

## **BULLETIN No 65, October 2013**

Journal of Sport Science and Physical Education

### **Feature: "Physical Literacy"**



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## Publisher`s Statement

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### Editorial


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*Ben Weinberg*

Welcome to issue No. 65 of ICSSPE's Bulletin, which provides a Special Feature on the concept of physical literacy and its role in the context of physical education, physical activity and sport. The section contains contributions on various aspects of the concept including its historical background and definition; pedagogical implications; physical literacy throughout different phases in life and with regard to particular populations; the relationship of physical literacy with coaching, health or creativity; the role of physical literacy in teacher education; and the profile of physical literacy in a number of countries. The Special Feature was designed, compiled and reviewed by Margaret Whitehead and Symeon Dagkas, both of whom are outstanding experts in the field. I would like to thank them for their great commitment and dedication.

The Current Issue section consists of nine articles. The first named "Healthy Aging in the 21st Century" by Karin Volkwein-Caplan addresses the importance for communities to provide availability of and access to health promoting behaviours. Carlos Vera Guardia then provides insights into the 50th anniversary of the International Association for Sports and Leisure Facilities, followed by Steffen Neubert's contribution on the activities of the European College of Sport Science in the year 2013. Christine Milner's article deals with "L'Arche, a Community of People with Disabilities and the University Graduate in the Allied Health Fields: A Potential Collaboration", while Paolo A. Adami, Mimi Rodriguez and Gabriella Pappadà describe the main results and methodology of "The eLF - eLearningFitness Project", which aims at facilitating the growth and expansion of the health enhancing sport and physical activity sector in Europe and worldwide. Michael Leitner, Yair Galily and Pini Shimon portray "The Effects of Mifalot Soccer Programmes on the Attitudes of Arab and Jewish Youth towards Each Other", and Rosa López de D'Amico depicts "New Doctoral and Masters Programmes in Venezuela". The article by Darlene Kluka, Anneliese Goslin and Rosa López de D'Amico meanwhile is concerned with the question "Women: Are they changing the face of global sport management?". The section closes with a compilation of recent ICSSPE news.

Finally, I would like to remind you that contributions for the Bulletin are always welcome, whether you would like to submit an article, a review, or report on a meeting or conference, introduce a new research project or university programme. Feedback on the format, or any aspect of the Bulletin, is always appreciated. Please email me at [bweinberg@icsspe.org](mailto:bweinberg@icsspe.org).



Ben Weinberg  
Manager Services

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## President's Message

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*Margaret Talbot*



This ICSSPE Bulletin, which focuses on the concept of physical literacy and its promotion through physical education and programmes of physical activity and sport, is an excellent example of the power of ICSSPE's international networks and the depth of academic and practitioner expertise which is provided by its membership. The thinking and debate on physical literacy has progressed significantly during the last 5-10 years, with the Editor of this Bulletin, Dr Margaret Whitehead leading conferences and symposia across the world. ICSSPE is indebted to her and to her co-Editor, Dr Symeon Dagkas, for their hard work in assembling such a rich collection of contributions. It is regrettable, as Margaret remarks in her Introduction, that the collection lacks coverage of the importance of physical literacy for persons with a disability – and ICSSPE invites practitioners and researchers working in this area, to come forward to fill that gap. It is also hoped that this Bulletin will further stimulate debate and discussion of physical literacy.

At the time of writing, ICSSPE is participating in the preparation of UNESCO's Guidelines for Policy Makers in Physical Education, and its associated Toolkit, which should be available early in 2014. This development is welcome, following as it does, ICSSPE's International Committee of Sport Pedagogy agreeing International Benchmarks for Physical Education, which are designed to enable governments and system leaders to evaluate their own systems and plan measures to address weaknesses and build on strengths. It is vital that any advice offered at international level accommodates the huge variation in infrastructure across different countries, and the challenges faced by those rebuilding their education systems after strife, disaster or crisis.

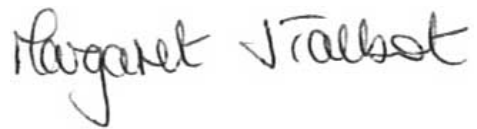
This was evident from the interventions by Ministers and Senior Officials during the MINEPS V Conference in Berlin in May 2013. The Conference agenda and consequent Declaration of Berlin were enhanced and enriched by the excellent scientific and advocacy contributions from ICSSPE members – and the Conference itself provided a unique example of the value of collaboration between UNESCO, government organisations – in this case, the Federal Ministry of the Interior of Germany - and NGOs – in this case, with conference organisation and scientific input led by ICSSPE. ICSSPE is now assisting UNESCO in regional meetings to help to follow up the recommendations in the Declaration of Berlin.

Partnership has been a recurrent and powerful element in ICSSPE activities during the year following ICSEMIS 2012. Perhaps the most pleasing development has been the many and varied invitations ICSSPE and its officers have received to participate in events and programmes which aim to promote physical activity for health. This has helped to progress ICSSPE's strategic priority "Healthy Living Across the Lifespan". Ten years ago, organisations representing physical activity were routinely excluded from health promotion fora. In 2013, ICSSPE has developed important partnerships with Nike and the American College of Sport Medicine, in co-authoring and promoting "Designed To Move"; with "Excellence in Paediatrics" and the PEARL Summit (Promote Energy Balance, Active and Real Living); with the Hellenic Nutrition Foundation; and with Generation Europe, to produce a healthy lifestyles planner for thousands of European school students; and most recently with TAFISA, to establish a Global Coalition for an Active World.

Beyond the health promotion field, too, new partnerships have been forged: examples include development of a shared resource on values education through sport, with WADA, IOC, IPC, UNESCO and International Fair Play; and a contribution on monitoring and evaluation for Peace and Sport. ICSSPE members and partners have provided venues and events to support ICSSPE meetings, notably Barry University Miami, for the meeting of the Editorial Board; Tianjin University of Sport and the All China Sports Federation, for the ICSSPE Statutory meetings and Conference on Quality Physical Education; and the National Association of Sport and Physical Education India and Shree Hanuman Vyayam Prasarak Mandal, Amravati, for the first meeting of the newly-elected President's Committee and Global Conference on Traditional Cultures, Sport and Games. ICSSPE values its ongoing partnerships with publishers, especially Human Kinetics Publishers, for the 2014 Directory of Sport Science, now available on-line for all ICSSPE members; and Routledge, for the "Perspectives" book series, which has increased both distribution and quality. ICSSPE has agreed to become a Strategic Partner of the International Working Group on Women and Sport, for its 2014 Conference in Helsinki in June 2014; and will hold its Statutory meetings there, hosted by the Finnish Society of Sport Sciences.

ICSSPE has reviewed and developed its three strategic priorities – Quality Physical Education; Healthy Living Across the Life Span; and Ethics and the Integrity of Sport – each now with ICSSPE member organisations leading their development and activities, and with potential seed funding to support their work. Planning has begun for ICSEMIS 2016 in Brazil. ICSSPE member organisations, as in 2012, will be vital contributors and beneficiaries of this unique multi-disciplinary Convention. ICSSPE looks forward to

further development during 2014; and invites all members to play an active part in ICSSPE events, programmes and publications.

A handwritten signature in dark ink, reading "Margaret Talbot". The script is cursive and fluid, with the first name and last name clearly distinguishable.

Professor Margaret Talbot, PhD OBE FRSA  
President

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## Welcome New Members

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Since July, ICSSPE has received the following new membership applications which will be ratified at the 75nd Executive Board Meeting:

A174-1

Karlsruher Institut für Technologie (KIT)

Germany

11 Dezember 2012

D090-10

Federal University of Juiz de Fora Minas Gerais

Faculty of Physical Education

Brazil

17 Dezember 2012

B121-3

World Silambam Federation

India

21 January 2013

B121-3

International Council of Sqay

India

21 January 2013

A174-1

Centro Sportivo Educativo Nazionale (CSEN)

Italy

22 February 2013

C090-2

Brazilian Physical Education Council

Brasil

22 February 2013

D090-11

University of Nine July

Brazil

22 February 2013

D142-1

Indonesia School Sport Society

Indonesia

7 March 2013

D043-1

Escola Superior de Ciências do Desporto / Universidade Eduardo Mondlane

Mozambique

15 April 2013

D057-32

Institute for Scholastic Sport Science & Medicine (ISSSM)

USA

15 April 2013

D174-6

University of Cassino and Southern Lazio, Department of Human Science Society and Health

Italy

25 April 2013

D121-13

Manghanmal Udham College of Commerce, Department of Physical Education

India



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### Introduction

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Welcome to the ICSSPE Bulletin on Physical Literacy. I hope that you find the papers informative and easy to read. I am delighted that so many people have followed up my suggestion that they write a paper – far more than I had anticipated! However this willingness to write evidences a wide acceptance of the concept and an interest to share ideas and developments from a range of perspectives. Very many thanks to all the authors and to ICSSPE for offering us this opportunity to bring together current thinking on physical literacy.

