

Playtime: the needs of very young learners in physical education and sport

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Getting elementary-age children to enjoy a movement activity is not a hard sell. Given their high degree of trust, imagination, and energy, it is almost unfair. Children are built to move; they want to move. Almost anything can be turned into a grand adventure – catching, throwing, running, touching, enjoying rhythmic activities, and discovering 'fundamental movement concepts'. A teacher who has a gift for make-believe can, without much difficulty, become something of a Pied Piper of movement. Delight, excitement, intrigue, and usually considerable noise permeate the physical education setting.

(Kretchmar, 2008, p. 166)



Introduction

Children love to play and to be active. This chapter considers some of the physical, cognitive and affective needs of younger learners (primary school) and ways in which they can be accommodated in physical education and sport settings. The purpose of the chapter is to make you think about the choices and decisions teachers and coaches make when attempting to optimise learning for very young learners in physical activity settings. You may find it helpful to read this chapter in conjunction with Chapter 21, Becoming an effective primary school physical education teacher by Mike Jess.

Some readers may have a specific interest in influencing the learning experiences of young children in physical activity, sport and physical education settings. If you become a primary school teacher, for example, there will be opportunities to plan and implement a

programme of physical education and also to promote physical activity during break times or in an extracurricular setting. As a coach, or a sports advisor in a community, you may find yourself with responsibilities for very young learners in selected sports. In other roles, for example in public policy or sport development, there may be opportunities to influence policy and programme development for young children. In any of these situations it is important that adults are able to plan, teach and advocate based on an understanding of *what* learning is desirable in physical activity settings for young children, *how* this learning should be organised and *why* this learning is important.

When children are asked why they participate in sport and physical activity they cite having fun, trying out new activities, participating with friends and feelings of success as the main reasons (Allender *et al.*, 2006). It is important, therefore, to keep the needs and interests of children at the core of all decision making in any role as physical educator or coach. This chapter examines the needs of young people in sport and physical education and argues that this understanding should be at the core of teaching and coaching young children.



Physical activity settings for young children: learning through play

The writings of early educationalists such as Froebel and Montessori laid the foundation for play as part of early childhood curricula (Branscombe *et al.*, 2000). Play theorists have outlined characteristics of play that help us to understand why children play, including their desire for fun and social engagement as well as the type of play that contributes to their development. Underlining the importance of play as fun, Lillemyr (2009) contended that play can have a fascinating, pleasurable nature that is a goal in itself, and for the child at play 'play is . . . a natural way of being' (p. 7). Play settings are also a key opportunity for children to learn many things including learning about themselves, others and the world around them.

Physically active play, sometimes called 'outdoor play', involves large body movements including running, climbing, pushing, pulling and swinging, and it provides many learning opportunities (Smith, 2005). When children are in supportive learning environments, exploration and appreciation of movement through play challenges the body's capacity to respond in creative and skilful ways. A broad experience in a supportive environment gives children the best chance of being successful movers and a good chance of finding activities they enjoy and want to repeat as the basis of lifelong physical activity participation. Children may find some movements to be pleasing almost entirely for aesthetic reasons: for example, spinning round and round, running fast or rolling down a hill. Other movements may be more pleasing for the outcome, such as scoring a goal or finishing a race.

Play should not be confined to break times in school playgrounds, nor should it be replaced too early in the lives of young children by structured, formal sport. It is particularly important to consider the role of competition when children move from unstructured to more structured play environments. Competitive activities should be devised that can accommodate children who all mature at different rates and so become 'ready' at different times to engage with the demands that competition may place on them (particularly the demand to win all the time!). Competition can be compatible with children's developmental

needs if it is designed in ways that recognise each child's potential and where effort is readily acknowledged. Lee (1993) prompted debate on the study of sport for children. He argued that the experience of sport can be an essential part of how some children develop a sense of self but can also lead to children adopting maladaptive behaviours. In such cases, success is defined as winning, with little value placed on mastery and personal achievement.

Comment

It is important that teachers and coaches support children to explore their world through play offering rich, experiential activities and challenges.

