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Movement-Versus Sporting-Based Physical Education in Elementary Schools: Does Either Ensure Quality?

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Abstract. Within the physical education literature, there remains to be contentions between the effectiveness of sporting- and movement-based approaches. Whilst both have noted strengths and weaknesses, there is little research into whether either is leading to quality physical education in Australian elementary schools. This paper therefore examines two of the common models based approaches to teaching physical education in elementary schools against the five interrelated propositions of the Australian Curriculum to determine if either pedagogical approach is leading to quality physical education. This paper draws on current literature, curriculum frameworks and pedagogical recommendations to determine the value of a models based approaches to physical education in relation to quality. Examinations indicate that both the sports and movement based approaches can address the five key propositions that underpin the Australian Curriculum, however quality is dependent on appropriate implementation by qualified and skilled teachers. Teacher education and pedagogical knowledge is paramount for the implementation of quality physical education. Further investigation and exploratory research is required to determine if the model based approaches are being effectively being introduced by both generalist and specialist health and physical education teachers in elementary school settings.

Keywords: curriculum, elementary, movement, physical education, sport.

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INTRODUCTION ~ While PE has had a contentious history, it has been integrated into school curriculum globally for over a century (Puhse & Gerber, 2005). In 1978, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) developed the Charter of Physical Education and Sport which outlined that physical education (PE) is a fundamental right for all, and is an essential element of lifelong education. UNESCO also recognised the important role of PE in reducing the significant health burden related to lifestyle diseases (United Nations Educational Scientific and Cultural Organisation, 2015). In the digital age, the

advancement of handheld technology, televisions, computers, video games has contributed to a significant increase of physical inactivity, sedentary behaviour and lifestyle related disease in young people (Okely A. D. et al., 2012).

While traditional approaches in health and PE have predominantly focused on the development of pre-requisite skills for common sports, recreational activities and physical fitness (Brooker & Clennett, 2006), the rise in non-communicable lifestyle and diet related diseases during the 1980's to early 2000's led to a greater emphasis on worldwide health promotion and

education. As such, the governed curriculum and learning area of PE has changed from focusing primarily on 'sport and fitness' to explicitly linking PE pedagogical practice to curriculum learning outcomes, with the overarching aims being the development of student's skills, psychomotor competencies, values and holistic understandings of health and well-being (Australian Curriculum, 2012). In the literature, this has commonly been termed as 'quality' HPE (McLennan & Thompson, 2015).

The definitions of quality PE within the literature are diverse and implementation of quality curriculum based on policy has remained problematic globally (United Nations Educational Scientific and Cultural Organisation, 2015). UNESCO defines "quality physical education" as planned, progressive and inclusive learning experiences that are developmentally age appropriate, and which encourage students to acquire psychomotor, social and emotions skills while developing cognitive understandings (United Nations Educational Scientific and Cultural Organisation, 2015). This is detailed and specific definition, however unfortunately UNESCO does not provide guidelines on pedagogical practice, nor does it tell teachers how to implement quality HPE into their lessons and meet mandated curriculum. The Australian Curriculum: health and physical education (ACHPE) learning area is aligned to UNESCO's definitions of quality physical education.

When creating the ACHPE, five interrelated propositions were developed to guide pedagogical action and ensure evidence-based quality (Australian Curriculum Studies Association, 2018). There is however, limited research investigating the relationship of the interrelated propositions and common pedagogical approaches to teaching PE. More recently, has been a shift in pedagogical approach and the notion of movement based practice has emerged as the preferred way to teach PE in elementary schools and connect with mandated ACHPE (Kirk, 2013). However, there remains to be inconsistencies in the utilisation and implementation of sport-teaching and movement based approaches in Australian elementary schools.