Physical Literacy defined as presented in the second paper in this Bulletin has developed over the last 20 years, being presented for the first time at an IAPESGW Congress in 1993 in Melbourne. Prior to this the concept had been referred to by a number of writers but had not been widely debated or interrogated.

Physical Literacy as defined in this Bulletin is not a concept that has been randomly selected to provide a rationale for the value of physical activity. Far from it, the concept has been systematically developed, building on the philosophical foundations of Existentialism and Phenomenology. One of the motivations behind the development of physical literacy is to identify the significance of our embodied dimension and physical activity in human life as we know it. With this significance secured we can assert that physical activity has educational validity. The suffix of 'literacy' was never chosen to give the subject a 'back-door' entrée into the 'academic' areas of the curriculum. Literacy as used nowadays in many contexts signals the way any human capability can promote human interaction with the world and, via this interaction, enhance quality of life.

While much of the work shared in this Bulletin is school focused it is important to remember that physical literacy is a life-long journey and has relevance in all stages of life – from cradle to grave.

While most of the papers are written against the background of 'Western culture', the concept is applicable to all – notwithstanding customs and culture. One of the next tasks in relation to physical literacy is to work with colleagues across the world and assist them in shaping advocacy that is sensitive to their way of life. While the concept was developed in England, it is excellent to have evidence that it is being seriously considered across the world. Particular interest has been shown in Canada and Australia as well as the Americas and Europe.

As indicated above, physical literacy is relevant to all people in all countries although it needs to be incorporated appropriately into different societies. That said, to preserve the

integrity of the concept it is very important to stress that the key elements of physical literacy must be addressed. The definition identifies the elements of motivation, confidence, physical competence and knowledge and understanding. Whatever nuances are needed for application in any context, these four elements must be addressed. Omission of any one or having a sole focus on any one will not be promoting physical literacy. While physical competence is at the heart of physical literacy, development limited to this element alone will not necessarily foster physical literacy.

Physical literacy has seen exciting development over the last ten years. A national seminar was held in UK in 2008 and this was followed up by four regional seminars. Two International Conferences ran in 2011 and 2013. There are plans to re-launch the website to share ideas and research. Scholarly writing and research are both increasing, with growth in publications and in the number of students studying physical literacy as the focus of doctoral and post-graduate work.

Alongside these developments it is interesting to read work by colleagues from other disciplines such as neuro-science, cognitive psychology and sociology that clearly support much of the underpinning rationale for the importance of capitalising on the embodied dimension/motile potential as a significant characteristic of the human condition.

This Bulletin is another step towards encouraging debate and discussion around physical literacy. It is hoped that the contents will elicit further contributions and ideas from colleagues across the world, who work in physical education and sport and related areas.

The Bulletin is set out in Sections

Section 1 covers the background to the concept and sets out the definition, identifying key aspects over which there is some misunderstanding. This is followed by three papers on the value of the concept of physical literacy. Section 2 explains that physical literacy is relevant cradle to grave and is best seen as a journey. Section 3 provides some answers to the question 'How can physical literacy be fostered?' Papers set out the implications for practitioners of adopting physical literacy as their goal in leading work in physical activity/pursuits – whether this is in a school, coaching or leisure activity context. One writer then reminds readers that physical literacy is a much broader concept than simply the development of fundamental movement skills and the final paper explains that while pedagogical implications are very important, content implications should also be taken seriously.

Section 4 looks at the importance of promoting physical literacy in the early years and shares a programme developed by the British Heart Foundation. Section 5 develops this area and includes three case studies on work with younger learners. Section 6 focuses on the secondary years with a particular interest in fostering motivation. Most papers include reference to case studies while others are wholly concerned with sharing a small scale investigation in school. Section 7 alerts readers to the importance of physical

literacy in the adult years and Section 8 looks at particular populations. We regret that there is not a paper looking specifically at individuals with a disability. There is some good work going on in this field and references are given for those interested to follow this up.

Section 9 includes two papers that aim to relate physical literacy to other concepts, namely health and creativity, while Section 10 contains two papers on the relationship between physical literacy and coaching. Section 11 comprises three papers that look in different ways at the role of physical literacy in initial teacher training in UK, at primary, secondary and postgraduate level. Section 12 focuses on charting progress in an individual's physical literacy journey. There is a range of initiatives being taken in this field and there are papers from Canada and Northern Ireland.

Section 13 is most welcome in that it reports on physical literacy across the world. Many of these authors presented at the 2013 International Physical Literacy Conference and agreed to re-present their paper for this Bulletin. The first three papers are from UK and report on curriculum developments in Wales, the work of Sport Northern Ireland and a new programme in Scotland. This is followed by papers on the developments in The Netherlands, The Czech Republic, Sweden and Malta. Papers from South Africa and Australia recount how physical literacy is being developed alongside particular philosophies and colleagues from Canada share the extensive work taking place in their country. The last four papers are from the Americas. A colleague from Venezuela shares experiences of working to introduce physical literacy while three writers from USA each take a different perspective on physical literacy in their country. These authors address the relationship between health and physical literacy, teacher-learner interaction and Continuing Professional Development.

The authors would welcome feedback on their work and look forward to hearing from readers from all over the world. As we develop our physical literacy website we plan to have an area in which ideas and research can be shared. There is still a great deal of work to be done to embed physical literacy across the life-span and to accrue the benefits this offers.

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## The History and Development of Physical Literacy

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*Margaret Whitehead*

### Abstract

This article looks at the history of the development of the concept and makes reference both to what are seen as current attitudes to physical activity and also to the philosophy that underpins the concept. Issues concerned with the notions of 'physical' and 'literacy' are discussed and the piece concludes with an assertion that physical literacy provides a sound footing on which physical activity can be seen as of intrinsic value.

### Introduction

Over the past eighty years the notion of physical literacy has been referred to fleetingly by a number of writers in a variety of contexts, not all related to physical activity per se. For example some have been concerned with movement as communication or a form of language. However the concept was never systematically developed. Nor was it perceived as one that could be aligned with the thinking of certain philosophical schools of thought that championed our embodied dimension as of significance in human life.

The development of the concept saw the coming together of a life in the world of physical education and more recent philosophical study.

### Physical Education and Physical Activity throughout Life

Over the fifty years in which I have been involved in physical education and physical activity I have become increasingly concerned that:

- fewer people are continuing with physical activity after leaving school
- sedentary leisure pursuits are on the rise
- cases of obesity and stress related conditions are increasing
- in many schools and other physical activity settings there was, and is, a subtle move towards high level performance being the principal focus of the subject.

In relation to this last concern, David Kirk (2010) describes the nature of the subject as 'physical education as sport-techniques', while Chris Shilling (2008) writes 'that we are

living in an era of performative sport'. There would seem to be a possible link here with the first two concerns mentioned above. It could well be that with high level performance taking centre stage, those unable to match up to this aspiration are being seriously demotivated and thus all too ready to opt out of active participation when they complete their schooling.

Together these situations present a worrying picture, and regrettably one that seems unlikely to change in the short term. It would seem to be the case that the value of physical activity, beyond the achievement of successful performance at international level, is minimal. Indeed apart from the well rehearsed benefit of exercise to promote physical fitness among the general population, physical activity is viewed as a dispensable recreational pursuit.

This was a disturbing view and one that did not resonate with my own perception of the significance and value of physical activity in human life. This disquiet led me to study certain schools of philosophy, each of which articulated the view that movement and our embodied dimension play a crucial role in life as we know it.

### **Philosophical Studies that played a Part in the Development of the Concept of Physical Literacy**

Three areas of philosophy provide well argued support for human embodiment as an important human potential. These are monism, Existentialism and Phenomenology.