Physical education is a vital part of school life as it may be the only place on the curriculum where children can learn in and through movement. This learning can be significant in developing a child's physical literacy. It provides opportunities for the development of knowledge and understanding of specific activities, the skills needed to participate and the foundations for future successful participation. Learning the rules of the game of tennis, for example, combined with learning such skills as striking and throwing, are necessary for successful participation in the game. Another way of understanding physical activity and physical education has been developed by Margaret Whitehead, who has spearheaded use of the term physical literacy as a replacement for the term 'physically educated'. In so doing, Whitehead argued for a move from an activity-centred model to a person-centred model of learning in the physical: 'Physical literacy can be described as the motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout life' (Whitehead, 2009).

While play, physical education and sport settings provide *opportunities* for children to learn and develop, this learning does not happen automatically. Children need to be supported, encouraged and guided through a range of developmentally appropriate activities to facilitate this learning. This task is made more complicated by the need to consider and accommodate the complex and varying needs and interests of the children during the activity. The following section presents a short account of children, aged five, learning in a physical education lesson. As you read, consider how Claire's lesson reflects your experience of being a young learner or working with young children in physical education or sport. You will be asked to return to this story in later sections of this chapter.

Claire's story

Claire is a student teacher. She has been placed for teaching practice in a suburban school where 90 per cent of children do not speak English as their first language. She has been assigned to teach a junior infant/reception class (age five). There are 16 children in the class and they only started school three weeks ago. Claire is teaching a physical education lesson. She has taught the class physical education on two prior occasions and she is always supported by the regular class teacher.

Claire begins her physical education class by asking the children to form a line near the door of the classroom. She interacts with the children as they move into line, checking that they are wearing correct footwear and praising them for 'how they are so well prepared' for their physical education class. Some children ask whether they are going out to play. The children form a line but Sam is reluctant to join just yet. He has chosen a space in the classroom where he is playing on his own: twirling, hopping and skipping. Claire calls him and asks him to join the class. Slowly, he agrees to join in. The class teacher approaches him discreetly and encourages him to move along quickly.

The class walks out into the school playground. It is a bright sunny morning in September. Claire asks the children to gather in a part of the playground that has playground markings (painted ladders on the ground, shapes, snakes, etc.). She asks the children to walk around inside this area and explains how she will use her whistle. She repeats this activity a few times and they respond well. Claire tells them that they are very good at listening. She prompts them to repeat the activity but this time with jumping, then running. She constantly monitors the children to ensure they stay within the boundary.

Claire hands each child a rubber disc. The children are delighted to receive the equipment but there is some arguing over the colours that Claire gives them. She tries to reassure them that it's not important but ends up swapping two discs so that she can avoid any further debate on colour. The children do some simple mobility exercises, swinging their arms high and low and swinging from side to side using the disc as a base. Claire uses her voice enthusiastically and the children respond really well: they are clearly enjoying these activities. She asks them to hop, landing on the disc. Some children have difficulty with balance but she reminds them that they will have lots of chances to practise this again.

Claire then suggests that they will play a little game responding to three different calls: 'up' (jump up), 'down' (crouch) and 'run'. Again, the class responds with enthusiasm although two children begin to stray and need to be reminded to return to the marked area. Claire calls all the children together and tells them that they will now be playing using a beanbag. She begins to distribute the beanbags but again colour is an issue and many return to the box to exchange their bag for one of another colour. While reminding them that the colour isn't important, Claire moves on to ask them to try to do some tasks with the beanbag. Can they balance it on their head? their hand? their foot? their knee? As they play she asks them 'Which is easiest? Which is most difficult?' A variety of answers are offered. Claire prompts them to find different ways of balancing the beanbag on their bodies.

Claire asks the children to toss the beanbag in the air and to catch it with both hands. Some children manage this successfully some of the time, others drop the beanbag most of the time. Sam runs off around the large playground. Claire urges him to rejoin the group but some of the other children are now 'off task' as they watch him, so she moves to follow him and tries to encourage him to rejoin the group. He comes back as far as the class area but sits on a window ledge and opts out of playing. Claire struggles a little to get children back on task but decides to move on to the next stage of the lesson, which involves distributing hoops. The children are very eager to collect a hoop. After a few moments in which they experiment with wriggling in and out of hoops, Claire gets their attention and asks them to place the hoop on the ground and to try throwing the beanbag so that it lands in the hoop. She moves among the children, encouraging them to use an underarm throw and to stand closer to the hoop. There are shrieks of delight as children achieve the target. They run in quickly to gather and try again. At this point, some children are counting how many times they are successful. A discussion begins between Megan and Ashraf about how many they had 'scored'.

