

Australian Football: Leading Children's Fundamental Movement and Sporting Skill Development

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Introduction

This chapter critically analyses Australian football's significance within the early years of primary schools. Recent research has reported that Fundamental Movement Skills (FMS) of Australian children has regressed over the last 30 years (Craw, 2015) and that many children enter secondary school with limited FMS (Barnett et al., 2013). Furthermore, the recent Review of the Australian Curriculum (Australian Government, 2014) recommended that the key learning area of 'Health and Physical Education' be only taught informally during early years of primary school and begin formally in Year 3. However, despite these alarming reports research also indicates strong primary school principal desire for physical education beginning from the Foundation year of primary schools (Lynch, 2015). Hence, there appears to be a gap in children being 'physically educated' in the early years of Australian primary schools (5-7 years) and an identified need, which does create an opportunity for the traditionally popular and highly skilled sport of Australian Rules football.

Sport is defined as a logical extension of a school's physical education (PE) program (Commonwealth of Australia, 1992). Within Australia this relationship has been espoused over many decades:

physical education began to be positioned towards the end of the 1940s as the 'foundation stone' for children's participation in sport, as the site in which the skills required for sports participation should be developed, and for the first time making an explicit connection between school physical education and lifelong participation in physical activity. Kirk, 2014

Actually, sport and PE have been traditionally considered as the same concept throughout history, and it was only in 1979 (p. vii) when the term 'sport' as [was] being separate [d], or different from the term 'physical education' (Zeigler, 1979).

This chapter argues that the unique and popular national sport of Australian football is ideal for providing development for children's fundamental movement skills and introduction to sporting skills. The author reflects on relevant theory and draws on his experiences as an Australian Football League (AFL) Junior Development Officer, teacher, Health and PE specialist, footballer, researcher, Early Years School Leader and football coach to offer recommendations on how this can be best done.

The importance of children's fundamental movement and sporting skill development through Australian football will be explored and understood through three major underpinning themes:

- Fundamental Movement Skills in Australian football
- 'Developmentally appropriate' physical education and sport
- Physically educating children through quality Australian football experiences

Fundamental Movement in Australian football

Fundamental Movement Skills, also known as Fundamental Motor Skills (FMS) are the building blocks to participation in sports and ideally require early mastering. Children who are proficient at FMS are more

likely to enjoy active lives (Barnett et al., 2013). The Australian Curriculum: Health and Physical Education definition (ACHPE) states FMS “provide the foundation for competent and confident participation in a range of physical activities” (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2015). FMS can be categorised as locomotor skills, non-locomotor skills and manipulative skills (object control).

Locomotor and non-locomotor skills include; running, jumping, hopping, skipping, leaping, landing, galloping, rolling, sliding, stopping, twisting, turning, swinging, dodging and walking (Australian Sports Commission, 1997). Supplementing these are; balancing, jogging, floating and moving the body through water (ACARA, 2015). Manipulative skills include; ball control, throwing, tracking/ trapping, kicking and striking (Australian Sports Commission, 1997), where ‘ball control’ involves bouncing and catching (ACARA, 2015). Motor skills “can be defined as goal-directed, improvable actions that require movement of all or part of the body in order to be performed successfully” (Williams, 2014, p. 63).

At the core of dance movements lies ballet; similarly, arguably at the core of all sports and PE movements lies gymnastics. Dominant Movement Patterns (DMP) that are the building blocks of gymnastics include; landings, locomotions, swings, statics, springs and rotations (ACHPER, 1998). While landings, statics, locomotions, springs and rotations are easily identified as movements on a football field, ‘swing’ as a DMP is not (as there are no parallel bars involved in this sport). Swings are “movements of the body, forward or backward, pivoting around part of the body. They develop spatial awareness, body tension and grip” (ACHPER, 1998, p. 10). For the purpose of exploring Australian football, swing movements will represent any pivoting around part of the body.

FMS, underpinned by DMPs within Australian football can be categorised by the phase of play where they are predominantly used. There are three phases of play within the game and particular sets of skills are predominantly used during each phase:

- i. Ball is in team possession – possession skills and disposal skills;
- ii. Ball is in opponents possession – pressure skills; and
- iii. Ball is in dispute (eg. out of bounds, ball up, ball in pack) – pressure skills, possession skills and disposal skills.

