

# Preface

This book is written to support parents and practitioners who wish to understand movement and how it contributes to all aspects of learning – intellectual, social and emotional, as well as the movement/motor aspect itself. Moreover, as there is a huge increase in the number of children with movement learning difficulties (Keen, 2001), that is children who do not move confidently and easily, the book also highlights the significant part less competent movement plays within the specific learning difficulties, e.g. dyspraxia, dyslexia and the attention deficit disorders (ADD), and with hyperactivity (ADHD).

## Why is movement so important?

From the very earliest age, being able to move confidently and efficiently in many environments underlies most, if not all, activities of daily living. An interesting claim by Laszlo and Bairstow (1985) in fact is that ‘all overt behaviour is expressed through movement’ and while this gives us pause for thought, it also begs the question, ‘How are we to know if children have learned if they don’t move?’ Considering possible answers also demonstrates that ‘movement’ is much more than physical education, important though that is. It is part of writing and mathematics; it is essential in getting dressed, in using a knife and fork, even in being able to speak. It is part of communication both verbally and through touch and so it is fundamental to the achievement of a whole plethora of social skills. Moreover, movement allows children to do what they want to do, in other words to control their environment, and thus is essential to their becoming more independent. Being able to carry out activities such as tying laces, catching a ball or riding a bike just as well as and at the same time as their friends makes a huge contribution to a child’s self-esteem. This in turn impacts on how confidently they approach and complete all kinds of learning tasks. All of these precursors to learning are discussed in the book.

It goes without saying that all the adults who interact with young children want them to do well in all aspects of their living and learning. For a very few children, providing a movement environment with resources that stimu-

late them to achieve and progress can be enough to ensure a good start. Many more require consistent and considered support and encouragement if they are to realise their potential and some need specialised resources and a high level of help. Providing the most appropriate level and kind is a complex endeavour and to be most effective it has to come in the early years, i.e. ideally pre-school, certainly before age 8. This is because appropriate support can reduce the effects of difficulties, sometimes even before the children realise that they are there. Moreover, if the difficulties persist, then the parents and teachers may well have established shared ways of helping in a positive, child-centred environment.

What is involved in providing this support? Parents and practitioners must be able to observe young children as they move and assess whether their development is proceeding according to established 'norms'. (Examples of age-related norms are provided in Appendix 1.) If it is, they must know how to extend a child's learning through the provision of challenging activities; if it is not, if progress is accelerated or delayed, they must observe even more closely, then analyse the child's movement patterns, assess what is amiss and provide or seek effective and timely support.

This may present a huge challenge for parents who suspect difficulties when their children are in the age range 0–3, but they are the experts, the children's first educators and they are right to be persistent in asking for help.

### CASE STUDY

Marie, Freya's mum explains:

'I knew from the start there was something wrong. Freya was so floppy; it was obvious that although she looked fine when lying in her cot, she had very little strength in the top of her body. Her arms just hung limply down and she could hardly suck. I had to dribble milk into her. However, the doctors didn't seem perturbed. "Just give her time," they said, but I knew she needed more than that. So I rubbed her little arms gently and made her close her fingers round a rattle and encouraged her to squeeze the sponge in the bath. These were all games that she enjoyed and we felt we were doing something to encourage her development. We stimulated her but it took a lot of thinking and wondering if we were doing the right thing. Parents shouldn't be left alone like this.'

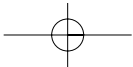
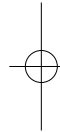
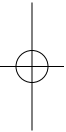
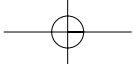
This early time is critically important for this is the time when children are developing their basic movement patterns, the foundation stones for more complex skills. Literally they are 'finding their feet' in a sheltered environment when parents or carers are there to prevent bumps and bruises and keep the children safe. And as the children learn to move they are developing all other facets of their learning – they are making decisions about where to go and if it is safe, who will be there and how to attract their attention, as well as what they are going to do to achieve their aim. So moving around is a problem-solving experience, which is the basis of intellectual, social and emotional competence. At this early stage attitudes to encountering new activities are being formed. It is important that they are positive ones.

Concerns like this may have promoted the compilation of curriculum documents for nursery and school-age children in the different regions. Two examples are *Curriculum Guidance for the Foundation Stage* (DfEE, 2000) and *A Curriculum Framework for Children 3–5* (SCCC, 1999) and these provide advice on the kinds of competences that should be nurtured in the early years (see also Appendix 2). Although these differ slightly in where the different skills are placed (e.g. in England, mathematics has a section of its own while in Scotland mathematical learning in the early years is subsumed under 'Knowledge and understanding of the world'), the key learning outcomes are essentially the same. These frameworks have provided critically important guidance in the selection of recommended activities and strategies within the book. In turn these should augment practitioners' plans for their individual children in their own learning context.

The 'rewards' from helping children become 'better movers' are enormous. Just as poor movement is public and open to scorn, so improved movement is immediately visible and gains well deserved praise. It can be a source of happy communication with parents and carers, but perhaps listening to the children brings the best reward of all.

