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How fundamental are fundamental movement skills?

Professor Beth Hands, University of Notre Dame

If you take the time to observe children playing in a playground you will notice some whose movements are fluid and graceful, who clearly experience the joy of successful movement and feel confident in their actions. Look further and you may notice some less confident children who may be hovering on the sidelines, causing fights with their peers, sitting quietly by themselves on the verandah or even hidden away in the library reading a book. These children find participation in playground games and many other physical activities challenging, tiring and even embarrassing. They are worried they will miss a ball thrown to them in a game of keep-off or fall over in a game of chasey. Nobody wants them on their team. For these children, the opportunity to feel the intrinsic enjoyment of successful movement is denied. Their inadequacy is very public and subsequently humiliating – this is much worse than the experience of the child who is yet to master math or reading. Their inadequacy is more easily concealed in a classroom.

Unfortunately, many teachers and even parents do not consider the movement difficulties these children experience as important. The child is often considered to not be ‘the sporty type’, to be lazy, or just clumsy and they will grow out of it. However, these children are at risk of a range of physical, emotional and social poor health outcomes. Unfortunately, children with poor coordination or inefficient fundamental movement skills, may have a condition known as Developmental Coordination Disorder, which is commonly unrecognised and frequently undiagnosed. These children are unable to perform most movement skills at an appropriate level for their age and there are no other diagnosable conditions that could account for their impairment, such as cerebral palsy. Prevalence estimates are between 5% and 16% of school-age children which would rank it among the most prevalent of child-hood disorders. It is important, therefore, that parents, teachers and other allied health professionals are aware of the importance of identifying children struggling to master fundamental movement skills and providing ample opportunities to develop proficiency in these skills.

What are fundamental movement skills?

Fundamental Movement Skills, usually referred to as FMS, are the basic building blocks or precursor patterns of the more specialised, complex skills used in organised and non-organised games, sports and recreational activities. They may be categorised as body management (such as balance, roll, climb), locomotor (such as run, jump, hop, swim) and object control (such as catch, kick, throw, strike) skills to facilitate evaluation and lesson programming.

The importance of fundamental movement skills

Children with a high level of competence in a range of FMS are able to confidently participate in a wide variety of activities. They also benefit from many physical, social and emotional health outcomes in both the short and long term.

These include:

- Higher physical activity level
- Higher cardio-respiratory fitness
- Higher likelihood of maintaining a healthy weight
- Stronger muscles and bones
- Higher self esteem
- Greater self confidence
- Greater willingness to take risks
- Higher athletic competence
- Motivation to participate in games and sports
- Greater popularity with their peers
- Greater likelihood of involvement in lifelong physical activity

Most children will achieve early developmental milestones, such as crawling, walking and running in a timely manner, however we cannot assume they will be able to perform these skills proficiently. This is also the case for the more complex movement patterns such as jumping and throwing. Some children work out how to do most FMS proficiently by themselves at an early age, some take a bit longer while others may never develop competence in a skill. Movement skills are mastered through lots of opportunities to practice, ideally in a stimulating and challenging, yet supportive, environment, and by receiving quality instruction and feedback. These opportunities can be provided to the child at home, at school or in the wider community. Unfortunately, we are making sedentary activities such as watching television or playing computer games easier





(and more attractive) for children to access compared to active past times. Most parents and teachers agree it is much easier (and perceivably safer) to supervise a child who is sedentary, for example watching television, than one who is being active outdoors.

Fundamental Movement Skills in the School Curriculum

The Health and Physical Education curriculum in each Australian state and territory is very similar and all have an explicit focus on the development of FMS in the early years. The draft scope and sequence of the proposed Australian Curriculum maintains this focus for the Foundation to year 2 age band. Most states have also developed teaching resources and support information, often associated with professional development, to assist teachers and teacher assistants to plan and deliver FMS programs. To find out more, contact your state education department.

An early focus on FMS is important as it is much more difficult to unlearn or break down a bad habit such as a poor movement pattern than to learn a proficient pattern in the first instance. The mastery of a new skill takes approximately 9-10 hours of practice, whereas it takes about 3 months to change an established movement pattern. However it is possible!

So where should you start?

- **Start with the children's interests, strengths and needs**
It is essential to consider the interests, strengths and needs of the children in your class. Teachers, as well as curriculum developers and educationists, must not lose sight of what physical competencies are valued by young people themselves. The teaching and learning program should be based on an understanding of what engages and sustains young people's participation in physical activity and not on what you, as an adult, consider is important (or interesting). For example, if the local community is "mad" about soccer, the children are more likely to be engaged if the teaching program is based on soccer skills rather than your favourite sport.