Considering the sport of Australian football and the skills required to play confidently and competently, we can begin to identify the DMPs and comprehensive FMS that participants need and the game cultivates (Table 1). It can also be argued that there are more skills required in this sport than many others offered or advocated within primary schools. However, the number of FMS involved in Australian football does imply that although this game is best for developing a wide range of skills, it necessitates time and consistent efforts, a gap research suggests exists in many primary schools and early years at present.

This chapter argues that the wide range of skills can be successfully introduced and developed within the early years of primary school for all students, boys and girls. Children do not automatically learn or develop these skills, subsequently some children begin school having established all FMS from previous opportunities and some children unfortunately exit primary school without having developed FMS. “Just as children need to be taught their ABCs to read and write they also need to be taught fundamental movement skills” (Barnett et al., 2013, p. 10). That is, FMS are learnable and should be explicitly taught in the early years of primary schools.

Research suggests that the best time for children to learn and refine their motor skills is the preschool and early primary school years (Branta, Haubenstricker, & Seefeldt, 1984; Commonwealth of Australia, 1992; Espenschade & Eckert, 1980; Lynch, 2011; 2014), as these are also the “most formative years to establish a healthy approach towards physical activity” (Queensland Government, 2003, p.1). This phase of child development has the advantage that it is aligned with the child’s natural play structure and is likely to have fewer competing activities, therein allowing children more time to concentrate on developing their motor skills. Furthermore, the early detection of motor problems facilitates early intervention programs which can reduce many physical and related emotional problems (Arnheim & Sinclair, 1979; Commonwealth of Australia, 1992; Johnson & Rubinson, 1983; Lynch, 2013a; Seefeldt, 1975; Smoll, 1974). Having established that the skills of Australian football are ideal to be introduced in the early years of primary school it is now relevant to understand how this should be done in an appealing, developmentally appropriate manner.

Skill Set	Dominant Movement Patterns (DMP)	Fundamental Movement Skills (FMS)
Movement during general play	locomotion	running
Movement during general play	locomotion	jogging
Movement during general play	locomotion	walking
Movement during general play	spring	jumping
Movement during general play	spring	hopping
Movement during general play	rotation	rolling
Movement during general play	landing	falling
Movement during general play	spring	leaping
Movement during general play	landing	landing
Movement during general play	static	stopping
Movement during general play	static	balancing
Movement during general play	swing	twisting
Movement during general play	swing	turning
Possession skills	locomotion	dodging/ evasion (running)
Possession skills	locomotion	dodging/ evasion (sidestep)
Possession skills	combined	tracking/ trapping
Possession skills	combined	ball control close to body
Possession skills	locomotion/ static	bouncing (from hands)
Possession skills	locomotion/ static	Bouncing (tap on ground)
Possession skills	combined	catching/ marking (hands)
Possession skills	combined	catching/ marking (chest)
Possession skills	combined	catching/ marking (overhead)
Possession skills	combined	catching/ marking (outstretched arms in front of body)
Possession skills	combined	pick up
Possession skills	locomotion/ rotation	blind turn
Possession skills	locomotion/ static	dummy
Possession skills	combined	shrugging tackles
Disposal skills	combined	kicking – snap around body
Disposal skills	combined	kicking – dribble along ground
Disposal skills	combined	kicking – soccer off ground
Disposal skills	locomotion	kicking – roost for distance
Disposal skills	combined	kicking – short stab/ pass
Disposal skills	combined	handball – short pop
Disposal skills	combined	handball – for distance with speed
Disposal skills	combined	Striking (hit out/ palm)
Pressure skills	combined	smothering
Pressure skills	combined	tackling - wrap
Pressure skills	combined	tackling - grab
Pressure skills	combined	bumping
Pressure skills	combined	spoiling
Pressure skills	combined	shepherding
Pressure skills	swing	swinging

Table 1: Skills of Australian football.

'Developmentally Appropriate': Physical Education and Sport

The ACARA draft shape paper for ACHPE espouses 'developmentally appropriate' Health and Physical Education (HPE) from the very beginnings of schooling. As priority the ACHPE needs to; "provide ongoing, developmentally appropriate opportunities for students to practise and apply the knowledge, understanding and skills necessary to maintain and enhance their own and others' health and wellbeing" (ACARA, 2012, p. 4). When exploring the term 'developmentally appropriate' in relation to physical education and sport, Bailey (2012) asserts; "The collective wisdom from decades of research into children and sport can be summarised as 'Children are not mini-adults'" (p. 21).