The lesson then moves on to a game of 'magic shoes', which involves some pretend play: they pretend that they are in a shop where they act out items for sale that Claire identifies, e.g. a bouncing ball, a train, a bicycle, a kite. When she calls out 'magic shoes' they all have to sit cross-legged. Sam rejoins the group as the game commences. The children are very excited as they play this game and rush about enthusiastically, mimicking, for example, a train. Claire now draws the lesson to a close by asking them to return to their discs and to stretch up high, crouch low, make a wide shape and then a narrow shape. She demonstrates the shapes required. She then calls each child in turn to join a line. Claire comments on how well they tried to complete all the tasks and urges them to walk in line back to the classroom. John asks whether they will be coming out to the playground again later and is reassured that they will indeed have their playtime break outside.



The needs of young learners

Engaging in play or more structured forms of physical education and sport can potentially be a highly valuable learning experience. However, Claire's story has raised several pedagogical issues that need to be considered if a teacher or coach endeavours to meet the needs and interests of all the children in their group to support learning and development. The importance of meeting the needs and interests of children and young people learning in and through sport has been highlighted by Kathy Armour in Chapter 1.

Young learners have particular needs that can be met in physical education and sport settings. The following section outlines what the important areas of learning for young children are and presents evidence of why each of these areas should be considered by you as a teacher or coach of young children. You may emphasise physical, cognitive or affective learning at different times depending on the needs of your group but in reality, like Claire, your understanding of all three areas will probably inform and influence how you organise and approach teaching and learning with young children. We begin by considering the physical domain, which might be considered the most obvious area of learning for young children in sport and physical activity settings. Yet the importance of providing developmentally appropriate opportunities to explore movement potential and learn and develop physical skills cannot be underestimated, because it is the foundation for lifelong participation.



Physical domain

Young children move naturally and instinctively to explore and learn about their world. Children love to play and to explore movement, and sport is often one of their favourite pastimes. In the 'Growing Up in Ireland' study (Williams *et al.*, 2009) 65 per cent of nine-year-olds mentioned sport as their favourite pastime or hobby, with 19 per cent of the group saying sport was the 'thing that made them most happy'. Learning through physical activity, movement and play can impact on the development of physical competences that are crucial to children's overall development as well as laying the foundation for lifelong physical activity (Bailey *et al.*, 2009).

Children can learn physical skills through a variety of movement activities including dance, gymnastics, games, athletics, outdoor and adventurous activities and aquatics. These

are the six activity areas included within the primary PE curricula in the UK and Ireland. However, it is important to remember that these activities should not look the same as they would if adults were playing them; instead they must be facilitated in developmentally appropriate ways to support each child's learning of fundamental motor skills, physical activity and physical fitness. These key elements within the physical domain are discussed below.

Fundamental motor skill development

Fundamental motor skills (FMS) are the gross motor movements that lay the foundation for the development of more complex and specialised skills and include skills that relate to:

- management of the body stability skills (e.g. stop, twist, turn, bend);
- moving in different directions locomotor skills (e.g. dodge, hop, skip);
- control and manipulation of objects such as hoops and bats and balls (e.g. strike, kick, throw).

The development of fundamental movements is emphasised in primary physical education in many countries around the world including Canada, Australia and the UK. Research suggests that mastery of FMS supports children's successful participation in a range of physical activities. The learning and development of physical skills are not automatic. It takes many years for children to acquire, develop, select and apply these skills appropriately.

The primary years represent a critical window for mastering these skills (Thomas and Thomas, 2008); children start exploring them from a young age (approximately age two) and should master them by approximately age 12. Primary school age is, therefore, the optimal time to learn these skills because they become more difficult to master with age. It is worth pausing here to reflect on that last point and the responsibility it places on teachers and coaches working with young children. At the same time, it is also worth remembering that there is very limited physical education training offered in many primary teacher training programmes. These two observations, taken together, raise interesting and troubling pedagogical concerns.

