leading to Motor Development Activities.
for learning in the physical area. Consistent with the socio-cultural approach and comparable to play-based pedagogy, learning motor skills requires scaffolding and guidance from an expert to assist the child to become competent. Scaffolding sits within Vygotsky’s zone of proximal development and expertise may involve family and community partnerships. While tasks may be initially challenging for the child, practising should be enjoyed regularly if the child is to master the skill.

**Information processing model**

Another model Williams discusses in relation to motor control is the information-processing model which ‘stresses the importance of the internal cognitive processing of the learner’ (Rink, 2010, p. 24). This model ‘posits three distinct and sequential stages of movement control: perceiving, deciding, and acting’ (Williams, 2014, p. 66). Children require a clear idea of the task, need to be actively engaged in the learning process, have plentiful opportunities to practice, and be offered external feedback as well as opportunities to self-assess through internal feedback. Furthermore, ‘knowledge of how learners process information [information processing theory] helps educators to select appropriate cues and to design appropriate feedback for learners’ (Rink, 2010, p. 24). During practice, formative feedback such as ‘Assessment for Learning’ is vital.

Popular metaphors are adopted by many educators and coaches. For example, in swimming the instructor may remind the children to glide through the water like an arrow, long and straight with arms outstretched, or to have ‘long legs’ and ‘kick their socks off’ during the flutter kick. An analogy for landing safely in gymnastics is ‘land on your motorbike’, with arms reaching forwards (holding the handlebars), legs bent and shoulder-width apart (sitting on a motorbike).

It is commonly recommended that no more than three cues be used so that children can retain the information (Anshell, 1990). For example, three cues for the underarm throw might be: swing back, step forwards (on opposite leg to hand holding the ball) and release. Further detail and a demonstration can accentuate that the arm swings forwards and releases when the hand is directed towards the target. Also, that the opposite arm comes out to the side of the body to assist with balance. Further, pedagogy may involve questioning and exploring to enable children to discover what they think are the most effective steps in this FMS.

**PAUSE AND REFLECT 5.6: EXPERIENCES OF MOVEMENT**

Reflecting on your experiences of movement, what are some other effective analogies you are familiar with?

For a number of motor skills to be performed simultaneously – for example, skipping (locomotor) while dribbling a basketball – it is essential that at least one of the motor skills (either dribbling or skipping) is automatic (Figure 5.3).
Conclusion

Figure 5.3 A PMP can be implemented using parental involvement.

Program for Early Years of Primary Schools (YPYP) (Figure 5.3) implemented with parental assistance is a successful structured program. Opportunities are provided, research indicates that the perception of the mother program increase resources, Kellogg and Associates, within the community will influence how cultural contexts of the child and school contribute to children's motor development. Location, cultural contexts of the child and school contributed to the implementation with the socio-cultural approach. (Pepin, 1999, p. 59)

Practice (or training) may be extremely difficult if not impossible to correct execution of technique. Many believed that feedback should be immediate with correct practice because immediate feedback learn errors in movement. It is not a single set of actions can be conducted without simultaneously means that at least once of actions can be conducted twice simultaneously means that at least once of actions can be conducted
Summary

Educators are encouraged to be creative in their provision of inclusive movement activities and to offer progressive and developmentally appropriate learning experiences. The key messages highlighted in this chapter are:

- Quality physical education enhances children's health and wellbeing.
- Quality physical education is a planned, progressive and inclusive learning experience.
- It is strongly recommended that all children have opportunities to master FMS before seven years of age.
- Educators require expertise in the fundamentals of movement and the inclusive socio-cultural approach.
- The physical dimension is significant within children's learning as it offers powerful and meaningful connections across all learning and development areas.

Questions

5.1 What does human movement theory look like in schools?

5.2 How can ‘belonging, being and becoming’ physically educated be successfully implemented in early years settings?

5.3 Why is ‘belonging, being and becoming’ physically educated vital in childhood?

5.4 What hidden curriculum messages about movement have been brought to your attention after reading this chapter?

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