Children's minds and bodies work differently to adults, and as already declared they firstly need to have FMS, which are best developed when participants are intrinsically motivated (Bailey, 2012; Callcott, Miller & Wilson-Gahan, 2015). This is axiomatic for any game which leads progressively to a sporting experience. Participants need to be interested, able, engaged and competitive to varying degrees for enjoyment to be experienced. It is important to state that while some children may learn FMS from play with siblings and friends, as the research has noted already in this chapter, unfortunately most do not. As Callcott, Miller and Wilson-Gahan (2015) suggest, "It is now evident that practice and encouragement as well as correct and quality instruction are necessary for children to become proficient in fundamental movement skills" (p. 32).

Anshell (1990) advises that when it comes to learning FMS "Practice does not make perfect: correct practice makes perfect" (p. 21). Correct practice involves "varied situational conditions at initial stages, followed by numerous opportunities to rehearse them" (Anshell, 1990, p. 21). This involves deliberate teaching and learning episodes. "Early childhood professionals recognise that a gradual shift in emphasis occurs over the first eight years of a child's life, along a continuum from play to more structured learning in formal settings" (Department of Education and Early Childhood Development (DEECD), 2009, p. 12). Hence, when learning FMS in PE classes, children should participate in adult-led learning, guided play and learning, and when appropriate, child-directed play and learning.

There is a general misconception in early years learning surrounding the term 'play-based pedagogy' and how this relates to PE. I argue that quality PE does not involve free-time to experiment with sporting equipment and would often be regarded in time poor schools as wasted physical education lesson time. Play-based pedagogy is defined as "where play is characterised as a planned and purposeful activity, built around a well-resourced environment and rich interactions with adults" (British Educational Research Association Early Years Special Interest Group (BERA-SIG), 2003, page 10). Play-based pedagogy involves scaffolding guidance from an expert to assist the child to become competent. Hence, for the same reason that children do not sit in a library unattended when learning to read, they should not be left to 'play' with equipment during lessons if the objective is to learn correctly.

Besides this is the fact that children have opportunity for child-directed play and learning every lunch, recess break and as general planned activities during the school day. After the child has learnt to read they can then be left to explore the wonderful books and stories the library has to offer, likewise after they can perform FMS to a certain level they can then enjoy increased child-directed play and learning experiences with friends. This point is extremely pertinent when teaching physical education in the early years of primary school and one that is often overlooked at the expense of the learning area.

Hickey (1992) warns that when teachers are unable to provide a meaningful PE program, the community questions the necessity of PE in the curriculum, as evidenced by the recent Review of the Australian Curriculum and its alarming recommendation; beginning HPE formally in Year 3 (Australian Government, 2014). Graham, Holt-Hale & Parker (1998, p. 4) suggest, "physical education should be a developmentally appropriate educational experience designed to provide immediate and lifelong benefits – important benefits that are typically only taught in physical education classes". Hence, children require PE teachers with early years' expertise who are confident and competent in the application of content and pedagogical knowledge in the early years. This bottom-up approach to education is often advocated but not implemented mainly due to barriers including professional development and preparation of teachers (Lynch, 2013a). According to Callcott et al (2015, p. 29):

Childcare providers and teachers in early childhood settings who have had training in early childhood physical education are rare... For this reason, teachers at pre-service level need to be instructed in providing comprehensive, developmentally appropriate instructional practices for physical activity within an inclusive curriculum.

It becomes problematic if children are encouraged to explore and play with any quickly lose intrinsic motivation which Bailey asserts, is required in developmentally appropriate physical education and sport. Alternatively, another consequence of leaving children to experiment with child-directed play as their only medium for learning is that they increase the possibility of learning incorrectly, or learning 'dead-end' motor patterns that have to be addressed later as they compromise movement potential or potential lead to injury.

"Although the passage from being a novice player through to being an expert performer is a long, and arguably continuous one, the best learners pass through at least three identifiable stages" (Abernethy, 1991, p. 92). Fitts & Posner (1967) first described three stages in acquiring motor skills as:

- i. The Cognitive Phase (learner uses information on how the skill is to be performed)
- ii. The Associative Phase (learner refines the mechanics of the skill)
- iii. Autonomous Phase (learner can perform skill automatically)

The stages of motor learning theory is still useful (Rink, 2010) and illustrates that if children continue to practice over and over the incorrect skill they will reach the autonomous stage. This is when the skill is performed automatically and "ingrained, highly learnt errors in movement execution (or technique) may be extremely difficult, if not impossible, to correct" (Abernethy, 1991, p. 93).