#### **Monism**

An early diagnosis in my quest to identify why physical activity and hence physical education has such a low profile was the perception that there was an unquestioned acceptance of dualism. Dualism views the human as comprising two separable parts , the mind and the body, with the mind being far superior to the body and the body being only of importance to keep the mind alive. This view goes back to Plato (1928) but is principally associated with Descartes (1641) who famously said 'I think, therefore I am.'

In opposition to this view, Monism views a person as essentially an indivisible whole. One of the longstanding issues in philosophy and the sciences is the problem of how the body and the mind can work together. However Strawson (in Gill 2000), who advocates Monism, dismisses this issue in asserting that the person is first and foremost one entity. He argues that there is no problem concerning putting the body and the mind together as they are two elements of an intricately integrated entity. We are comprised of a range of potentials which are interdependent and mutually enriching. This view was supported by Sartre (1957) who wrote that 'For human reality, to be, is to act'. Similarly Burkitt (1999) writes ' prior to the Cartesian '*I think*' there is an '*I can*' '. This view is now held by many philosophers, neuroscientists and cognitive psychologists. Modell (2006) writes that nowadays there are 'practically no neurobiologists who believe in a Cartesian dualism.

Notwithstanding these views, Descartes' dualistic assertions have been locked into the thinking of western cultures to such an extent, that habitual language use re-affirms dualism in the way that it refers to the body as a noun. Leder (1990) writes that the

stranglehold of dualism has resulted in our being 'trapped inside a picture – a dualist picture that has limited our self- development and self-relation.'

What is overlooked is the fact that there is more than one way in which our embodiment contributes to our nature as humans. Put simply, there are two very different modes in which our embodiment plays a part in life – the embodiment as an instrument and the embodiment as lived. It is the latter that is overlooked - yet it is this dimension of ourselves which has a highly significant role to play. Habitual language use results in our falling into the dualist trap of only seeing our embodiment as an instrument - forgetting the all pervading role of the embodiment as lived. Our embodiment as lived functions very much on a pre-conceptual level and is thus taken for granted. The exceptional motile intelligence this dimension of ourselves displays is effected without conscious thought and for this reason is overlooked.

Two schools of thought which build from a Monist perspective are Existentialism and Phenomenology. Both schools have high regard for our embodiment as lived.

## Existentialism

Briefly Existentialists assert that we create ourselves through our interaction with the world. In other words our uniqueness or essence arises as a result of the experiences we have in interacting with the world. Existence precedes essence. The nature of our being is a result of the accumulated experiences we have in the different environments we inhabit. We are quintessentially beings of the world. As we become familiar with the world about us we also come to realise the wide range of capabilities we have with which we can

interact with the world. Interaction is the key to life, the stimulus to our development. It follows that all those aspects of our human nature that enable us to interact with the world are key capabilities that should be nurtured in the interests of realising a fully human existence. Our embodied capability is one such aspect and should therefore be seen as an important human potential. That is, not as dualists would have it, an inferior aspect of our nature, serving only to house the mind. This is endorsed by Burkitt (1999) who writes – 'prior to thought and representation, there is a primordial coexistence between the body and its world, which grounds the possibility of developing conscious awareness and knowledge'.

## Phenomenology

Phenomenologists build from both Monism and Existentialism and interrogate the nature of perception, which they view as a crucial element of interaction. A significant foundation of their work is that we perceive the world from the backdrop of previous interactions. On account of the fact that each of us brings our personal cluster of previous interactions to a situation, each of us will perceive the situation from a unique and personal point of view. With the inherent involvement of our embodied capability in almost every interaction it follows that our embodied capability will significantly influence our perception. Embodied experience is integral to human existence, we see the world from the perspective of an embodied being. Phenomenologists have interrogated perception with the consistent view, as exemplified by Leder (1990) that 'Perception is itself a motor activity. Moreover, that which is perceived is always saturated by the implicit presence of motility.'

Thus embodied experience is as important as all other experiences in our understanding of the world – the world of animate and inanimate features. Research now shows that in the early years embodied interaction is the most important medium of interaction and furthermore its value persists throughout life as embodied interaction provides the backdrop to most of our dealings with others and the world.

There is a great deal more to be said about these schools of philosophy (Whitehead 2010) however this brief explanation provides a window into a very different world - a world in which our embodied dimension is a human dimension of incalculable significance, and one that we ignore at our peril.

## **The Way forward**

The challenge arising from my philosophical study was to find a way to share this significance with others and to make a case for the recognition of the embodied dimension as an important human capability. A concept was needed that identified the role of our embodied capability in human life as we know it or put in another way to identify the human ability to effect 'fluent and productive embodied interaction with the world'. The concept would need, firstly, to include reference both to the embodied dimension. Secondly it would need to signal Monist principles and identify the contribution this human capability makes in the majority of our interactions with the surroundings. Physical literacy was the chosen concept, 'physical' fulfilling the first requirement and 'literacy' fulfilling the second.

## **Challenges to the Concept of Physical Literacy**

The concept of physical literacy as identifying a human capability with considerable significance and philosophical support was first presented in 1993. Unsurprisingly there has been, and remains, ongoing debate about the adoption of the concept.

'Physical' was seen to be perpetuating the idea of the 'body' as an object, and 'literacy' was seen as being too closely related to the ability to read and perhaps not a term that it was appropriate to use in relation to our embodied capability.

## **In defence of 'physical'**

While 'physical' does have unfortunate dualist connotations there is no denying that we inhere a physical dimension which is part of our human nature working in orchestrated harmony with all our other capabilities.

'Movement' was advocated as an alternative to 'physical'. While it is true that 'movement' avoids the dualist connotations of 'physical', the term 'movement' applies to a myriad of non-human phenomena such as transport and the workings of machines. On this account 'movement' has not, generally, been seen as appropriate for use in the field of physical education – although it is been employed on occasion to describe the physical



activity undertaken in education in the early years and was, for a few years, used to describe academic departments through giving them the title of 'Human Movement Studies'. Other alternatives to 'physical' are the philosophical terms 'embodied' and 'motile'. Resultant terms would be either 'embodied literacy' or 'motile literacy'. While these might be acceptable terms in the context of philosophy, they were seen as inappropriate for general use, being unfamiliar and somewhat esoteric in nature. So, while accepting that the continued use of the term 'physical' has unfortunate associations with dualism, rather than helping to signal the monist view that as humans we are a whole, it was seen to be the most acceptable term to refer to our embodied capability.

### In defence of 'literacy'

Alternatives to 'literacy' suggested were 'competence', 'ability' and 'skill'. However 'physical competence', 'physical ability' and 'physical skill' would seem to leave the concept very much tied to pure physicality and to perpetuate dualistic attitudes. While physical competence forms a key element of physical literacy, the terms identified above would seem to focus on the embodiment as a machine or an instrument and do not address important role of the embodiment as lived. Nor do these terms signal the interactive significance of the embodiment as highlighted by Existentialists or endorse the monist foundation of the concept.

The notion of literacy as characterising a form of interplay with our surroundings or productive relationship with the world is supported by UNESCO. The definition of literacy given by UNESCO refers to literacy in its traditional use as a stand-alone concept being the:-

*"ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society".*

*UNESCO Education Sector Position Paper: 13. 2004.*

Notwithstanding the fact that this definition is directed to the written word, the reference to literacy as facilitating full participation in the community and wider society undoubtedly infers the development of a productive relationship between individuals and their environment. In UNESCO's terms this relationship is made possible through the ability to read and write. However I would argue that, in line with existentialist thinking, there are multiple ways in which we can develop this productive relationship. This would seem to be endorsed in that a good many subject areas have now adopted the suffix 'literacy' to describe the value, goals and intentions with respect to their work. The following can be found on the world-wide web:- Music literacy, Computer literacy, Digital Literacy, Nutrition literacy, Political literacy, Media Literacy, Maths Literacy, Science Literacy, Geographic Literacy, Arts Literacy, Health Literacy, and, of course, Physical Literacy

Clearly there has been a major shift in the understanding of the term 'literacy' – now being subject to much wider use. In this context it could be asked 'What are the common

threads of understanding among all those who are now adopting 'literacy' as an element of their lexicon?' I would propose that all would want to include attributes such as appreciation, recognition, knowledge, understanding, assimilation, accommodation and the initiation of an appropriate action, relevant to their specific context. In combination these attributes would seem to point to the ability to respond appropriately and engage productively within a particular field.

