

PHYSICAL LITERACY IN WALES

IDENTIFYING A GAP

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In the summer 2017 edition of *Physical Education Matters*, the first article in this series charted the emergence of physical literacy in policy and government documentation in Wales. This second article will examine the contribution of the Foundation Phase curriculum in Wales to the development of physical literacy.

Since devolution in 1999, Wales has developed an increasingly different approach to education from the rest of the UK and in 2008 Early Years and Key Stage 1 were replaced by the Foundation Phase. This play-based curriculum for pupils aged 3-7 years sees more holistic areas of learning replacing traditional subjects. Therefore, physical education as a subject for the under-sevens no longer exists in Wales and, considering physical education's role in the development of physical literacy (Talbot, 2007; Whitehead, 2010), this change in the curriculum could be a cause for concern. In light of this, a three-year research study was carried out to examine the contribution of the Foundation Phase to pupils' physical literacy. This article discusses findings from the study and explores how key features of the Foundation Phase delivered through playful pedagogy make a significant contribution to the development of many aspects of physical literacy with the exception of object control skills.

PHYSICAL LITERACY

Although there is much debate surrounding the concept of physical literacy, Whitehead's widely recognised work defines physical literacy as "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (Whitehead, 2016). Findings reported in this article relate not only to aspects of this definition but, with changes in the Welsh curriculum moving towards a more holistic approach to learning, it is the holistic nature of physical literacy that is of particular relevance to

this study. Whitehead's work draws on the existentialist belief that "individuals create themselves as they live in the world" emphasising the underpinning philosophies of monism and phenomenology as central to physical literacy. She emphasises that physical literacy is about developing an understanding of embodiment, that "you have not 'got' a body but rather 'are' your body" (Whitehead, 2010:23). This notion of embodied learning is something that is very evident when children are at play and is a fundamental part of the Foundation Phase.

THE FOUNDATION PHASE AND PLAYFUL PEDAGOGY

The Foundation Phase is a child-centred, play-based, holistic curriculum for children aged 3-7 years (DCELLS, 2008). Influences from the open curricula traditions of German and Scandinavian schools, Te Whāriki in New Zealand and Reggio Emilia in northern Italy are evident in the

Foundation Phase with its key features of play-based and active learning, a balance of adult-led and child-initiated learning and use of the outdoors. As a play-based active curriculum, children are not expected to be sitting at desks for long periods of time. Unlike the traditional subject-focused approach of Key Stage 1, six and seven year olds in the Foundation Phase continue to experience play-based learning involving movement and active engagement, with the outdoors as an integral part of their experience.

Although the Foundation Phase is a play-based curriculum, this does not equate to free play, but rather takes an approach of playful pedagogy. This recognises an understanding of 'play' based on children's perceptions and an approach that is about playfulness and attitude. Howard and McInnes (2010:35) show how children use cues to distinguish between work and play, illustrated in Table 1.

Table 1: Cues that children use to distinguish between play and work.

PLAY		WORK	
<i>Emotional cues</i>	<i>Environmental cues</i>	<i>Emotional cues</i>	<i>Environmental cues</i>
Voluntary	On the floor	Compulsory	At a table
Under child's control	Lacks adult involvement	Under adult control	Includes adult involvement
Easy	No adult evaluation Can be continued: focus on the process	Hard	Includes adult evaluation Has to finish: focus on the product
Fun	Physical	Can be fun	Not physical



The pedagogical approach of the Foundation Phase uses activities that have cues linked to play and, as such, are tasks that children perceive as play even when they are planned and teacher-led. For example, literacy and numeracy activities may be in the form of treasure hunts for key words or number trails around the grounds; writing activities use large chalk boards outside; and children play target games for addition or subtraction. Pupils will often have a menu of tasks linked to a theme or topic and can select an activity to work on over a sustained period of time.

DEVELOPING PHYSICAL LITERACY IN THE FOUNDATION PHASE THROUGH PLAYFUL PEDAGOGY

This article draws on a three-year mixed methods research study of the Foundation Phase focused on the motivation, confidence and physical competence attributes of physical literacy with pupils in the Year 1 age group (six year olds). Literature in relation to motivation has shown the significance of autonomy as opposed to control in maintaining intrinsic motivation (Niemic and Ryan, 2009). In the Foundation Phase, with aspects of child-led learning, pupils often have choice in their learning, whether that is selecting a task from a menu of activities or deciding where they want to work or how they are going to carry out a task. One example from the study was based on the theme of stones, where pupils were given the opportunity to choose any activity as long as they were using a stone. There was also an optional

challenge to make a stone float. All of the pupils went outside and some were building small world scenes with dinosaurs and stones, others were making roads out of stones for toy cars, others were making 'stone soup', some carried out the challenge and made boats for the stones. Several of the children chose to play hopscotch and similar games using stones and playground markings. These children were not sitting at desks and, as such, the learning was not just a cognitive experience, rather a total absorption in the activity, showing what Whitehead (2010) describes as embodied interaction in their environment.