- **Opportunities to develop, practice and master FMS can be embedded into every school day in lots of fun ways**
FMS learning opportunities can be an integral part of most school days. In addition to physical education and sport classes, short, 10 minute physical activities can be used to transition from one activity or space to another, as time fillers, or at the beginning or end of the day.

For example

- Jump up in the air, clap your hands and say "Good morning".
- Place a bean bag between your feet and jump outside to recess.
- Make up a hopping rhyme.
- "As you go out the door, jump up and touch my hands".
- Link arms with a partner and skip in a circle as you say "goodbye".

- **Integrate FMS into each key learning area**

Use an integrated approach to connect learning experiences across the curriculum. This strategy enables students to make better meaning of their learning and also demonstrate what they have learned in a number of different ways. Many topics can be delivered (and learned) in an active way.



For example,

- Use the body to make numbers, letters and shapes - with partners or in groups.
- Use movement sessions as a stimulus for language or art sessions e.g. "write a story about your basketball game this morning".
- Ask the children to respond with the appropriate movement as you spell the action e.g. J U M P or read the word in a story.
- Make letter or number grids on a wall for target practice.
- Measure the distance a ball can be thrown, kicked or hit.
- Draw an outline of each child on a large piece of paper. Measure their height, length and /or width, place the drawings in order of height. Ask the children 'can you jump the length of Sally?'
- **Consider differences between males and females**
FMS may develop in different ways and in a different order between males and females as a result of diverse experiences, interests and opportunities. It is important, therefore, to include a range of activity types in your program to accommodate for these differences. For example, you could teach skipping during a game, a music lesson or even while telling a story – the children could act out the story. Ensure to include some movement to music or dance opportunities.

• Individualise learning experiences

As your class will probably include children with a range of skill levels ensure you cater for these differences and ensure all children are able to achieve success in most activities.

You can do this by:

- Varying the demand of the task by changing the rules (1 bounce allowed), the required movement pattern (jump, skip, run), the size of the play area (smaller or larger) or the number of players (tag is harder with fewer players).
 - Modifying the equipment by offering different size or height targets or different size equipment (ball, bats, lines or beams).
 - Changing the grouping by working individually, with a partner, or in a group.
- **Maximise participation in activity**

Children who do not feel confident about their movement skills will seek opportunities to avoid participation. They might misbehave, offer to run errands, forget to wear or bring the appropriate clothing, complain of feeling unwell, tired or even bored.

To ensure maximum participation in activity sessions:

- Avoid elimination or getting out games. Guess who will be the first ones out?
- Work out ways to change low activity games such as duck, duck, goose into activities where everybody is active.
- Avoid asking children with poor skills to demonstrate to the class. They may be able to articulate their knowledge by answering a question on rules or strategy.
- Avoid activities that involve winning more than learning.
- Find each child's strengths. Identify, and then tap into, each child's multiple intelligences. We all learn in many different ways.
- Those children who are not capable of playing fast moving, strategy based team games, will find more success and enjoyment in individual, less competitive activities such as golf, martial arts or swimming programs.



FMS in the later years

While FMS may be only explicitly noted in the early years of the school curriculum, opportunities for the proficient development of FMS need to be provided throughout the school years. In the middle to late primary school years, the curriculum focus tends to shift to the development of movement skills (usually FMS sequences, such as a basketball lay-up) that are required to play games and sports, and to learning game strategies and tactics. However, it cannot be assumed that every child has mastered a sufficiently broad repertoire of FMS to allow them to confidently participate in the many games and sports typically played by adolescents. Some adolescents still need to concentrate on developing their own motor skills in a stable environment without having to worry about avoiding players, anticipating where a ball is coming from, or remembering what team strategy should be put into play. Therefore, individually designed activities in predictable environments and which build on principles of motor control and learning are most likely to be effective with this group. When the skills are mastered, responses can be automated, allowing the individual to process the extraneous demands of playing in a team. It is important that teachers and coaches continue to include motor skill teaching and learning opportunities throughout primary and into the secondary school years and identify and support those who are still struggling with their FMS. Many schools offer a range of developmentally appropriate activity types including non-team based sports such as dance, badminton, table tennis, fencing, swimming, and forms of martial arts.

But most of all - make movement fun!



Additional Information

Many resources are available to support FMS teaching and learning programs across the school years. Contact the ACHPER Healthy Lifestyles Bookshop to see the range.

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