While it is acknowledged that children's development is affected by individual physical characteristics such as age and size, appropriate opportunities to practise and receive accurate feedback from the teacher and coach can impact positively on the development of skilful controlled movement. Emphasis should be placed on application of skills in a variety of contexts in relevant, enjoyable and meaningful ways rather than an overemphasis on isolated skill teaching. Children should be supported to develop movement competence in a wide range of physical activities and to develop the most efficient movement response solution within a given situation. There are a number of programmes used in schools that are firmly grounded in the development of fundamental skills (Basic Moves (UK), Be Active (Ireland)). These skills provide children with a vocabulary of movement that allows them to make choices about their future participation, encouraging the adoption of a physically active lifestyle. The following section considers the physical activity and fitness needs of young children.

Comment

Fundamental movement skills should ideally be mastered during the primary school years to encourage and support children's successful participation in sport and physical activity. Claire selected the development of fundamental motor skills (stability, locomotor and manipulation) as one particular focus in her lesson.



Physical activity and physical fitness

Around the world, a combination of changes in diet and modern living has led to decreasing physical activity levels and rising levels of childhood obesity, despite the fact that young children are the most active section of the world's population (Telama *et al.*, 2005). Active children are more likely to become active adults. Providing space and time for children regularly to have fun and play with their peers may be the first step in promoting a physically active lifestyle (McKenzie and Kahan, 2008). It is recommended that children should be active for a minimum of 60 minutes per day. In the UK, schools are now recommended to deliver five hours of physical education and school sport (*Sport England and YST*, 2009). In Ireland, however, the guidelines recommend only one hour per week of school physical education (Government Publications, 1999).

Physical activity participation by young children contributes to health-related fitness as well as performance-related fitness including agility, balance, coordination and speed (the ABCs). These physical skills support safe, successful participation in a range of physical activities. Children need the motivation as well as the ability to be physically active. For many children, school physical education is the place where they will figure out what activities they enjoy and excel at, thus equipping them with tools for lifelong physical activity.

Comment

Creating fun, joyful and meaningful learning experiences may be the best way to encourage a love of physical activity and a commitment to a physically active lifestyle. [Kretchmar, 2008]

While the potential of physical activity and sport settings to address the physical needs of young learners may be self-evident, these settings can also address some other important needs of young children.



Affective domain

Learning is a social activity that can enhance 'the ability of children to act, interact, and react effectively with other people as well as with themselves' (Gallahue and Cleland Donnelly, 2003, p. 20). There is a wealth of opportunities for affective growth including personal and social development in play and physical activity settings. Important elements of the affective domain can be identified as enhancing self-esteem and positive socialisation. Young children begin to develop self-esteem in a variety of ways including through play and physical activity, and enhancement of self-esteem can occur in very simple ways: a child rolls a ball, knocks down skittles and jumps for joy, experiencing that 'I can . . .' feeling. Positive socialisation is concerned with the ability of the child to relate to others and to take personal and social responsibility. Fair play, cooperative behaviour and 'healthy' attitudes to winning and losing can be promoted within a variety of movement experiences.

There are models that address social and personal development within teaching and coaching settings. Table 11.1 on the next page outlines the characteristics teachers and coaches can use to promote social and personal development (Laker 2001), and Bailey *et al.* (2009)

Table 11.1 Generic groups of individual traits

Source: Based on Laker (2001)

Groups	Traits
Sportsmanship	 Fair play, honesty, peer respect, peer support, competitiveness
 Individual 	 Self esteem, creativity, initiative, leadership, determination, hard work, confidence, independence
• Cooporation	 Teamwork, helping, trust, sharing, group success, interdependence, decision making
Attitudes	 Enthusiasm, precipitation, enjoyment, humour

highlighted the importance of *planning* for such outcomes rather than hoping they will somehow happen as if by magic.

Some physical educators (e.g. Hellison and Templin, 1991) have suggested that children's social and affective development should be a core focus of PE programmes, while continuing to promote other aspects such as the development of fundamental skills, understanding and knowledge. The difference in this approach is that the subject matter of any lesson or session would be selected to facilitate the development of certain personal and social qualities. An example of this would be where a teacher targets development of self-esteem and confidence through engagement in volleyball, athletics or dance. In such cases, young children are encouraged to take increasing levels of responsibility for their learning and behaviour with the ultimate goal of transferring this learning to settings beyond the gym/sports field. The teacher/coach could also highlight examples of teamwork (cooperation), fair play, sportsmanship and group success from the wider sporting context and make connections between children's actions and those of well-known sporting role models. Furthermore, teachers and coaches can demonstrate the value they place on positive socialisation by including reference to it in discussions with parents.