I suggest that the phrase 'fluent and productive interaction' with the world, sums up the root characteristics of 'literacy' in any field/area. Effective interaction with the world is, in the view of Existentialists, the key to a fulfilled life. This interaction is available in any medium through which we interact with the world, hence the acceptability of the current multiple uses.

In this context I feel it is not inappropriate to use the language and substance of the UNESCO definition and to describe physical literacy as identifying a human capability that affords us

*'the ability to identify, understand, interpret, create, respond effectively and communicate, using the embodied human dimension, within a wide range of situations and contexts. Physical Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society'.*

At this stage it needs to be stressed that the adoption of the notion of 'literacy' in the field of physical activity is not designed to give academic respectability or credibility to this human capability, but rather to highlight its educational validity as part of a liberal education that recognises all our human capabilities and potentials as of equal importance and value.

## Conclusion

In summary, I argue that the notion of 'literacy' in conjunction with the notion of 'physical' is both apposite and revealing. Physical literacy is in tune with certain schools of philosophy and has resonances with life as we know it

Physical literacy:-

- signals the significance of the embodied dimension in interaction with the world, and in so doing acknowledges the role of this dimension in perception
- implicates the embodied dimension in doing, interpreting, responding and understanding, thus underwriting Monist views
- implicates the embodiment as lived and thus broadens the role of the embodied dimension being purely a machine or instrument
- has non-exclusive connotations, indicating all can achieve this capability in line with their unique endowment

The concept of physical literacy underwrites the key role that the embodied dimension plays in life as we know it. In the context of our nature as beings-in-the –world physical literacy affords us an essential avenue of interaction without which we could not realise our potential as humans. Physical Literacy supports the view that we should celebrate our embodied capability, a capability that needs no justification beyond its unique and indispensable contribution to human life.

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## Definition of Physical Literacy and Clarification of related Issues

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Margaret Whitehead

### Abstract

This article sets out the current definition of physical literacy and then discusses a range of issues, many of which seek to clarify the concept and counter misinterpretations that have dogged the development and acceptance of the concept. The material in this article draws on the physical literacy website and the publications by Whitehead et al in the references.

### The Definition of Physical Literacy

In short, as *appropriate to each individual's endowment*, physical literacy can be described as a disposition to capitalize on our human embodied capability, wherein the individual has:

the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the lifecourse.

On account of our holistic nature, individuals who are making progress on their individual/unique physical literacy journey, demonstrate the following attributes:

1. the motivation and confidence to capitalize on innate movement/physical potential to make a significant contribution to the quality of life.

*All humans exhibit this potential, however its specific expression depends on individual endowment in relation to all capabilities, significantly movement potential, and is particular to the cultural context.*

2. movement with poise, economy and confidence in a wide variety of physically challenging situations.
3. sensitive perception in 'reading' all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these, with intelligence and imagination.

4. a well established sense of self as embodied in the world. This together with an articulate interaction with the environment, engenders positive self esteem and self confidence.
5. sensitivity to and awareness of embodied capability, leading to fluent self expression through non-verbal communication and to perceptive and empathetic interaction with others.
6. the ability to identify and articulate the essential qualities that influence the effectiveness of movement performance, and an understanding of the principles of embodied health, with respect to fundamental aspects such as exercise, sleep and nutrition.

## **Clarification of the Concept of Physically Literacy**

### **Philosophical Foundation and the Breadth of the Concept**

The concept of physical literacy has its roots in philosophy and arose from the study of Monism, Existentialism and Phenomenology (see Article 1 on the History and Development of the Concept). Significantly the concept is founded on a Monist viewpoint and therefore rejects dualism.

The commitment to Monism is reflected in the definition which encompasses three of the key characteristics of human nature - the affective, the physical and the cognitive. Focus on only one of these areas of human potential does not constitute physical literacy. For example developing fundamental movement skills is only a very small element in promoting physical literacy.

### **Physical Literacy as a Concept that can best be understood as a Cradle to grave Journey**

Physical literacy is not a state that is reached and then persists throughout life. It is best seen as a journey, a journey unique to each individual. Each journey is likely to encounter twists, turns and maybe setbacks along the way. Journeys may stall on account of a range of personal circumstances, some maybe beyond the individual's control. However with determination and the help of others, individuals' journeys can re-start and indeed flourish.

While all can be physical literate, it is the case that, if at any stage of life, individuals lack or lose the motivation, confidence and physical competence to value physical activity and take steps to maintain activity, they can no longer be described as being physically literate, in other words they may become physically illiterate.

The key issue is that all who are supporting individuals need to provide experiences that enable participants to make progress on their individual journeys. In circumstances in which the individual could be described as physically illiterate, practitioners need to

encourage the participant to develop the motivation, confidence and physical competence to enable the individual to start or restart their journey.

Physical literacy is much wider than physical education and encompasses all participation in physical activity throughout the lifecourse. The promotion of physical literacy is relevant throughout life and is as important to pre-school children, the adult and older adult population as it is to learners in the years of schooling.

### **Physical Illiteracy**

Questions have been raised concerning how physical illiteracy could be described. From one perspective every human is a physical being and exists only because each is, by nature, embodied. In this context everyone, by definition, has, and employs physical competence. However physical literacy only develops when this dimension is deployed beyond what might be called subsistence level. Physically illiterate individuals will avoid any involvement in physical activity in all situations wherever alternatives are possible. This could include not walking short distances, avoiding tasks such as house cleaning and gardening, preferring quick methods of preparing a meal and always using the remote control to turn on an electrical appliance. Individuals will not be motivated to take part in structured physical activity and will therefore not achieve any refinement or development of their physical competence. They will have no confidence in their ability in the field of physical activity, anticipating no rewarding feedback from such involvement. Individuals will have a very low level of self-esteem with respect to this aspect of their potential and will avoid all inessential physical activity in order to guard against failure and humiliation.

### **Relevance of the Concept to every Individual whatever their Endowment**

For some time there has been the misconception that physical literacy is only important in the preparation of high level athletes. This is very far from the case. All can make progress on their physical literacy journey, the challenge being to capitalise on individual potential to take part in whatever physical activity is within an individual's capacity. Indeed the goal of nurturing physical literacy goes way beyond ambitions to produce elite athletes. Wherever physical literacy is fostered, future elite athletes will benefit from the breadth of activity covered and the positive and empathetic ambience of sessions. However physical literacy is as valuable to the average performer and those with particular challenges to overcome, as it is to the most able.

### **Motivation and Confidence as fundamental to Physical Literacy**

As the definition anticipates the motivation and confidence to participate in physical activity are at the heart of the concept. While it is the case that motivation and confidence arise on account of progress in respect of physical competency, this competency on its own does not constitute physical literacy. The mastery of a movement

skill in itself does not necessarily promote a desire to be involved in activity, rather it is the rewarding satisfaction and pleasure generated from any experience in the movement field that creates interest in further involvement. The long term aspiration of all practitioners working to promote physical literacy in the field of physical activity is to so enthuse participants that they adopt physical activity as a key element of their life pattern.

### **The Relationship between Physical Literacy and Physical Education**

There is some confusion concerning the relationship between physical literacy and physical education. However physical literacy is not an alternative to physical education, nor is it in competition with physical education. Physical education is a subject area in the school curriculum while physical literacy is the goal of physical education, a goal that can be articulated and defended with confidence to reveal the intrinsic value of physical activity. (See ICSSPE Position Statement on Physical Education) The implications of this clarification is that teachers or indeed any practitioners, DO NOT TEACH physical literacy: rather they plan, guide and support learner involvement in experiences that are rewarding, meaningful and develop self esteem and self respect.

### **Physical Literacy as a Concept with connotations beyond Schooling and the Responsibility of many significant others to promote Physical Literacy**

Another misunderstanding is that the concept of physical literacy is only relevant to schooling. This is not the case. Fostering physical literacy is important in pre-school, out of school and post school contexts – indeed in any situation involving physical activity. This means that teachers of physical education are not alone in working to promote physical literacy. All significant others who are in a position to influence attitudes to, and competence in, physical activity have a role to play. This includes parents, carers, nursery nurses, coaches, peers, family members, leisure management personnel, employers, the medical profession and carers for the elderly. (See Whitehead with Murdoch 2006) Teachers of physical education, however, do have a key role as they are the only qualified professionals who will have contact with every young person. This puts a responsibility on teachers to lay the ground for all learners to make progress on their individual physical literacy journey.