SPORT-BASED AND MOVEMENT-BASED APPROACHES

Sporting-based approach (SBA): This has also been referred to as "sport-teaching approach". The SBA attempts to educate the students to become 'sports literate' which has also been termed the teaching of 'sports literacy' (Drummond & Pill, 2011). The term 'sport' refers to a variety of physical activity movements distinguished by accepted codifications of rules to enable participants to distinguish specific types of sporting activities. The term 'sports literacy' refers to the functional use of sport knowledge for active and engaged citizenship (Pill, Penney D., & Swabey K., 2012). In 2010, Pill provided four distinct areas for knowledge and understanding of

sport. These are: i) Sport is an applied, practised and situated set of skills; ii) Sport creates embodied meaning, and meaning that can be communicated, interpreted, understood, imaged and used creatively; iii) Sport creates a 'text', which can be read for understanding; and iv) understanding sport requires a learning process (Pill, 2010). Sport literacy approaches aim to provide students with a meaningful and authentic sporting experiences and focus on building sport specific skills so that they can become competent and enthusiastic sportspersons and enjoy being physically active (Siedentop, Hattie, & Mars, 2011).

Movement-based approach (MBA): The MBA aims to make students physical literate and proficient in movement, rather than learn a situated specific set of skills for sports. This approach focuses on building and refining body positioning and movement skills for physical proficiency for a broad range of applications including, but not limited to sport (e.g. active play, minor games, recreational activities, dance, gymnastics) (Whitehead, 2013a). It has a dominant focus on the development and application of a range of body fundamental movement skills (FMS), such as, body management, locomotor and object manipulation. The FMS skills have been reported as the precursor patterns for more specialised and complex movements and have been identified as important for children's, physical, cognitive and social development (Lubans, Morgan, Cliff, Barnett, & Okely, 2010). The aim of this

approach is to build students competence and confident when engaging in all types of movement so they enjoy being physically active. This has led to the emergence of the term '*physical literacy*'. The concept of being physical literate is the possessing the motivation, confidence, competence, knowledge and understanding to maintain a physically active life (Lundvall, 2015).

Whilst both SBA and MBA have noted strengths and limitations when taught in isolation, there is little research into whether either of these models are leading to quality physical education in Australian elementary schools. This paper will draw on current literature, curriculum frameworks and pedagogical recommendations to investigate the SBA and MBA address the five interrelated propositions of the ACHPE to determine if either pedagogical approach is ensuring quality. This paper attempts to address the following research questions:

1. How does the SBA align to the five interrelated propositions of the ACHPE?
2. How does the MBA align to the five interrelated propositions of the ACHPE?
3. Would a blended dichotomous approach be more appropriate to ensure quality PE?

THE STRUCTURE OF THE AUSTRALIAN CURRICULUM: HEALTH AND PHYSICAL EDUCATION

The ACHPE is organised into two content strands: Personal, social and community

health and movement and physical activity. Each strand contains content descriptions which are organised under three sub-strands: i) being healthy, safe and active; ii) communicating and interacting

for health and wellbeing; iii) contributing to healthy and active communities; iv) moving our body; v) understanding movement; vi) Learning through movement (Australian Curriculum, 2017).