The use of playful pedagogy as identified above meant that even in teacher-directed learning pupils were motivated, such as when learning about tens and units in maths by throwing bean bags into buckets. By making activities physical, outside and fun they have many of the cues pupils associate with play and, as such, are highly engaging. The study found that the autonomy given to pupils in the Foundation Phase approach meant that pupils were motivated to move in a variety of contexts during all aspects of their learning (Wainwright *et al.*, 2016b). The motivation for movement can be both extrinsic and intrinsic, but of particular importance to the development of pupils' physical literacy is 'embodiment-as-lived' (Whitehead, 2010:2) and the value of bodily physical experiences for their own intrinsic worth (Brown, 2013). Intrinsically motivated movement was evident throughout the children's learning, with children moving spontaneously in response to their emotions. The curriculum allowed space for children to demonstrate

these emotional responses to learning (such as excitement) through physical responses. For example, children might run up and down when excited about an activity. During a maths task on measurement, pupils were measuring their jumps outside. In between the measurements, they were running round and jumping for fun. It is interesting to note the distinction between jumping for the purpose of the measuring task, and the running and jumping as intrinsic enjoyment of movement.

The active play-based Foundation Phase curriculum, with autonomy supportive playful pedagogy, means that pupils perceive themselves to be highly physical beings and, as such, see themselves as physically competent. As a result, over time the study saw a significant increase in pupils' perception of their physical competence (Wainwright *et al.*, 2016a). High levels of perceived competence are important in relation to engagement in physical activity (Stodden *et al.*, 2008). However, children in early childhood are not usually able to accurately judge their level of competence and relate effort to ability, therefore making this an important time for developing skills whilst they are still enthusiastic to try. A particularly crucial time is when children start to become accurate about their ability. At this point pupils who have not yet mastered skills are at risk of disengagement from physical activity, perceiving themselves as non-movers. Surprisingly, in this study, pupils as young as six were accurate in their perception of their physical competence, indicating a growing self-awareness. For those pupils with poor competence this

could have been a problem and many would be expected to disengage from physical activity. However, the play-based ethos of the Foundation Phase is underpinned by the notion that all pupils are on an individual journey and children do not measure themselves against others in any aspects of their learning. This approach sees children accepting struggle as part of the learning process as they work towards personal goals. Therefore, children who had not yet reached a proficient stage in their skills continued to engage in physical activity and, as such, maintained opportunities to develop their skills. If these children had been experiencing a traditional games-focused physical education curriculum where they were put into teams, the public failure associated with poor skills in a game situation could undermine confidence and future engagement in physical activity.

Although the subject of physical education no longer exists in the Foundation Phase, physical development is in the curriculum as one of the seven areas of learning, thus ensuring there are still opportunities for focused whole class physical development sessions in a school hall or playground. The structure and ethos of these sessions are vitally important as, although the Foundation Phase is an active play-based curriculum, and there is some evidence that playing in a natural environment will impact on motor development, it is a misconception that skills will develop just through simply playing (Gallahue, Ozmun and Goodway 2012). Developmentalists suggest that motor skills are developed through the interaction of constraints from the “specific demands of the movement task” with the individual and the environment (Gallahue *et al.*, 2012:29). Therefore, teachers and coaches need to have the necessary understanding of motor development to identify the appropriate task and environmental conditions to support the development of children’s motor competence. The balance of adult-led and child-initiated learning in the Foundation Phase means that schools still give children structured learning opportunities for this physical development where they can be taught these skills.

Although physical literacy is far more than physical competence, over 30 years of research in the field of motor development highlights early childhood as a crucial time for developing the physical competence needed for the foundations of physical literacy (Barnett *et al.*, 2016; Stodden *et al.*, 2008). This study found that pupils in the Foundation Phase had good levels of physical competence with a significant improvement in children’s locomotor skills but not object control skills (Wainwright *et al.*, 2016a). The lack of progress in object

control skills is a concern as these skills are most strongly associated with adolescent physical activity (Barnett *et al.*, 2009). Whilst children were developing their locomotor skills in many aspects of their learning, the opportunities for object control skills were less common. For example, pupils took part in a maths trail around the school grounds which, although planned as an activity for mathematical development, saw children using locomotor skills throughout. Not only did the activity of a trail (in essence an early form of orienteering) encourage the pupils to run, but the use of the natural terrain and the obstacles of a trim trail meant that children were running, climbing, leaping and jumping. Opportunities for object control skills, though less frequent, were apparent in some lessons, such as throwing bean bags at number targets, however, the teachers did not have the understanding of motor development to intervene to improve pupils’ throwing skills.

The expertise of the teacher in relation to children’s physical development is an important factor, particularly in light of concerns raised about low levels of teacher confidence of non-specialists in the primary sector (Morgan and Burke, 2005). In order to ensure teachers are able to provide tasks and an environment appropriate for the pupils in their class, they need to have understanding of how children develop motor skills. With limited initial training in non-core subjects such as physical education, effective strategies for professional development of Foundation Phase teachers in the context of the school are crucial if teachers are to deliver a play-based curriculum with appropriate physical development opportunities for pupils (MacPhail and Tannehill, 2012).

CONCLUSION

Despite the absence of physical education in the Foundation Phase, the playful pedagogy in both teacher-led and child-initiated learning means there are ever-changing interactions of the environment, task and developing child. This means children can have the individualised experiences that are necessary for the acquisition of motor skills at their own pace. However, crucial to this is that staff need to have the necessary understanding of motor development to enable pupils to progress and without this there is a gap in pupils’ motor development in their object control skills. In addition to this complex relationship between physical activity, physical competence and perceived physical competence, early childhood gives us a window of opportunity to develop skills while children are still motivated to engage in a range of movement experiences (Barnett *et al.*, 2016; Stodden *et al.*, 2008).

The next article in this series will outline how a cross-disciplinary regional approach has trained staff and supported schools and communities to plug this gap in young children’s motor development and lay the foundations for physical literacy and physical activity for life. ■

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