### **The Implications of adopting Physical Literacy as the Goal of Physical Activity**

The implications for all practitioners, e.g. teachers, coaches, instructors, working to a goal of promote physical literacy are fivefold. They need to:-

- develop an informed and considered commitment to the concept
- conduct an honest self appraisal to ensure that they demonstrate equal interest in every learner and design tasks to enable all to make progress
- undertake a thorough review of pedagogy to ensure motivation and confidence are nurtured



- carry out a critical review of content to ensure sufficient time is spent on exemplars from a broad range of activities, to facilitate enhancement of both physical competence and self esteem
- engage in a comprehensive review of assessment so that this is used as a motivational tool. Assessment should be ipsative (see note at end of this paper), charting individual progress across all aspects of physical literacy. Comparison with the achievements of others is seldom relevant.

All programmes working to promote physical literacy should evidence a common pedagogical framework. Further detail of these implications can be found in Section 3 of the Bulletin.

## **Physical Literacy and pedagogical Models**

There is also some confusion about the relationship between pedagogical models and physical literacy. Physical literacy is not a pedagogical model. However physical literacy can be promoted through any pedagogical model, be it for example sport education or health related exercise. While it is suggested that a pedagogical model can be selected for use in physical education, as and when appropriate, the goal of every learner making progress on their individual physical literacy journey should underpin all curricular and extra-curricular work in physical education.

## **Physical Literacy as encapsulating Significance and Value for Physical Activity as an end in itself and not as a means to other Ends**

Physical literacy provides a clear rationale for the unique and intrinsic value of physical activity. No extrinsic justifications are needed such as cognitive development, social development or moral development. Physical activity should be seen as an end in itself rather than a means to other ends. This is grounded on the philosophical support from existentialists and phenomenologists who give unequivocal support for the centrality of our embodied dimension in life as we know it. This issue is fully debated in Capel and Whitehead (2013) with reference to Peter Arnold's seminal paper that addresses education about, through and in movement. The conclusion drawn here by Capel and Whitehead is that while it is the case that, on account of our holistic nature wider benefits may be experienced from participation in physical activity, these should not be used as the justification of physical activity or of physical education in schooling. Physical activity needs no justification beyond its intrinsic value.

NB Ipsative assessment is assessment against an individual's previous performance.

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## What is the Value of Physical Literacy and why is Physical Literacy valuable?

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*Len Almond*

### Abstract

In Margaret Whitehead's more recent and updated definition of physical literacy (Whitehead, 2013), she uses the words 'understand' and 'value'. These words represent key terms that underpin how her definition is interpreted and how it is translated into practical steps that enable teachers and practitioners to implement it diligently and steadfastly.

The starting point for this article is to pose two questions (1) what is the value of physical literacy? and (2) why is it valuable? In this article I propose to answer these questions in order to illuminate the significance of physical literacy and put them in the context of what there is to understand.

### What is the Value of Physical Literacy?

Our assessment of the value of physical literacy needs to be addressed in two ways (1) on a personal level – of the young person or adult, and (2) professional level.

On a personal level physical literacy has value because it fosters a fundamental human capability:

- a capability that has the potential to enhance and enrich the quality of lives
- a capability without which we could not develop as human beings
- a capability which operates in concert with our other capabilities

Purposeful physical pursuits represent a range of activities that can have great significance and value that affect people in a very pervasive manner. A key aspect is that the individual comes to understand the benefits of regular engagement in purposeful physical pursuits. They have the power to enrich and transform lives, becoming an

absorbing interest that rewards and fulfils and also provides avenues for the enhancement of human potential. When purposeful physical pursuits become part of an individuals' life pattern they can enrich lives. When people are engaged in something they consider valuable and worthwhile they become aware of how participation can enable them to flourish and enhance their wellbeing. As a consequence, they see physical activity as an important priority in their lives and take steps to embed it within their life pattern. This commitment enables them to access purposeful physical pursuits that have become a fundamental and important part of our human heritage and cultural life. A life devoid of participation in purposeful physical pursuits is a life less lived fully - a life without the exhilaration of realising our embodied potential and the wide range of benefits this brings. In other words these pursuits become crucial *IN* our lives.

Purposeful physical pursuits have a significant role to play in promoting the health and wellbeing of individuals (CMO, 2011). By engaging in a variety of purposeful physical pursuits on a regular basis, young people ensure the development of the complex inter-related systems of their body to an optimal level of functioning that enables them to energise their lives. In achieving this, young people are building a *wellbeing resource* and reserve that provides the conditions for enriching their lives in other ways, develop other capabilities and enables them to feel good and flourish well. In the same way, certain forms of exercise can help to restore people's physical capacity and aid recovery following ill-health, an operation or a condition that inhibits a person's normal life.

Participation in a range of purposeful physical pursuits provides the opportunity for individuals to develop a variety of human capabilities. For example these pursuits can foster appropriate interpersonal skills. The collaboration required in many purposeful physical pursuits requires participants to develop co-operative skills such as empathy, reciprocity and sensitivity. In addition, engagement in purposeful physical pursuits takes place within a context of different social networks in which others can contribute to a person's flourishing and they in turn contribute to the flourishing of their friends and contacts. Participation provides situations that rely on trust and respect for others. Similarly personal skills are called on such as the adoption of conduct that reflects fairness, an appreciation of rules and conventions and the willingness to take responsibility. Effective participation also often depends on unselfishness and consideration for others. Engagement in purposeful physical pursuits is important *FOR* our lives. It needs to be stressed, however, that participation should NOT be seen just as a means to develop such desirable social and personal ends but rather a medium in which, if there is interaction and commitment, these additional benefits are possible outcomes.

On a professional level, an understanding of physical literacy enables the practitioner or teacher to acquire an inspirational model for putting in place a more informed vision of what can be achieved in physical education. At the same time, this understanding provides teachers with guiding principles that inform what needs to be addressed in the promotion of purposeful physical pursuits and how engaging with young people and adults is a crucial part of this process. These are significant values that give physical

education, educational validity, not least in preparation for life beyond school.

By fostering physical literacy we are working to help people get on the inside of different purposeful physical pursuits. We are striving to open the minds and hearts of young people to the satisfactions that can be generated and the needs fulfilled by participation in purposeful physical pursuits. As a result we need to go beyond 'just engagement' in school-chosen activities; young people need to learn from their involvement and begin to appreciate the characteristics and values of different activities. This will necessitate putting in place appropriate purposeful physical pursuits and ensuring access to all young people as well as monitoring one's practice to match expectations with the realities of schooling.

We must enthuse our learners so that they develop a commitment to participation and in addition are appropriately informed and empowered to take responsibility for the choices they make. These choices include both the adoption of an active lifestyle and decisions about in which purposeful physical pursuits they will engage. In other words, we need to help our learners to develop a commitment to participation, and recognise it is up to them to make choices. A person's wellbeing can only be realised in full if they accept that it is their responsibility to do all they can to enhance it: no-one else can do this for them. Thus, we need teachers with the skills to cultivate, nurture and help people to cherish their vitality, dynamism, energy and wellbeing and avoid squandering them.

In order to take these ideas on board, teachers and practitioners may need to address the following:

- Free their minds from narrow tradition, custom or habit.
- Have the capacity to connect with other ways of thinking.
- Develop imagination to decipher alternative interpretations in a meaningful and sympathetic way.

### **Why is Physical Literacy valuable**

Finally, I need to turn to 'understanding' physical literacy. The National Curriculum in England uses the word 'understanding' in all the areas of learning: 'knowledge, skills and understanding' required in each subject. However, there is no explanation of what these words mean or what they imply. If understanding is an important part of children's learning in schools and in physical education why has so little time been spent in articulating how teachers can organise learning and provide informed guidance on how to achieve understanding? There appears to be no guidance.

Almond and Ayers (2013) made an attempt to unravel what 'understanding' in the

context of teaching games meant. They reviewed papers by Grimm (2006; 2010; 2012) to highlight the following key characteristics:

- Grasping and seeing
- Making sense of something
- Coming to understand is primarily attributable to the abilities of the student
- Understanding as an accomplishment

In order to 'understand', our students need to grasp how the different aspects of a game depend upon one another and to anticipate how changes in one part of the game will lead (or fail to lead) to changes in another part. Seeing is also an ability to anticipate or see what things could be like. In other words we need to find ways in which we can help our students to make sense of what can happen in a game. Underpinning these characteristics, is the recognition that understanding is an accomplishment and an ability of the student. This implies that learning to be independent is central.