What does developmentally appropriate PE and sport look like in lessons? For a novice, the skill development will start slowly, often in a stationary position as a 'closed skill', where the environmental conditions remain stable and are predictable (Rink, 2010). Skills will progressively be developed over time and through correct practice, so that they can be performed at increasing speeds and among growing dynamics, becoming highly unpredictable, referred to as an 'open skill' (Gentile, 1972). This explanation sounds quite simple and straight forward, but is a basic fundamental of PE that is often overlooked when implementing lessons.


According to Rink (2010) there are requirements for learning a motor skill which are often violated in practice. Certain prerequisites include participant's motor ability, physical ability, and developmental readiness. Children require a clear idea of the task, need to be actively engaged in the learning process, have plentiful opportunities to practice, and be offered external feedback as well as having opportunities to self-assess through internal feedback.

Knowledge of how learners process information helps Australian football teachers and coaches to select appropriate cues and to design appropriate feedback for learners (Rink, 2010). Specifically, this involves; exposing children to relatively few stimuli and keeping activities simple, slowing the speed of presenting stimuli, providing the learner with cues and/or metaphors prior to the stimulus that will facilitate anticipation, avoidance of information overload, using more visual than verbal information, modelling motor skills and how they are used in a game, communicating slowly and keeping instructions simple, minimising environmental distractions, reducing response uncertainty by perhaps discussing beforehand and predicting what will happen, identifying similarities of current skills with already acquired skills, practising skills in proper sequence, practising situations that simulate game conditions, practise decision-making strategies under relatively slower than normal situations, using modified and appropriate equipment and offering feedback in a sensitive and encouraging manner.

A program that enables and promotes appropriate instruction, cues, feedback and general pedagogy in the early years of primary schools is the Perceptual Motor Program (PMP). Furthermore, PMPs were regularly used in early years of Australian primary schools 30 years ago and although still used in schools today, the quality of implementation and regularity is questionable (Stephenson, Carter & Wheldall, 2007). PMPs will be discussed in more detail under the next sub-heading; 'Physically educating children through quality Australian football experiences.' However, with research from, Victoria, Western Australia and New South Wales indicating a decline in children's FMS from 30 years ago (Craw, 2015), perhaps revisiting well implemented PMP's in the early years of schools through Australian football programs would be timely, developmentally appropriate and offer success.

Physically Educating Children Through Quality Australian Football Experiences

The governing body for Australian football, the Australian Football League (AFL) offer the introductory program called Auskick. This program was deliberately developed where children (5-12 years) can learn the FMS of Australian football. The program's purpose is to introduce and attract children to the game and develop their FMS to a level that they can continue to enjoy playing as a member of a football club. Auskick is extremely successful at achieving its

purpose of reaching and introducing children to the game with large numbers participating each year. According to AFL NSW Australian football participation in western Sydney rose 27 per cent in 2012 from 28,306 in 2011 to 37,000 participants (Masters, 2012). The National Australia Bank (NAB ) sponsors of the Auskick program and contend;

NAB's partnership with Auskick continues to provide much needed support to over 180,000 participants and 20,000 volunteers, involved at the 2,900 centres around the country. During NAB's tenure, numbers have increased by over 43,000 participants. Programs such as the NAB AFL Auskicker of the Year, NAB AFL Auskick Local Activity Fund and the NAB AFL Auskick Free-kick initiative demonstrate how NAB is doing more to grow the game. (<http://www.aflauskick.com.au/nab-and-the-afl/>)

However, Masters (2012) was critical of the Auskick program suggesting there is more that can be done to grow this game. Masters (2012) questioned the actual playing numbers of Auskick, quoting report findings by the University of Melbourne, "In the chase for participant numbers in NSW and ACT, a shortened and often subsidised version of Auskick has been aggressively rolled out in primary schools (In-School Auskick) and after-school centres (Community Auskick) ... Junior club feedback has indicated that the In-School and Community versions have, at times, harmed Club Auskick." Masters rationalisation for Auskick not reaching its purpose was because other sporting organisations offer more suitable alternatives:

It appears Sydney kids, brought up on modified versions of other codes, might be different to children from other capitals, preferring competitive games to skill practices. The report says, "Soccer, rugby league and rugby union introductory programs essentially comprise modified games whereas Auskick centres concentrate on skill acquisition drills. Interviews and surveys have suggested that in Sydney there is a preference for more game-based activities to complement skill-based content.