Positive sports experiences can contribute to social inclusion by equipping children with the skills, motivation and confidence to belong to a team or club. Relating well to others as part of that 'belonging' is a valuable opportunity for a young child. School-based teams and clubs can be particularly valuable because they are accessible to most children and may have the additional bonus of being linked with other curriculum areas, thus extending the range and quality of potential learning. Importantly, all physical activity and sport settings for young children should provide opportunities for social development, for example teams meeting and formally greeting each other before a game begins or encouraging

young club members to referee games. These are behaviours that should be prompted from the earliest days of a child's engagement with sport and physical activity, and the power of the sports setting to engender positive (and negative!) social development should not be underestimated. Moreover, sport and other physical activities provide many opportunities to support young children's cognitive development.



Cognitive domain

Cognitive development in physical activity settings with young children may relate to understanding of skills, movement, activity, fitness and academic concepts. This section presents concept development and creativity, two areas of cognitive development, to prompt consideration of the ways in which physical activity settings can be established to encourage curiosity and imagination. While the teacher or coach may not view these areas as their key focus, there will be opportunities to stimulate cognitive development in every single session.

Concept development

Intentional directed movement is at the core of physical education and physical activity participation. Concept development occurs as learners are required to make decisions based on knowledge of their own body and its movement potential (Gallahue and Cleland Donnelly, 2003). Such concepts include:

- selection and application of skills, tactics and compositional ideas;
- knowledge and understanding of fitness and health;
- critical thinking, evaluation and impact on performance.

These activities stimulate thinking and engage children in problem solving and decision making. When the teacher or coach has expectations of the children that they will select, analyse, apply, integrate, justify, interpret and choreograph, it becomes clear to them that there is a significant 'thinking' dimension to physical activity and physical education participation. This thinking can be enhanced further by providing opportunities for the children to be creative.

Creativity

Teaching for creativity can promote children's curiosity, flexible thinking and risk taking through exploration and openness to new ideas. Creative use of the imagination promotes original thinking in supportive environments (Lavin, 2008). Teaching for creativity does not have to be limited to gymnastics and dance activities. There is potential for creative processes in all areas of physical activity, with many possibilities for children to explore, respond to and solve problems in creative ways. Galton (2008, p. 70) identified some practices that can promote creativity processes that can be applied in physical activity settings with young children:

- 1 Allow the children to explore ideas before presenting them with more formalised responses.
- 2 Allow the children's questions and comments to lead and direct discussion.
- 3 Promote activities that encourage talk between the children and require less teacher talk.

- 4 Create space for review and critical reflection on decisions and choices made.
- 5 Make links and connections between what is learned and the pupils' lives outside school.
- 6 Build content in clear simple steps around one core idea.

These practices can be applied in physical education and sport contexts to promote creative development. Physical activity settings also have the potential to promote learning in a wide range of areas beyond the activity or game. This requires the teacher or coach to consider what is happening in the children's world, e.g. festivals such as Halloween and events such as birthdays. The following section presents some ideas on how learning might be integrated, with the potential to make the experience both relevant and meaningful for the children involved.



Integrated learning

Physical education and physical activity can be used as vehicles for learning in other areas. Learning *through* physical activity involves reinforcing learning across different subject areas and making connections to the children's lives outside school. Physical education can be used to explore wider global and environmental issues such as global warming, social justice and intercultural education. Examples of this learning include developing the ability to cooperate in group situations and exploration of different cultures through dance. Physical activity sessions that are designed to be fun for children are ideal learning environments in which to reinforce concepts relating to literacy, language development and numeracy. Links can be made between musical concepts and dance, measurement and time in athletics, and geography and science in outdoor and adventure activities. Links between health-related concepts in science can be integrated with physical education lessons to support connections between knowledge and understandings of fitness and health concepts and promotion of physical activity. For example, in the USA, a group at the University of Maryland developed a science-based physical education curriculum (*Be Active Kids!*) for elementary school children (University of Maryland, Department of Kinesiology, 2007).