In respect of physical literacy there are two dimensions to understanding, one relates to what we would hope learners understand as they make progress on their physical literacy journey, the other is the understanding that the teacher needs concerning how they can foster this capacity in learners.

It is not expected that learners will understand the concept of physical literacy, its philosophical underpinning, its justification, its elements and attributes. However we would hope that learners acquire the 'understanding' that is associated with learning to value and take responsibility for maintaining purposeful physical pursuits/activities throughout one's life-course.

It is hoped that learners will grasp:

- that they need to develop their physical potential to experience the satisfaction of progress and success in purposeful physical pursuits
- that they need to exercise their ability to make choices and to control the procedures needed to achieve goals that the person values
- the importance of taking responsibility for their own well being

That they will see that:

- participation in physical pursuits can enhance sense of vitality, dynamism, energy and wellbeing
- being active can be rewarding and pleasurable and develop a commitment to an active lifestyle

That they will make sense of:

- the need to explore participation in a wide range of purposeful physical pursuits and thus widen their life choices
- the notion that regular participation in purposeful physical pursuits develops a resource that enhances all round health and well being and that this will be of benefit to them throughout the life-course and into old age.

These goals for the learner to achieve in respect of physical literacy are very ambitious. As will be appreciated from the list above they demand independent thinking and commitment, not to mention strength of character and vision.

In a very challenging book, Taylor (1991) highlights the need to define oneself actively, to 'exist in what he calls a horizon of important questions'. For Taylor does not believe that commitment to one's idiosyncrasies trump all because there are some idiosyncratic pursuits that are meaningful and those that are not. His question becomes one of differentiation and qualification. Which are the worthwhile idiosyncratic pursuits? Taylor objects to things taking on importance because people privately decide or feel that something is important. Things need to take on significance against a background of intelligibility or what he calls 'the horizon of significance'. This is where physical literacy can provide this sense of intelligibility but this represents a major challenge for all teachers and practitioners: if they don't understand what it is or entails they will be unable to promote it.

Taylor speaks of 'authenticity' which requires individuals to be purposeful, to know what one wants to make of oneself, what one intends to identify with and then craft a consistent project from within one self, to accomplish something. To achieve this, it is necessary to take active care of oneself, to decide what needs to be added to his

horizon of significance by engaging in specific projects that have meaning for the individual.

In addition, Taylor (1991) makes the point that an individual becomes a full human agent capable of 'understanding' and defining themselves through interactions with one's surroundings, communicating with others and exploring one's opinions with significant others and in some instances through struggling against pressure from others to be something else.

Nevertheless, this portrayal of 'understanding' is incomplete because there is one feature that has not been addressed; teachers need to 'understand' HOW to put their initial understanding into practice and demonstrate 'intelligent performance.' Jerome Bruner makes the point " I've become increasingly convinced that the powers of mind reach their fullness not simply in accumulation -- in what we come to know -- but rather in what we can do with what we know, how we are enabled to frame possibilities beyond the conventions of the present" (Bruner, 2007: p.2). This is the ingredient that we tend to ignore, how do we help all young people?

## Conclusion

The most recent definition of physical literacy contains the words value and understanding. These are extremely important words because they have implications for how physical literacy is interpreted and how it guides the practice of promoting purposeful physical pursuits across the life-course. In this short paper I have addressed some issues concerning what it means to value physical literacy and I have made an attempt to introduce the idea of understanding.

Engagement in purposeful physical pursuits has the capacity to enrich lives in significant ways and can enable people to energise their lives and reduce their risk to a number of chronic diseases. An understanding of physical literacy brings to the forefront the significance of helping people to make informed choices, acquire a sense of empowerment and agency together with realising the importance of responsibility for their wellbeing. These are important capacities that should have a significant role in the education of young people as well as adults. How we achieve this should be a major concern for all us.

Allied to this concern, is the need to establish 'horizons of significance' (Taylor (1991) and what he calls a background of intelligibility. I believe that physical literacy can provide such a background of intelligibility, a task worthy of all our efforts in the quest to develop more understanding of what a commitment to physical literacy entails and how it can influence the lives of young people and adults.

Finally, it is somewhat narrow to use the word teacher in the context of physical literacy so I have used practitioner as a way of acknowledging that we are concerned with the life-course. Thus adults and older adults need to be considered.

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## The Value of Physical Literacy

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*Margaret Whitehead*

This paper serves as an introduction to Len Almond's paper on the value of physical literacy. It is one of a series of advocacy papers for use in introducing physical literacy to those less familiar with the concept. Len's paper discusses some of these values in greater detail. Reference to the value of physical literacy can be found in many of the papers in the Bulletin.

### What is the value of being physically literate?

Physical literacy is valuable because it fosters a fundamental human capability

- a capability without which we could not develop as human beings
- a capability that has the potential to enhance and enrich the quality of lives
- a capability which operates in concert with our other capabilities

### More specifically physical literacy is valuable as individuals:-

- develop their physical potential and

experience the satisfaction of progress and success in physical activity

- grow in self awareness and self assurance and

strengthen their global self belief and self esteem

- come to realise that being active can be rewarding and pleasurable and

develop a commitment to an active lifestyle

- have the confidence to explore participation in a wide range of activities

acquire a sense of empowerment to make choices and thus widen their life choices

- enhance their all round health and well being and

are less likely to become over-weight and more likely to remain fit and healthy into old age

- come to appreciate the value of physical activity in respect of promoting wellbeing and realise the importance of taking responsibility for their own participation
- learn to make informed decisions about the kind of purposeful physical activities they want to engage in, on a regular basis and actively evaluate their life habits and patterns, with respect to participation in purposeful physical activities, from an informed position

I judge these to be highly significant values, values that give physical education educational validity, not least in preparation for life beyond school.

Through making progress on their physical literacy journey, individuals cannot only develop the motivation and confidence to maintain an active lifestyle, they can also grow in self confidence and self esteem, enjoy participation in a wide range of activities and appreciate the beneficial effect of being active on their total well being and its impact in their lives.

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## **“Strike While the Iron is Hot”: the duty of physical education to capitalise on its' compulsory position with a holistic curriculum underpinned by physical literacy**

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*Andy Sprake & Sue Walker*

*Andy writes ‘As a trainee teacher of Physical Education in England , I was frequently asked questions such as “So you’re teaching PE? What’s your sport?” I had always believed that teaching PE was far more complex than that and having been introduced to the concept of Physical Literacy, my personal philosophy for PE now has some structure and theoretical underpinning. However, the more I understand and value the concept, the more I appreciate how much work is still to be done if it is to inform future PE practice.’*

### **Abstract**

This paper explores the philosophical controversies surrounding Physical Education within a curriculum shackled to a dualist perspective on what is educationally valuable. Adopting a monist outlook on human embodiment, the authors encourage educationalists to reconsider the currently lopsided view of educational priorities and to broaden the vision on human intelligence. The recent political impetus surrounding Physical Education must be exploited. Those within the profession have a duty to capitalise on this and strike while the iron is hot. By offering a vision of school PE which recaptures a holistic focus, Physical Literacy might enable PE to reassert itself and be celebrated in its own right.

### **Introduction**

The overarching purpose of education is to promote the holistic development of children and young people (McGettrick, 2005). A fleeting glance at the range of subjects on offer through the English National Curriculum (QCA, 2007) might suggest that the education system is doing just that, while the reality is somewhat different. In its current state, education is handcuffed to an ideology which has a narrow perspective on human intelligence (Robinson, 2013). That is, the entire curricular spectrum is informed by a dualist view of what is didactically valuable which, in turn, has created a hierarchy whereby intellectual development is the top priority. This can be evidenced by the current framework for school inspections in England, which measures the overall achievement of pupils based on their academic attainment (Ofsted, 2013). Furthermore,

this dualist paradigm is now so deeply-embedded in education that *physical* education (PE) has been manipulated into a position where *mind before body* is accepted as 'common-sense'. Consequently, by joining the 'academic bandwagon' (Whitehead, 2013a), PE is limiting its unique opportunity to contribute to a holistic education.