Here within lies the very problem that this chapter has been alluding towards. The skills of Australian football required to play successfully in modified games are complex (Table 1), arguably more difficult to develop than the skills required in the other sports Masters refers to. Children in the early years enjoy playing games (Arthur, Beecher, Death, Dockett, & Farmer, 2015) but they need to be able to play successfully which involves performing the skills 'correctly' (Anshell, 1990; Callcott et al., 2015). As discussed earlier, children firstly need to have FMS, which are best developed when participants are intrinsically motivated. Furthermore, game participants need to be interested, able, engaged and competitive to varying degrees for enjoyment to be experienced.

Short introductory taster programs for a highly multi-skilled game to children who as a generation have limited FMS (Craw, 2015; Barnett et al., 2013) are not sufficient and their developmental appropriateness is questionable. This is exacerbated in the states/territories of Queensland, New South Wales (NSW) and Australian Capital Territory (ACT), where Australian football is not traditionally indoctrinated in culture as it is arguably in Victoria, South Australia, Western Australia, Northern Territory, and Tasmania. That is, a high majority of children will be novices when it comes to the fundamental skills of the game. Hence, reports suggesting children are not developmentally ready in all states to play in modified games of such comprehensive skills, is intensified in the developing states. Rugby based programs require a pass (throw) only before emulating games can be played and soccer based programs require a kick from the ground before games are played, effectively halving the use of limbs required in comparison to Australian football. Hence, children are able to participate successfully in modified games in rugby codes and soccer much earlier.

At present activities offered within Auskick lessons are required to extend children who have established 'fundamental' skills, while in a diverse class, group or team simultaneously create opportunities for beginners with limited experience (closed skill dependant). This scenario is a challenge for teachers, coaches and development officers and will continue to be a challenge when attempting to maintain intrinsic motivation for every child in the early years. Furthermore, it is accentuated that learners should not be placed in situations where they cannot succeed.

There is a progression through stages of skill development which assists to illustrate some of the difficulties children confront when not given the opportunities to master FMS. Adopted from Seefeldt, Reuschlein & Vogel (1972), Thomas (1984) and Callcott, Miller & Wilson-Gahan (2015) skill refinement leading to lifelong physical activities as a process appears in Figure 1:

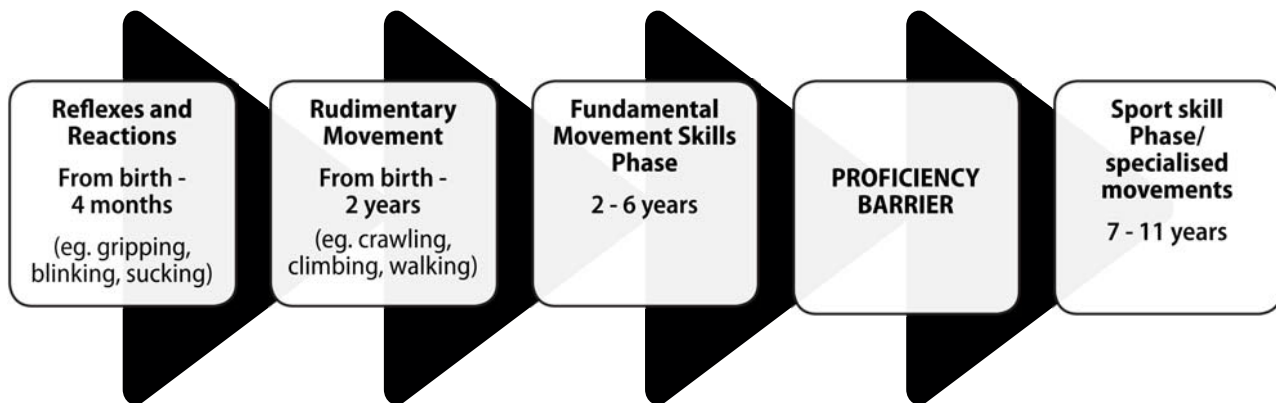


Figure 1: Skill refinement leading to lifelong physical activities

It is paramount that the proficiency barrier (beginning of sport skill development) is achieved in order for all children to optimise their Auskick experience. Again, this affirms the need for FMS acquisition as early as possible and preferably before the Auskick program. Ideally the proficiency barrier which generally occurs around Year 3 at school (7 years of age turning 8) will culminate with myelination which “permits the transmission of nerve impulses and is not complete at birth” (Gallahue & Donnelly, 2003, p. 31). This allows for increased complexity in children’s movement skills and is completed at approximately 7-8 years of age.