There is also some research to suggest a positive relationship between increased physical activity participation and improved academic performance (Sallis *et al.*, 1999; Van der Mars, 2006). In these cases it has been suggested that physical activity participation contributes to improvements in children's concentration and alertness with benefits for all aspects of the children's learning (Bailey *et al.*, 2009). Ultimately, the teacher or coach determines how the potential of physical activity settings can be harnessed to promote the development of thinking, reasoning and action through fun active participation.

Comment

Sport and physical activity settings can support concept development, encourage creative responses and provide opportunities for learning in a wide range of areas in an integrated way.

In this chapter we have divided children's needs into three key areas – physical, affective and cognitive needs. In reality, the teacher or coach considers these areas simultaneously, and this provides one illustration of the complexity inherent in all pedagogical encounters. For example, in response to a child who is practising a skill, the teacher or coach may

provide a physical cue to enhance performance while also praising the child's efforts and setting cognitive challenges about how the skill can be applied. This approach is based on a holistic view of the child which recognises and accommodates the broad learning needs of each child. The following section provides some guidance on how the teacher or coach can plan to meet these needs and this echoes some of the suggestions made by Mike Jess in Chapter 21.



Meeting children's needs: implications for practice

Claire had planned a variety of appropriate activities for her class, yet she still faced a number of challenges in making sure all the children benefited from these activities. The following guidelines could help practitioners to create the kinds of experiences that can support children's learning:

- 1 Create a warm, safe, supportive learning environment; be interested, enthusiastic and encouraging. Children should feel good about themselves as they explore, create and challenge their movement potential.
- 2 Plan a variety of approaches and developmentally appropriate activities to explore a wide variety of movements through a combination of play, teacher/coach-directed and self-directed experiences. This approach will motivate the learner and promote learning (Martin *et al.*, 2009). Competition should be introduced in a developmentally appropriate way and should enhance other aspects of the programme.
- 3 Adapt tasks and expectations for each individual context. Inclusive activities should be fun, engaging, appropriate, relevant and challenging to the individual learner and should be success-orientated.
- 4 Provide children with time to explore, combine, select and refine their movement competence and fundamental movement skills during this key developmental 'window'. 'Children have to learn how to learn motor skills' (Thomas and Thomas, 2008, p. 181).
- 5 Be generous with praise, acknowledge effort and support learning by keeping information simple and making feedback specific and constructive. Peer and self-evaluation can complement teacher/coach feedback (Stork and Sanders, 2008). Share the efforts and achievements of each child (in all three domains: physical, affective and cognitive) with their parents/carers.



Conclusion

The choices made by teachers or coaches working with young children can impact significantly on what children feel and learn in physical activity environments. It is vital, therefore, to remember 'the many contributions that systematic, sensitive teaching can make to both the cognitive and affective development of the individual' (Gallahue and Cleland Donnelly, 2003, p. 12). All pedagogical decisions should be based on what is in the best interests of the children involved. For example, with a new group of young learners it may be necessary to focus on cooperation and listening skills. On another occasion it might be

more appropriate to emphasise fundamental skills or making connections with learning in literacy or numeracy. Employing a variety of approaches and emphases offers the best chance of meeting children's needs in a balanced way based on the uniqueness of each individual. Moreover, as Claire's experience reminds us, the best-laid plans and intentions of a teacher or coach must always be flexible to ensure the specific learning needs of children are met. This chapter has endeavoured to illustrate how children, teachers and other professionals can answer the question raised by Kathy Armour in Chapter 1: Do I know enough . . . to create a positive learning experience for this child?



Learning tasks

Individual task

Reflect on Claire's lesson, or any other teaching or coaching sessions with young children that you have observed. How would you advise Claire to meet the developmental needs of Sam in physical education?

Group task

Design a 30-minute physical activity session for a group of 30 children aged five. Specify the activity, learning outcomes in all three domains, and ways in which you will evaluate children's progress in these domains.

Further reading

To read more about best practice in physical education and sport settings, we suggest the following: *The Elementary School Journal*, 2008, 108(3).