### Dualism and the Manipulation of Physical Education

The role and contribution of PE has long been a contested area (Smith and Parr, 2007). This is perhaps unsurprising given the on-going struggles to establish a definitive purpose for the subject (Bailey and Kirk, 2009). Ironically, the debates concerning PE appeared to exacerbate the philosophical confusion surrounding the subject, rendering PE as a vulnerable target for the dualist take-over that followed. In effect, PE has been backed into a corner. The hegemonic-dualism which informs PE appears to disregard the subject's true potential (Sprake and Palmer, 2012) and is suffocating the would-be holistic development of children and young people.

Dualism is based on the belief that humans not only comprise two 'separate' parts (the body and the mind) but that the body is subservient to the mind (Whitehead, 2010b). Therefore, if all the subjects are compelled to *pledge allegiance* to a dualist ideology, PE might seem the most controversial and unproductive. The increasing focus of PE to support academic achievement (Trudeau and Shephard, 2008) combined with the significant rise in examinable PE (Green, 2008) demonstrates a clear acceptance that intellectual development is an over-riding priority within the curriculum. It is argued that the 'academicisation' of PE (Green, 2005) has enabled the subject to assert its educational worth (Sprake and Palmer, 2012). Unfortunately, however, this approach seemingly overlooks the main strength of PE, which lies in its ability to develop the child holistically. Nevertheless, through ideological power-relations, PE has been persuaded into accepting that the transfer of academic knowledge is a common-sense priority, even though it might not be in the best interests of PE itself. From a sociological perspective, this process has been described as "curricular-hegemony" (Sprake and Palmer, 2012, p. 75).

Similarly, it is argued that PE is exploited as a "political football" (Johnrose and Maher, 2010, p. 15) which is kicked back and forth in order to serve in the best interests of political preferences. As it stands, PE is the only compulsory subject in England at KS1-4 in addition to the obligatory English, Maths and Science. This indicates a government commitment to PE which must be exploited. Advocates of PE have been presented with a window of opportunity to establish a clear and unified rationale for the subject which would enable PE to be celebrated in its *own right* (Whitehead, 2010a) and thus stand shoulder to shoulder with other curriculum areas.

### Monism, Physical Literacy and the Re-Focusing of Physical Education

A recent proposal for the justification of PE has been the development of Physical Literacy (Whitehead, 2010a) in which the focus should be on *movement* rather than the activities themselves (Burgess, 2013). Physical Literacy as an outcome of PE can

provide children and young people of all abilities and dispositions with the foundations on which to build a lifelong commitment to, and enjoyment of, physical activity.

The concept of Physical Literacy stems from a “monist approach to human nature” (Whitehead, 2013b, p. 37). Unlike dualism, monism is a philosophical perspective which views human embodiment as one indivisible entity, in which neither the mind nor the body can claim superiority (Whitehead, 2010b). This viewpoint allows for a holistic understanding of human existence and captures the full essence of human experience. Gill (2000, p. 100) astutely remarks that “only against the backdrop of embodied experience” can propositional knowledge become useful. Thus, by allowing a dualist philosophy to inform the nature of the subject, PE might be criticised for *selling itself short*. By the same token, until PE can indeed be justified in its *own right*, then it may be difficult to envisage a PE-existence which is not exploited for any and all academic potential. This is not to say that the academic components of PE should be abolished, rather, that it need not eclipse the subject’s fundamentally physical nature. Indeed, a monist approach towards educational relevance would allow for a ‘broad and balanced’ appreciation of human embodiment.

Kirk (2010, p. 121) anticipates three possible futures for PE: “more of the same, radical reform or extinction”. If the subject merely produces *more of the same*, it is likely to arouse the same timeworn debates, which may guide PE to its own eventual *extinction*. The principle aim of Physical Literacy, on the other hand, is to equip individuals of all ages and dispositions with the “motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the lifecourse” (Whitehead, 2010a, p. 18). Considering that the central aim of PE is to promote lifelong physical activity, Physical Literacy might be the “light at the end of the tunnel” (Sprake and Palmer, 2012, p. 75). Herein might be the *radical reform* that has eluded PE throughout its contested history.

There are, of course, various challenges to this paradigm shift. This new approach would demand a move away from the ‘tick every box’ culture inspired by the increasing demand for instant accountability. This climate, in which pupils have been labelled a ‘Level 3b’ in football, is counter-productive to the Physical Literacy journey. Indeed, enabling a child to develop their physical literacy requires a focus on the *process* rather than the *product* (Fox, 2010).

### Philosophy to Pedagogy: barriers to Physical Literacy

Physical Literacy can be characterised as the “development of a disposition” as opposed to the realisation of an end product (Whitehead, 2010b, p. 163). The *process* of becoming physically literate, therefore, against the backdrop of a *product*-driven education system, is fundamentally challenging, not least because measuring the degree to which a disposition has been developed is a challenge in itself. In an educational climate fixated on pupil-data, progress reports and accountability, it is foreseeable that promoting Physical Literacy as ‘the new underpinning concept for PE’ will be met with concerns about its practical application. The dearth of pedagogical guidance renders it difficult for a teacher at the ‘chalk-face’ to demonstrate where a pupil currently sits on

their Physical Literacy journey. It should be emphasised that Physical Literacy is neither an *alternative* to PE nor a *pedagogical model* in itself (Whitehead, 2011) but the pedagogical challenges that have stifled attempts to embed Physical Literacy into PE (Bassett, Sammon and Casey, 2013) must not be overlooked. In order to maximise the impact and secure the future of Physical Literacy in education, it might seem prudent to develop a framework for its practical application in schools. Unless a tangible model is developed, one which promotes a holistic PE experience while at the same time providing means of accountability, then it seems unlikely that schools will redefine their day-to-day PE practices.

Whitehead with Almond (2013, p. 27) have attempted to bridge the gap between theory and practice for the application of Physical Literacy by setting out guidelines through which teachers can facilitate a "...pedagogy of engagement". They do this by advising teachers to consider several learner experiences on their Physical Literacy journey. These experiences are to be rewarding and enjoyable; ones which promote self-worth and self-confidence; that enable pupils to progress and succeed; empower pupils to make choices about physical activity; that enable pupils to understand the value of physical activity for lifelong health benefits; and experiences which encourage pupils to engage in physical activity for themselves (Whitehead with Almond, 2013, p. 27). Despite their efforts, however, there remains an air of confusion about how to embed physical literacy within the PE classroom.

Needless to say, schools are dynamic and complex environments caught up in a whirlwind of various pressures (Park, 2003). Such pressures are likely to overshadow any efforts to promote the concept of Physical Literacy, particularly when guidelines for its application in PE seem to come in the form of abstract signposts rather than practical advice for teachers. In order to make the concept of Physical Literacy more immediately appealing to schools and their practitioners, it seems important to establish a framework for implementation which is user-friendly. In doing so, the future of Physical Literacy in PE would hinge on something more than a *philosophical selling point*.

Attempts have been made, however, to make Physical Literacy more accessible for practitioners. The basic movement skills programme 'Developing Practical ABCs' is a toolkit which enables teachers to facilitate a fun, active and progressive learning environment, in which learners of all abilities can develop an enthusiasm and passion to be physically active (Walker, 2013). Such *toolkits* might provide an ideal starting point from which to generate a growing advocacy for the practical element of Physical Literacy, but it is imperative that they are placed in context and strategically promoted as only one aspect of physical literacy and not as the sole driver of PE. This is not to say that the essence of Physical Literacy can simply be *put in a box* or *packed up and sold*, but the issue certainly warrants further discussion.

In addition to the problems of embedding Physical Literacy into PE, many PE departments are pressured to 'pick-the-teams' in time for extra-curricular sports or activities. The specific demands of these 'trials' requires an immediate focus on the *product*, that is, how well the pupils can already perform. This approach is indifferent towards the *process*. Invariably, children's early experiences of sport and physical activity have severe implications for their subsequent involvement (Trimble, et al., 2010)

and, incidentally, research suggests that only a minority of adults continue to participate in activities they experienced in PE (Kirk, 2005). This implies that PE in schools is currently failing to achieve one of its central aims. From a phenomenological perspective, it could be suggested that, for such adults, the prospect of engaging in physical activity might provoke unpleasant recollections of their experiences of PE. Therefore, the manner in which PE is facilitated can impact heavily on pupils' enthusiasm to engage in lifelong physical activity (Fairclough, Stratton and Baldwin, 2002). PE appears to be the intersection at which young people *opt-in* or *opt-out* of physical activity, which magnifies the responsibility of the PE teacher and highlights the social and health implications of the subject. It is therefore the duty of physical educators to generate, harness and nurture pupils' physical competence in order to build positive experiences and predispositions towards lifelong physical activity, during both curricular and extra-curricular activities. This adds indirect support for Whitehead (2010), who insists that it is essential for young people to leave compulsory schooling with a positive attitude towards physical activity, in other words are making clear progress on their individual physical literacy journey.