**Scott, who has enjoyed his time in his perceptual-motor programme, explains, 'I'm much happier at school now because I can run faster and my friends let me play football now.'**





# **I**ntroduction

This book aims to help all those who interact with young children to:

- understand the importance of movement as a key factor in personal, social, emotional and intellectual development;
- observe movement patterns and assess/analyse them to identify any cause for concern;
- devise appropriate and enjoyable strategies and activities that will support the development of efficient and effective movement;
- justify including more movement activities at home and in the early years' curriculum.

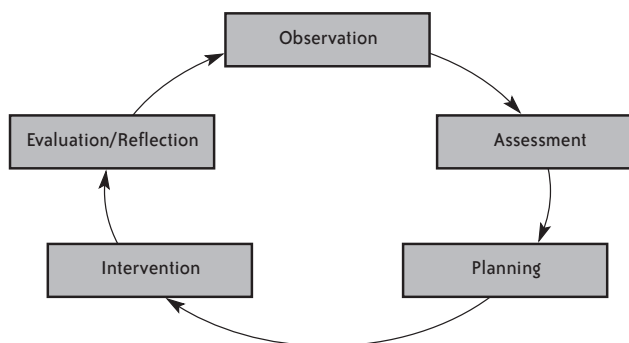


Figure 1 The cycle of observation and support.

## Why are all of these skills so important?

At home, at school and during all of the activities in between, movement underlies most, if not every, aspect of learning. All the age-related feats of daily living, e.g. sucking to feed, reaching to grasp a toy, getting dressed, opening a lunch box, even speaking clearly, are compromised by not being able to make

the correct movements plan, e.g. how to move, when to move and where to go. At school too, much of the curriculum is based on practical activities. The youngest ones must learn to spread toast or biscuits at snack, thread beads, complete jigsaws and gradually learn to become more independent. They must learn how to communicate with others and recognise how their non-verbal behaviour, another form of movement, is perceived and interpreted by others. All of these skills are necessary to cope with the vast number of activities involved in daily living. Every early movement experience promotes the development of the movement abilities such as balance and co-ordination, body and spatial awareness, which underlie the timely acquisition of more demanding tasks, e.g. more formal writing which requires a sophisticated amount of poise and control and mathematical problem-solving which involves recognition of shapes and symbols as well as numbers.

The slightly older children learn to manipulate materials in mathematics, science, environmental studies and music as well as coping with more demanding feats of co-ordination and body movement in physical education and drama. These are the more obvious 'movement things'. But movement is also a critically important, if subtle, part of learning to read, because the eyes have to work together in a controlled way to track the symbols on the page and when writing means copying from the board another more complex form of tracking is required. Writing itself is a major motor skill dependent on balance co-ordination, rhythm and control. And so, although many parents seem more concerned to find out whether their children can read and write and count to ten than asking about their movement skills, this could be a costly mistake. Perhaps they are overlooking the fact that movement competence is at the root of many different kinds of intellectual, emotional and social success.

If children are to see themselves as 'coping well' and gain confidence from their self-evaluations, they have to be able to move with confidence in different environments and with different 'tools'. When they can't cope at the toilet or do up their buttons at the same time as their friends, their self-esteem takes a hard knock, for these 'movement things' are public and exactly what the children themselves like to be able to do. Moreover, parents and teachers and even friends have expectations that these competences will be achieved 'at the right time' and comparisons among youngsters can be part of the daily scene. This adds often quite unnecessary stress to the process of growing up, yet if delay is suspected then opportunities for timely and appropriate intervention should not be missed. This is arguably more important for movement than other skills for the reasons listed above and because:

developmental movement and gross motor deficiencies are a special case for intervention strategies. This is because movement difficulties may be more difficult to eliminate than other deficiency classifications. (Cowden and Euston, 1991)

This is a very significant finding. If movement difficulties are indeed 'harder to eliminate' than others kinds of problems then the case for early and sustained intervention in movement cannot be denied. One of the key aims in early years' education is to 'increase children's understanding of how their bodies work and to have children practise the fine and gross movement skills which will keep them safe' (DfEE, 2000). This understanding and these competences have to be nurtured to allow them to 'use tools and equipment' (SCCC, 1999). If these aims are to be met, the underlying movement competences, e.g. balance, co-ordination and the movement planning which precedes their use have to be carefully and regularly assessed.

The earliest 'assessments' all children have are made by observing their acquisition of movement patterns, e.g. when they hold eye contact, when they smile, when they sit unsupported, if and when they crawl, when they walk, when they use the pincer grip and when they can grasp and let go. All of these skills are known as 'motor milestones' and when they are achieved at the right time, then adults can be reassured that progress is being made according to the norms of development (see Appendix 1). These early assessments should be made by adults observing children interacting in their own environment and carrying out their usual activities. This is a naturalistic form of assessment that should not distort the findings or cause any stress. Making records of the children's progress in this way is critically important for such notes can pinpoint difficulties that may be present or looming and alert adults that early support might be required. If these difficulties or delays are minor, then carefully selected practices may help them to be overcome quite quickly. If they are more profound or long-lasting, however, then a programme of activities can be devised and the most appropriate support can be given without delay. This text suggests ways of doing just that, i.e. through observing the children, analysing their movement successes and difficulties and suggesting the most appropriate ways to help. Naturally, the ethos of doing that would be in a child-centred environment, i.e. based on recognition of each child's developmental stage, their readiness to learn more and the provision of activities and resources to let that happen (for examples, see also Macintyre and McVitty, 2003).

