

# Why should we be considering movement programmes?

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Autumn 2009

The effects of movement on academic performance and cognitive development has been a topic of debate for many years. Whilst many theorists argue for the importance of movement to be recognised, they face scepticism from those who do not accept the claims made. There are a number of programmes which are currently in use in this country and overseas which have grown out of different backgrounds and additional commercial programmes are increasingly being targeted at schools. These share some similarities, but also many differences and it is difficult for the conscientious and professional specialist to decide whether a movement programme is of direct relevance to their pupils. In the light of media controversy and reputable research, there are decisions to be made about the value and justification of including a movement programme into a child's timetable. Fredericks, Kokot and Krog (2006) detail studies with positive findings in relation to the impact of movement on learning, but they also stress the necessity of considering the content of movement programmes in relation to purpose. They quote a study (Longhurst 2002) which found that a 'regular' physical education programme 'made no significant difference to the motor proficiency or academic performance of learning-disabled children, while significant improvements in both areas were noted in groups of children engaged in sensory and perceptual motor programmes'.

There are many critics of, for example, Brain Gym, who are not convinced of its efficacy and dismiss it as 'pseudo-science' whereas its defenders enthusiastically praise its ability to improve performance through simple coordinated movements. The Brain Gym technique claims to help children to overcome dyslexic, dyspraxic, attention deficit and behavioural problems and a number of schools in the UK are using a selection of the basic Brain Gym movements as a routine part of the day, claiming positive benefits for learning and concentration. The Brain Gym activities were created to stimulate children, help them to relax and to focus.

Having trained for four days in Brain Gym several years ago, I can confirm that children enjoy most of the activities. What I cannot confirm from my own personal experience is whether there was any significant impact on their learning. Certainly some of the exercises were useful for calming children and thus inducing a learning receptive state.

The Institute of Neuro-Physiological Psychology (INPP) Schools' Programme has been implemented in many schools across the country and featured in the Youth Sports Trust 'Inspiring Partnerships' DVD where the children are shown carrying out simple exercises which the staff used with children they had identified as underachieving due to issues such as lack of visual accuracy and poor concentration. There is a one day training course for teachers that enables them to identify underachieving children and to put in place a programme which 're-wires' the brain. The premise being it provides a second chance to inhibit primitive reflexes which are preventing efficient learning. Goddard-Blythe stresses the importance of the exercises being carried out daily and this is a common thread through the majority of such programmes. This in itself can cause organisational problems for some teachers as I have found, through my own work, both in various schools and with parents of individual children.

The links between movement and successful learning have their origins in the work of theorists such as Kephart (1971), Ayres (2005) Fiorentino (1981), Bender (1976,) Blythe, McGlown (1979), Goddard (1994/96) and Goddard Blythe (1998). Sally Goddard-Blythe is well-known and respected for her work on the links between primitive, postural reflexes and learning and she has recently published a book: 'Attention, Balance and Coordination: The ABC of Learning Success' in which she explores the physical basis for learning. Goddard-Blythe stresses that there are links between successful academic learning and the adequate mastery of motor skills. Reading, for example, involves the development and control of smooth eye-movements to send information to the brain. More importantly: to send it in the right order. The motor skills of hand-eye coordination and the ability to sit still, pay attention and maintain good balance are implicated in the development of higher cognitive processes. Until children have had regular experience of orienting their body in space by moving up, on, under, beside and in front of things, it seems likely that they may have difficulties with letter identification and the orientation of letters on a page. This is becoming increasingly an issue when some parents are unwittingly limiting their child's experience of this type of movement through more extensive use of strollers and other apparatus as well as limiting 'tummy time' due to health and safety concerns. In her book, Toxic Childhood, Sue Palmer refers to the 'dyslexia cluster' of dyslexia, dysgraphia, dyscalculia and dyspraxia and the links to changes in life-styles, technological and cultural changes as well as exercise and parenting styles.

If the vestibular, proprioceptive, tactile, visual and /or auditory systems have not developed efficiently and effectively, they will undermine a child's ability in the classroom. As the sensory systems develop hierarchically, there is an understanding that progress will not occur as effectively as it might if any developmental steps in the sequence have been interrupted or skipped. By revisiting this process, and working back up the hierarchy from the foundations, we may be providing the child with a stable foundation for learning.

A further programme that I have previously given attention to and reported is new to the U.K., although it is well-known in Australia and across Asia and Africa. The Move to Learn Programme works from a similar understanding that learning difficulties are often caused by a neurological problem, not an educational one.

Pheloung has developed a developmental exercise programme called Ten Gems for the Brain that I have delivered in Poland as a training course to educational and health professionals. We are awaiting the results of the associated research project being coordinated by the Akademia Pedagogiki Specjalnej, in Warsaw. The movements, including rolling, crawling and other floor-based exercises, are now being implemented and their effectiveness in relation to classroom performance is underway. Further one day training courses have taken place in Somerset, and more are planned for Spring 2010.

Barbara Pheloung, who founded Move to Learn, presented at the 6th International British Dyslexia Conference (2004) and made the following important point:

'I have been immersed in this field for 30 years and can relate to the excitement when someone comes up with a new hope or cure every year or so: tinted lenses, efalex, crawling/creeping, saccadic eye movement exercises, sound therapy, primitive reflex treatment, vestibular and tactile activities, joint compression, visualization, phonetics, music, biofeedback among many others. We will undoubtedly come away from here with many more exciting new paths to investigate.'

This will surely resonate with many who work in the field of additional needs, and even more so in these days of internet and information overload. Parents often carry out their own research and have high expectations of the professionals charged with helping their child make a success of academic progress. Professionally, Patoss members will have observed or worked with children who appear 'normal' but whose behaviour and school performance is delayed. Sometimes they are the child who is ten years old chronologically present externally or feel internally three years old developmentally. How do we make value judgments about the benefits of a developmental programme when faced with a limited amount of

time and resources and how do we know where to start? What physical signs can we observe that suggest that a movement based intervention might be appropriate? This is particularly problematic if we recognise the issue of co-morbidity of specific learning difficulties such as dyspraxia with dyslexia and/ or Autistic Spectrum Disorder –ASD; and/or Speech and Language Impairment.

Dittrich and Tutt (2008) stress the need for greater importance of motor skills in relation to these developmental disorders and point to the need for teachers, support staff, psychologists and therapists to share their skills and knowledge. Perhaps this is the key reason for including movement programmes, in a multidisciplinary approach, based on a sound understanding of their relevance. This is an area I am currently researching internationally and a resource guide is in preparation.

## Profile

Mary Mountstephen has an MA in special educational needs and AMBDA. She designed and led a masters' level course in dyslexia for practising teachers at the University of West of England and currently leads a large department of specialist teachers at an international preparatory school. She trains teachers, parents and professionals in the choice and use of movement programmes and is an experienced neuro-developmental delay specialist. Children can be referred for individual neuro-developmental delay assessment by parents, teachers or other professionals such as educational psychologists.

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