This leaves Auskick with a dilemma under the current climate- introduce modified games that do not closely resemble the skills of Australian football sooner or target the FMS used in Australian football in preparation to the Auskick program. I argue that the second option will increase the children’s ability to master the skills and move into modified games in less time so that enjoyment for all will be increased. This latter option is also in the best interest for all Australian primary schools and specifically early year’s children in overcoming the reported crisis in children’s FMS. Furthermore, Australian football is the ideal choice sport to drive this initiative as it involves a more comprehensive set of motor skills than most other sports.

Targeting children in Foundation year (4 turning 5) and Year 1 (5 turning 6) in a well implemented PMP in the early years of all schools would be timely, developmentally appropriate and highly successful. Perception is when “the learner attempts to perceive (make sense out of)” (Anshell, 1990, p. 18) information received. PMP therefore involves children making sense of moving correctly and includes several activities such as gymnastics, FMS, music, fitness and dance. PMP develops DMPs and FMS; locomotor skills, non-locomotor skills and manipulative skills (object control). Specific activities include identifying body parts, body awareness, balancing, animal movement activities, walking, hopping, jumping and landing, ladder with jump box activities (jumping from a height), obstacle courses, running, leaping, skipping, galloping, sliding, working with partners, body movements with ball control, rolling balls, bouncing and catching balls, throwing and catching balls, dribbling balls (hand and foot), striking balls, directionality (external positioning), laterality (left-right concepts), fine motor control using fingertips, rope activities (locomotor and strength development), hoop activities, bean bag and rhythm stick activities, tyre and parachute activities (Capon, 1990). PMP has also been thought to improve literacy and numeracy (Blackmore & Corrie, 1996) but for the purpose of this paper FMS development will remain the focus.

Perceptual motor skills are those which indicate the interrelationships between the perceptual processes and motor activity, and the ability of the individual to receive, interpret, and respond accurately to stimuli, either internal or external. Perceptual motor learning involves all senses: seeing, hearing, touching, tasting, smelling, and moving or kinesthesia.
(Capon, 1990, p. 12)

PMP in the early years of primary schools involve small groups of children rotating through a number of activities often managed with the assistance of parent helpers (Figure 2). They can be eclectic in activities offered and designed to focus on specific FMS, more so they can be tailored to meet the needs of the students. It is vital that parents are well instructed prior to assisting children and can offer valuable feedback and encouragement (Department of Education, 1998).



Figure 2: Perceptual Motor Program

Conclusion

The AFL, along with financial support from organisations such as NAB and Governments (state and federal) should design a PMP deliberately tailored to introduce children to the game of Australian football (culture and rules) while developing the many FMS of the game. Each skill set (Table 1): movement during general play, possession skills, disposal skills, and pressure skills would be practised progressively each lesson, representing DMP and FMS that will benefit all children during their lifetime of physical activities. Such a program could last between 6-8 weeks in duration each year (one 40 minute lesson per week) and every school could be provided with the equipment and professional development. Either PE teachers or Early Year's ambassadors could lead in the implementation and school management. As priority this program would be conducted during school time so that all children are accessed and given the opportunity to develop FMS. Such a program would adopt a strengths-based community collaborative approach (Lynch, 2013b; 2014) which is recommended:

Ideally, children should develop FMS proficiency during early childhood and primary school through a range of opportunities, including unstructured active play, interactions with parents, siblings and caregivers, quality physical education, school sport and community-based programs. (Barnett et al., 2013)

In summary, quality games' include four aspects and all would be enhanced during Auskick through introducing the pre-program 'Auskick PMP':

- i. Safe for all players;
- ii. Inclusive – all players can participate. This involves having the skill level to participate safely and at an enjoyable level;
- iii. Engaging – the players' participation is optimised. Waiting time is eliminated or minimal; and
- iv. Enjoyment is prioritised.


(Lynch, 2013c, p. 19)

Reports regarding children's lack of FMS are alarming. While the AFL Auskick program has been highly successful, criticism has brought to the fore possible enhancement. An opportunity exists for the AFL to be innovative in addressing children's limited FMS development while also promoting and attracting more children towards successful experiences in the game of Australian football.

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