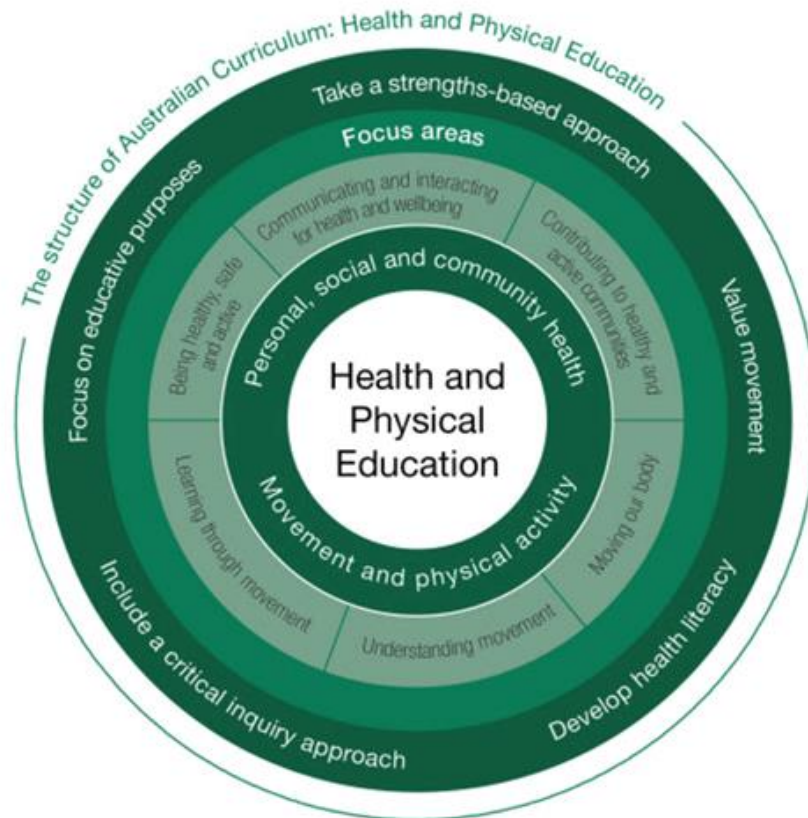


Figure 1. The structure of the Australian Curriculum: Health and Physical Education (Australian Curriculum, 2017).

THE AUSTRALIAN CURRICULUM HEALTH AND PHYSICAL EDUCATION: FIVE INTERRELATED PROPOSITIONS

The ACHPE has been shaped by five interrelated propositions. The following discussion examines both SBA and MBA in relation to each of the five propositions in the curriculum framework. The five propositions are:

1. Focus on the educative purpose
2. Take a strengths based approach
3. Value movement

4. Develop 'health literacy' skills
5. Include a critical inquiry based approach

Focus on the Educative Purpose

This key proposition reinforces that all physical education lessons should have an educative purpose. It highlights that all learning experiences should be developmentally appropriate and provide students with an opportunity to create, synthesise, apply and evaluate knowledge

whilst building physical skills (Australian Curriculum Assessment and Reporting Authority, 2018). The ACHPE curriculum is underpinned by the principals of many fields including physiology, nutrition, biomechanics and psychology (Australian Curriculum, 2012). Previous research focusing on elementary curriculum and pedagogy have often marginalised PE from the other learning areas and referred to it as non-purposeful, non-academic or non-cognitive education (Alexander & Luckman, 2001). PE curricula has been criticised with some researchers reporting that the learning has been limited to fundamental movements, motor and sport performance skills (Lumpkin, 2005). It has been reported that one reason that elementary PE has frequently concentrated on developing technical expertise in sport is the PE teachers' narrow interpretation of the curriculum and focus of teaching (Brooker & Clennett, 2006).

Due to the progressive and needs based evolution of the PE curriculum, there remains a prominence of embedded sport. Whilst it has been reported that sport in PE can enhance students access to practices that enable them to make positive contributions to society, skilled teachers with an expertise in interpreting the ACHPE are required to ensure that pedagogical approaches to PE are implemented correctly to promote application, evaluation and synthesis of knowledge. Novel pedagogical approaches such as MBA's, attempt to increase physical

literacy for application across a range of areas and advocate for the delivery of current content in the PE field which is socially constructed and hence relevant. The MBA provides settings where students can explore their learning, experience their body during physical activity and solve problems by interacting with others and the environment (Whitehead, 2013b). Although SBA and MBA's are fundamentally different, both approaches provide educationally rich environments where the students engage in explorative learning through movement to build physical competencies.