References

- Allender, S., Cowburn, G. and Foster, C. (2006) Understanding participation in sport and physical activity among children and adults: a review of qualitative studies, *Health Education* Research, 21(6), 826–35.
- Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I. and Sandford, R. (2009) BERA Physical Education and Sport Pedagogy Special Interest Group: The educational benefits claimed for physical education and school sport: an academic review, *Research Papers in Education*, (24)1, 1–27.
- Branscombe, N., Castle, K., Dorsey, A. G., Surbeck, E. and Taylor, J. B. (2000) *Early Childhood Education: A constructivist perspective*, Boston: Houghton Mifflin.
- Gallahue, D. and Cleland Donnelly, F. (2003) *Developmental Physical Education for all Children*, Champaign, IL: Human Kinetics.
- Galton, M. (2008) The pedagogy of artists working in schools. Report to Creative Partnerships, Arts Council of Great Britain, Cambridge: Faculty of Education, University of Cambridge.
- Government Publications (1999) Primary School Curriculum: Introduction, Dublin: The Stationery Office.
- Hellison, D. and Templin, T. (1991) A Reflective Approach to Teaching Physical Education, Champaign, IL: Human Kinetics.
- Kretchmar, R. S. (2008) The increasing utility of elementary school physical education: a mixed blessing and unique challenge, *The Elementary School Journal*, 108(3), 161–70.

- Laker, A. (2001) Developing Personal, Social and Moral Education through Physical Education: A practical guide for teachers, London: Routledge Falmer.
- Lavin, J. (2008) Creative Approaches to Physical Education: Helping children to achieve their true potential, London: Routledge.
- Lee, M. (1993) Coaching Children in Sport: Principles and practice, London: E & FN Spon.
- Lillemyr, O. (2009) Taking Play Seriously: Children and play in early childhood education an exciting challenge, Charlotte, NC: Information Age Publishing.
- Martin, E. H., Rudisill, M. E. and Hastie, P. A. (2009) Motivational climate and fundamental motor skill performance in a naturalistic physical education setting, *Physical Education and Sport Pedagogy*, 14(3), 227–40.
- McKenzie, T. L. and Kahan, D. (2008) Physical activity, public health and elementary schools, *The Elementary School Journal*, 108(3), 171–80.
- Sallis, J., McKenzie, J., Kolody, B., Lewis, M., Marshall, S. and Rosengard, P. (1999) Effects of health-related physical education on academic achievement: project SPARK, *Research Quarterly in Exercise and Sport*, 70, 127–34.
- Smith, P. (2005) Physical activity and rough-and-tumble play. In: Moyles, J. (ed.) *The Excellence of Play*, 2nd edn, Berkshire: Open University Press.
- Sport England and YST (2009) The PE and Sport Strategy for Young People: A guide to delivering the five hour offer, available from: http://www.youthsporttrust.org/page/pessyp/index.html, accessed 15 April 2010.
- Stork, S. and Sanders, S. W. (2008) Physical education in early childhood, *The Elementary School Journal*, 108(3), 197–206.
- Telama, R., Yang, X., Viikari, J., Välimäki, I., Wanne, O. and Raitakari, O. (2005) Physical activity from childhood to adulthood: a 21-year tracking study, *American Journal of Preventive Medicine*, 28(3), 267–73.
- Thomas, K. T. and Thomas, J. R. (2008) Principles of motor development for elementary school physical education, *The Elementary School Journal*, 108(3), 181–95.
- University of Maryland, Department of Kinesiology (2007) *Be Active Kids*! available from: http://beactivekids.org/bak/Front/Default.aspx, accessed 10 March 2010.
- Van der Mars, H. (2006) Time and learning in physical education. In: Kirk D., Macdonald D. and O'Sullivan, M. (eds) *Handbook of Physical Education*, Thousand Oaks, CA: Sage, 191–213.
- Whitehead, M. (2009) The current working definitions of physical literacy, available from: http://www.physical-literacy.org.uk/definitions.php, accessed 20 March 2010.
- Williams, J. et al. (2009) Growing Up in Ireland, National Longitudinal Study, The Lives of 9-Year Olds, Research Report, available from: http://www.growingup.ie/fileadmin/user_upload/documents/1st_Report/Barcode_Growing_Up_in_Ireland_-_The_Lives_of_9-Year-Olds_Main_Report.pdf, accessed 15 April 2010.