## Maturation and myelination

One of the trickiest assessments adults have to make is whether children have a 'real difficulty' or whether maturation will do the job by itself. There is no doubt that most children become more nimble and dexterous as they mature. This is because the limbs generally become longer and stronger and capable of more movement things. In addition, myelination of the axons – or insulation of the passageways in the brain, which ensures that instructions pass directly to the correct muscle groups that promote the action – may not be complete at an early age. This leaves the child with the appearance of being slow to respond or of having poor co-ordination. Once the coating is complete, however, all may be well. This is one reason why it would be inappropriate to issue labels indicating specific learning difficulties before the children are 6 years of age, i.e. the time when the myelination should enable them to move well. New research (Winkley, 2003) is claiming that myelination may not be complete till early adulthood, so there is always time for the children to progress (see Chapter 1). However, it is best to play safe and not be tempted to delay. Early experiences which 'have a profound influence on how our brains are structured and our minds develop' (Winkley, 2003) are best to be of the kind that nurture and enhance. Recognising that a programme of practices will not harm any child, but will be likely to benefit them all, is important too and should surely override any doubts as to whether intervention is advisable.

## Movement learning difficulties

Many children, including highly intelligent ones, have movement learning difficulties, even if they do not have the 'label' developmental co-ordination disorder (DCD, dyspraxia or DAMP, i.e. a Scandinavian term coined to cover a disorder of attention, movement and perception). New research also highlights the movement aspect of dyslexia, Asperger's syndrome and ADHD (Henderson et al., 2001). Clear speech (articulation) also depends on movement, i.e. control of the fine muscles in the mouth, and so any lack of muscle tone there means that both the acquisition of speech and communication are affected (Macintyre and Deponio, 2003). Poor muscle tone in the sphincter muscles can mean that control of the bladder and/or bowel can be affected so that toileting skills are delayed. This shows how widespread are the effects of poor movement control and co-ordination.



Left-handed children may give the impression of being poorly co-ordinated and clumsy, not because they have a movement learning difficulty but because they are struggling to cope in a world where resources are mainly designed for right-handed people. Yes, they need resources such as left-handed scissors but they also need their parents and teachers to understand the different ways they tackle tasks such as cutting out and they need demonstrations when forming letters or knitting! Adults have to consider the kind of support left-handed children require. When children find activities difficult, they often feel inadequate. They rarely blame the tools or the demonstrations, yet these are often the source of the problem.

And of course there are the children who can climb and run and jump but who find it really difficult to be still. They have a movement control problem that needs to be supported too, else their learning will be disadvantaged by distractibility and they may land up alienating others as well as not understanding themselves. Craig (2002) claims that, for many children, 'being still is the hardest movement of all!'

So, if a difficulty is suspected, what is to be done? Finding the root cause of the children's problems is the first step. Perhaps the children have perceptual difficulties so that the information they take in through their senses misleads them in some way? Perhaps the children can't plan what it is they wish to do? If these were the difficulties, then the support programme would be quite different from that needed by the children with poor muscle tone. Yet both would be unable to carry out their movement patterns competently and first observations might mislead observers into thinking that the intervention programme should be the same. This is why detailed knowledge and understanding must underlie observation, the first step in providing support.

The number of children presenting with these temporary/permanent difficulties is increasing rapidly (Keen, 2001), or perhaps it is that more informed parents are seeking help. This being so, it is essential to have a much larger group of adults who have the necessary skills and resources to make accurate diagnoses and who are able to design strategies to support them all.

Parents very often ask, 'When the children's movement improves, will they be more able to cope with their maths?' While research evidence denies a *direct* link (Dobie, 1996), teachers who have had children involved in early movement intervention/perceptual-motor groups invariably talk of the 'vast improvement' that they see in each child's self-confidence. This helps them confront other learning challenges with the self-belief that says 'I can do it... I can do it well!'

## MOVEMENT AND LEARNING IN THE EARLY YEARS

And of course there are many children who would be described as ‘good movers’ who have difficulties with other aspects of the curriculum, notably writing and mathematical calculations. Instead of giving them more of the same in the form of repeated tasks or homework exercises, which often means more failure, movement programmes can give extra fun practice in planning, in problem-solving, in making spatial decisions. These are essential strategies in writing, in mathematics and in developing social skills. The important thing is that children participating in these programmes are concentrating on the underlying competences in order to reduce their difficulties. When they recognise the progress they have made, they are enabled to tackle learning in a positive, confident frame of mind.

For all of these reasons, this text aims to equip interested and concerned adults to have the understanding and confidence to give all the children in their care programmes of movement activities so that their movement prowess is developed to the full. It also tries to provide a rationale to equip people to provide clear answers to why early intervention is so important. I hope it does.