Take a Strengths Based Approach

This key proposition focuses on supporting students to develop their strengths and be an advocate for their own health. Rather than focusing on potential risks for health, the ACHPE has a larger focus on providing knowledge, understandings and skills so that students have the ability to make sound choices and decisions about their own health. This key idea affirms that students and communities have particular strengths that can be utilised to enhance their well-being, movement competence and level of participation in physical activity (Australian Curriculum Assessment and Reporting Authority, 2018). The SBA teaches sports literacy with the overarching goal for students to creatively use this knowledge to become active sport engaged citizens. Research suggests that application of holistic understandings of sport will have a positive impact on physical, social and emotional health (Pill et

al., 2012). In addition, team memberships and student centred learning with an SBA promotes personal and social development as well as cooperation, student leadership, trust and problem solving skills (Wallhead & O'Sullivan, 2005).

The MBA focuses on creating environments where students can practise skills through high active modified and minor games. Students are required to collaboratively work together to explore their learning, apply strategies and tactics to achieve identified outcomes in game environments (Casey & MacPhail, 2018). Whilst the SBA has many positives, it has been criticised as potentially not serving the interests of many students, especially those elementary students who have lower skill levels (Araújo, Mesquita, & Hastie, 2014). Consequently, contemporary PE approaches (such as, the MBA), aim to create inclusive student centred learning experiences through modifiable environments to suit the needs of the students and aim to support existing strengths. If implemented properly, both MBA and STA provide opportunities where students are required to reflect on their learning, and hence, build students' knowledge and understandings of their own health so that they are able to make informed, timely and healthy decisions.

Value Movement

This key proposition reinforces that all learning experiences should provide a variety of opportunities for students to enhance movement competence and confidence. The pedagogy should

explicitly focus on refinement of developmentally appropriate movements and aim to enhance a range of personal and social skills (Australian Curriculum, 2012). PE learning experiences should promote the appreciation of movement as a valuable tool for lifelong health (Australian Curriculum Assessment and Reporting Authority, 2018). Both the SBA and MBA share an overarching goal of enhancing students' knowledge and understandings of physical activity and the potential positive impact it can have on physical, social and emotional health. As the MBA has a more dominant focus movement proficiently in a range of learning environments that align to the ACHPE curriculum focus areas (for example: active play and minor games, challenge and adventure activities, rhythmic and expressive activities and FMS), it is, consequently, a superior approach to SBA when addressing this proposition (Australian Curriculum, 2012).

Develop 'Health Literacy' Skills

Health literacy is defined as an individual's ability to gain access to, understand, and utilise health knowledge and services so that they are able to maintain good health and well-being. To develop health literacy students need to be provided with a range of opportunities to access, analyse, critique health information and services (Australian Curriculum Assessment and Reporting Authority, 2018). As both the SBA and MBA are approaches to teaching PE rather than health specifically, the dominant focus is on

physical literacy rather than health literacy skills; hence are both limited in addressing this proposition area. However, as stated above, regardless of the approach taken, all PE learning experiences should be educative, enhance the development of health knowledge and understanding and promote critical and higher order thinking (Dudley D., Telford, Peralta, Stonehouse C., & Winslade., 2018). To properly address this proposition, health literacy outcomes and assessment should be embedded into all PE programs.

Include a Critical Inquiry Based Approach

This key idea aims to engage students in critical inquiry by creating learning experiences that involve deeply analysing and evaluating social, environment and contextual factors that influence health and movement behaviours. Students should be provided with opportunities to research, analyse, apply and appraise health and movement knowledge (Australian Curriculum Assessment and Reporting Authority, 2018). As suggested by Pill (2010), for students to properly understand the multifaceted nature of sport, students are not only required to practise situated set of skills, but also to be able to create embodied meaning of sport that can be interpreted, understood, evaluated and creatively applied (Pill, 2010). Therefore the SBA approach has the ability to provide educationally rich, contextualised opportunities for students to analyse health and movement knowledge and be involved in critical inquiry. Similarly,

the MBA focuses on building a holistic view of movement and health. Students can use their knowledge and understanding of physical activity and movement to question social, cultural and political factors that influence health and wellbeing. By including critical enquiry, both the SBA and MBA's can challenge students to problem solve, analyse and evaluate the complex sociocultural issues that affect health and physical activity participation, hence make informed decisions about their own health.

