
LUCIE CARLIER

Leaps towards learning

Daily movement, tailored to particular ages and groups of children, must be placed at the heart of the curriculum in order to support all aspects of learning, argues Sally Goddard Blythe.



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The new education inspection framework (EIS) launched in September 2019 aims to reduce the focus on outcomes and assessment processes, placing the curriculum at the heart of the inspection process. Used alongside the EYFS profile 2019, which summarises and describes children's attainment in relation to 17 early learning goals at the final term of the year a child reaches age five, the data is intended to be used as a starting point for exploring what is happening within a setting and will no longer examine internal data.

Despite playing lip service to reducing the focus on outcomes, in my view both guidelines are still outcome driven and fail to pay practical and detailed attention to the primary role of physical development in supporting all aspects of learning.

Motor skills matter

A study carried out in Northern Ireland in 2004 reported that in a sample of more than 600 children assessed in six mainstream primary schools, 48 per cent of five to six-year-olds and 35 per cent of eight to nine-year-olds showed signs of immature motor skills . When results of physical tests were compared with teacher assessment of educational achievement, there was a correlation between immature physical skills and lower educational attainment in the younger age group.

At the time, this seemed to be an alarmingly high statistic suggesting that if the sample was in any way representative of the general population of primary school children, at the time of school entry nearly half of children did not have all the physical tools in place needed to support learning in the classroom, and more than a third were showing a similar profile three years later. Furthermore, it appeared to identify a link between immature motor skills and lower educational performance.

Motor skills matter because they are the medium through which children integrate sensory information and express knowledge and experience: Reading for example depends

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on eye movements to track along a line of print without the eyes jumping to the line above, below or further along the line. This is an oculo-motor function; writing requires coordination between the eyes and the hand to carry out independent movements on each side of the body; copying entails adjustment between visual focal distances at speed. All of these depend on having postural control to sit still and maintain attention. Even speech is a motor dependent skill. Irrespective of intelligence, children need to have these physical skills in place order to realise their potential in the classroom.

Assessment of 'higher' cognitive attainment at an early age may flag up early warning signs of failure but does not address whether children are furnished with the equipment needed to succeed in the classroom.

More recent research has indicated that far from improving, the situation may be worse now than it was 15 years ago. A small independent study carried out in cooperation with the University of Loughborough in 2017, using a standardised movement assessment test battery, revealed what appeared to be an 18 per cent decline in children's physical skills since the norms for the test battery were last revised in 2007 .

A larger project introduced as part of the Health and Wellbeing aspect of the 'Scottish Attainment Challenge' in 2017 applied the same physical screening test used in Northern Ireland schools in 2004 to a sample of more than 800 children . The project sought to investigate whether children had acquired the physical literacy skills needed to access literacy and numeracy experience across the curriculum, and to what extent there was an attainment gap between children from the most advantaged and most disadvantaged backgrounds. The findings (still to be published) have revealed as much as a 30 per cent decline in children's neuromotor skills since 2004, with disadvantaged children showing high levels of neuromotor immaturity.

What can be done?

All three projects introduced daily movement programmes into their school settings.

1. The 'INPP Developmental Movement' programme for use in schools with children from seven years of age.
2. 'Movement for Learning' – an informal movement programme aimed primarily at pre-school and children in reception
3. 'Better Movers and Thinkers' – used with children aged four to seven years.

A fourth ongoing project being piloted in schools in South Yorkshire has introduced a less structured, teacher-led, play based programme – 'Movement Before Language' – into seven primary schools in the Sheffield area.

The 'INPP Developmental Movement Programme'

has been in use for many years. It is a structured daily movement programme designed to be used with a whole class of children under teacher supervision over the course of one academic year. It requires ten – 15 minutes of time, five days a week for three terms and takes children back motorically to replicate movements that should have been made in the first year of life, giving the brain and nervous system a 'second chance' to form connections that may not have been fully established in the first year of life.

'Movement for Learning'

is a less structured daily movement programme, designed to improve children's physical readiness for learning. The programme is split into six units of activities with each being delivered on a daily basis for four weeks. Each four weekly unit comprises of a warm up, circuit-type activities (using everyday school equipment such as bats, balls, hoops and bean bags) and a cool down.

'Better Movers and Thinkers' (BMT)

is a more traditional physical education programme designed to help develop kinaesthetic awareness, engage the learners and encourage sustained engagement and to support learning by helping to develop thinking skills through movement and thereby develop executive function skills.

It is structured to develop movement through the use of scaffolding practices and develops performance by layering refinement and complexity. Education Scotland says: 'it has the capacity to place physical education at the forefront of learning and teaching across the curriculum'.

'Movement Before Language' (MBL)

is based on the same principles as the 'INPP developmental movement programme' but has been adapted to make it suitable for four to seven-year-olds. A series of songs and narrated stories accompany suggested movements to be carried out each day in class under teacher supervision. The songs and stories follow a developmental sequence but are open to individual interpretation, adaptation and creativity based on the developmental level and capabilities of the child. In addition to movement, children are encouraged to learn to sing the songs, become familiar with the 'story' told in the song and then act out the story through movement. This helps to develop phonological awareness, sequencing ability, expressive movement (gestural aspects of language) in addition to improving motor vocabulary and securing the foundations for balance, postural control and coordination.

Success of programmes

Results obtained from these projects and programmes indicate:

1. The INPP Developmental Movement Programme is effective in improving neuromotor skills and performance

Key points

What the findings suggest needs to be done:

- Routine screening of children's physical development at school entry and at key stages through the education process.
- Daily movement as a part of the curriculum
- Introduction of researched daily movement programmes for specific age and target groups

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Coordination and postural control are important for learning and concentration

Useful resources

- 'INPP Developmental Movement Programme' **inpp.org.uk/research-publications/research/improving-educational-attainment-through-movement-programmes/**
- 'Movement for Learning' **movementforlearningproject.co.uk**
- 'Better Movers and Thinkers' (Resource package) **gov.scot/improvement/Documents/hwb9-better-mover-and-thinkers.pdf**

on the 'Draw a Person' test, which provides one measure of non-verbal cognitive performance. For a smaller number of participants who were showing signs of both 25 per cent neuromotor immaturity and performing below age expectations on educational measures at the outset, there were small increased gains in educational performance compared to the control group. Poverty related levels of dysfunction have seen positive impact with a complete closure of the gap revealed between children from disadvantaged and advantaged backgrounds in measures of neuromotor performance and visual perception.

2. Movement for Learning – used the 'ABC movement test battery' to see whether children's physical capabilities were declining, as well as giving a robust measure of children's physical development at the start and end of the Reception Year. Those children who participated in the programme improved their physical development scores by 18 percentile points on the Movement ABC test battery while the comparison group made no progress at all (3).
3. 'Better Movers and Thinkers' was used once a week with children aged four to seven years with improvements in measures of motor performance and aspects of executive functioning.
4. 'Movement Before Language' is currently under evaluation. Teachers report that results from the INPP physical screening test correlate with children they have concerns about. 'We have seen progress in almost all of the children. It has been very interesting to compare their drawing skills and growing control and coordination and has been good for their wellbeing. We are very positive about the impact of this on children and are thinking about getting trained for the whole school next year.'

For education to be successful it needs to meet every child where he or she is in terms of their development. While inspections and guidelines are necessary there is an increasing tendency for educational policy to be data driven, curriculum prescribed and assessment orientated. True education begins with the child, follows pedagogic principles and seeks to ensure that every child is provided with the tools needed to support learning. **eye**

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