RECOMMENDATIONS

Hybridisation of Approaches

Both SBA's and MBA's have noted strengths and weaknesses when aligning to the five propositions of the ACHPE. One solution to addressing the weaknesses of implementing isolated approaches is the hybridisation (Casey & MacPhail, 2018). A recent systematic review of 20 pedagogical models for teaching PE in years 1– 12 found that there are advantages to teaching hybridised models over isolated approaches as there is the ability to address a multiple learning outcomes and domains of the curriculum. However, the review identified that for a hybridised approach to be successful there were three key features were identified: i) teacher commitment, pedagogical content knowledge, teacher experience and education (González-Villora, Evangelio, Sierra-Díaz, & Fernández-Río, 2018). The introduction of models based approaches (such as STA or MBA), into the

school PE program is complex and preliminary research has suggested that a large proportion of elementary teachers are not confident or competent enough to implement models based PE (Casey & MacPhail, 2018; Morgan & Bourke, 2008). Further research in this area is warranted to investigate the implementation of models based practice.

Skilled Teachers with Deep Pedagogical and Content Knowledge

Based on the definition from UNESCO, the quality of the learning experience is hinged on the education and skill level on the teacher (United Nations Educational Scientific and Cultural Organisation, 2015). UNESCO highlights that teachers that possess deep pedagogical content knowledge and the ability to provide valuable and meaningful learning experiences will ensure their students build skills, knowledge and the self-efficacy to lead healthy and active lifestyles (Dudley D. et al., 2018). This confirms the previous decades of research from the International Council of Sport Science and Physical Education (ICSSPE) which have recognised the importance of teacher education and resources to effectively improve the quality of PE worldwide (International Council of Sport Science and Physical Education, 1999; United Nations Educational Scientific and Cultural Organisation, 2015). Consequently, regardless of whether an approach is dominantly focusing on sport literacy or movement proficiency; if taught in isolation or hybridised; it will not ensure

quality unless is implemented by a skilled well qualified teacher with the proper resources. In addition to skilled teachers with specific content knowledge, a curriculum that is underpinned by a quality education framework is also needed.

Tailoring Approach to Needs of the Students

A blended dichotomous model may better address the five interrelation propositions of the ACHPE than an approach used in isolation, but as teacher education/experience, pedagogical and content knowledge remains varied internationally, there continues to be no recommended generalisable approach to teaching PE. It is therefore reasonable to identify the interests and needs of the elementary students, school and community and tailor a multidimensional approach to teaching sport literacy and movement proficiency. This will ensure that the pedagogical approach is appropriate and developmentally suited to the students' needs and skill level. Younger elementary students will require approaches that provide a large amount of skill practice time to build movement proficiency and FMS skills, such as the MBA. Whereas, upper elementary students may be more suited to approaches that provide opportunities for ongoing skill development, skill refinement and application of skills in a range of environments, such as the SBA. This, in conjunction with a qualified and skilled teacher that has access to the required resources should ensure that a quality PE program which promotes holistic

understandings and knowledge of the importance of physical activity and health is delivered.

CONCLUSION

The five interrelated propositions of the ACHPE promote the use of diverse learning experiences to build a holistic understanding of health and movement behaviours. Although both SBA and MBA have noted strengths and weakness, a dichotomous model that encompasses the strengths of both sporting and movement based approaches (and potentially strengths of other existing models based approaches), could potentially better address the five propositions of the ACHPE. Further research in this area is warranted to determine the quality of PE provided through a dichotomous or hybridised approaches. Prior to selecting an approach to teaching PE, teachers need to identify the needs and skill level competency of their students to ensure content is developmentally appropriate. Based on literature and curriculum framework, quality of PE will be guided by approach and implementation. Although we have seen a recent reform in PE curriculum across Australia, the quality of PE appears to be dependent on teacher education, expertise, pedagogical and content knowledge. Further investigation and exploratory research is required to determine if the sporting and movement based approaches are being effectively being introduced elementary teachers in Australian schools.

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