The future of Physical Literacy, in the PE setting, might currently lie in the hands of those who advocate the philosophical roots from which it originates. Perhaps the promotion of Physical Literacy should become an integral part of Initial Teacher Training, equipping future educators with a sound understanding of how to articulate and justify the educational validity of physical education.

## Conclusion

The opportunities for children and young people to experience a holistic education are being suppressed by an ideology which has a narrow view on human intelligence (Robinson, 2013). The entire curricular spectrum is seemingly informed by a dualist perspective on what is educationally valuable, whereby academic attainment is the top priority. The main strength of PE lies in its ability to develop the child holistically. However, through a process of hegemonic-dualism, PE has repositioned itself in a manner which seems to support the notion of *mind before body*. This approach restricts the true potential of PE to contribute to a holistic education which, incidentally, is the overarching purpose of education itself (McGettrick, 2005).

It would seem, therefore, that there is a pressing need for educationalists to reconsider the currently lopsided view of educational priorities and to broaden the vision on human intelligence. Adopting a monist understanding of human embodiment might see both the physical and the academic components of PE being valued equally. More importantly, doing so might enable *PE to be PE* and allow teachers to facilitate an environment whereby the holistic development of children and young people could truly flourish. From this perspective, Physical Literacy would be viewed as a legitimate learning journey, one which has the potential to define the role and nature of PE.

The future of Physical Literacy within PE relies on more than a *philosophical* selling point. In order to take-the-reigns of PE, a unified model for the application of Physical Literacy must be established. The pedagogical implications of a curriculum underpinned



by Physical Literacy must be debated and a consolidated approach agreed. What's more, all within the PE profession have a responsibility to "address and debate" the future of the subject (Penney and Chandler, 2000, p. 85). Therefore, trainee and newly qualified teachers might serve as the ideal target for a growing advocacy of the Physical Literacy movement because, ultimately, they will be responsible for reproducing or revolutionising the culture of PE practices.

In conclusion, the political impetus surrounding PE must be exploited. Those within the PE profession have a duty to identify a clear purpose and unified rationale for the subject. By offering a vision of school PE which recaptures a holistic focus, Physical Literacy might present an invaluable opportunity for PE to reassert itself and be celebrated in its own right. A holistic vision of PE is within our grasp - we must capitalise on this and strike while the iron is hot.

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## Stages in Physical Literacy Journey

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*Margaret Whitehead*

### Abstract

This short paper looks at the age related stages through which a physical literacy journey will pass and suggest some basic characteristics within each stage. Significant others who will play a part in supporting the individual in making progress are identified and the situations and contexts in which physical literacy can be nurtured indicated. Other papers in the Bulletin go into much more detail in respect of each of these stages. This paper provides a brief map laying the ground for the material in other papers. Table 1 'Attaining and maintaining lifelong physical literacy' presents an outline.

### Introduction

While it is accepted that every individual will experience a unique physical literacy journey it is not without value to reflect on the way these journeys will, characteristically, pass through different phases according to the age of the individual. In relation to the development of physical literacy an individual can be seen to travel through six stages:-

- Pre-School years
- Foundation/Early and Primary School years
- Secondary School years
- Early adulthood years
- Older adult years
- Adult years

### Pre-School years

In the period between birth and approximately 3 years, the foundation for the development of physical literacy should be fostered, supported and encouraged by all those in contact with the child - parents, family and significant others, such as those running Day Care centres. This is a critical stage, during which young children should be given every opportunity to be physically active. Deprivation of movement can have serious long term

effects on progress across many aspects of child development. Environments need to be set out and designed in such a way that allows for and encourages physical activity at this stage, including the home, the local environment, child care settings and activity clubs.

## **Foundation/Early and Primary School years**

In the Foundation and Primary school period, the fundamentals of physical literacy need to be further developed and soundly established. These fundamentals relate to motivation, confidence, motor competence and knowledge and understanding. This is a critical period covering a significant time when competences and attitudes are often achieved and formed, none so important as motor competence and self confidence in the area of physical activity. As learners progress through this stage there should be a gradual increase in involving the participants in discussing the nature and value of physical activity. Opportunities to plan and evaluate their own work and progress are recommended. Burgeoning physical literacy can be seen both in the ability to co-ordinate the whole body in activities such as jumping and climbing and in the facility to apply these movement patterns in a variety of settings. Developing physical literacy at this stage is significantly in the hands of teachers conducting physical education lessons. Also involved at this stage are parents, family, peers and coaches. Environments that are needed to support this significant stage of development include the school, the home and local clubs and recreational facilities. Those responsible for creating and maintaining these environments include schools, clubs and local authorities.

## **Secondary School years**

In the adolescent years in Secondary School it is essential that the fundamentals listed above are nurtured and enhanced. This should occur in tandem with devolving more responsibility to the learners to devise and evaluate their own movement challenges. Some serious discussion about the importance of physical activity to lifelong health and well being should take place at this stage. It will be as important to ensure that these young people realise the benefits of an active lifestyle as to nurture their motivation, confidence and competence in relation to physical activity. These learners should have experiences that help them to value physical activity and also to realise that it will be their responsibility to maintain this activity when they leave school. It should be made clear that physical activity is for all, not just for the most talented. The furtherance of the development of physical literacy in these years, even if this capability has been successfully established in the primary school years, is crucial if abilities and attitudes are to be carried forward into life after school.

Important here will be the understanding, on the part of practitioners working with these young people, of the need to respond to the challenges encountered throughout the adolescent years. The rapid changes that occur can cause acute self-consciousness and be accompanied by fear of embarrassment. The nurturing of physical literacy must accommodate the changing physique, attitudes and social prerogatives that these learners experience. This is a particularly challenging period in the development of

physical literacy, as some young people pass through a stage when previously well managed movements become clumsy and posture becomes awkward. Key players at this stage are teachers of physical education, peers, family, coaches and sports development personnel. Important at this stage, also, is the guidance given to young people in respect of the opportunities that are available for continued participation in physical activity when they leave school. Supportive environments are again needed, including in e.g. the school, the home, local clubs and leisure centres. Responsibility for providing appropriate environments for physical activity rest with local and often national policy makers.

Table 1						ATTAINING AND MAINTAINING LIFE LONG PHYSICAL LITERACY	
<i>AN EXAMPLE OF A PHYSICAL LITERACY JOURNEY - CRADLE TO GRAVE</i>							
PRE-SCHOOL	EARLY YEARS and PRIMARY SCHOOL		SECONDARY SCHOOL	IMMEDIATE POST SCHOOL	ADULTHOOD	OLDER AGE	
Motor Development fostered, supported, encouraged	Development of Physical Literacy as a fundamental goal of Physical Education		Consolidation of aspects of Physical Literacy, achieved by own motivation to participate in selected physical activities as part of life-style	Physical Literacy established, contributing to successful and rewarding physical activity being a part of an individual's life-style. Continued interest in, and awareness of, the way physical competence can be beneficial in respect of quality of life, including aspects of health promotion	Personal Physical Literacy modified with age. Continued appropriate activity. Increase of knowledge and understanding in relation to changing capacities, health in older age and the importance of an active life-style		
	Fundamentals of Physical Literacy nurtured: motivation, confidence, motor competence, and knowledge and understanding	Fundamentals of Physical Literacy established and contextualised in a range of physical activities and contexts. Activity opportunities outside school introduced					
<i>Personnel influencing the attainment and maintenance of Physical literacy include:-</i>							
Parents, family significant others	Teachers, LSA's, parents, family, peers, coaches, club and leisure facility personnel		Peers, family, work place colleagues, personnel in :-, medical fields, clubs, fitness industry, leisure facilities, evening classes (coaches, sports development officers)				
<i>Systems, situations, contexts where Physical literacy can be encouraged, established and maintained include:-</i>							
Home, local environment, Day Care settings, Nurseries, Pre- School Activity Clubs	School Physical Education, extra-curricular opportunities, Sports/activity Clubs. Home, local environment, countryside, local facilities		Quality and quantity of local and national facilities and staffing. Government policies and priorities. Employer policies. Contexts created by medical professions. Context created by media (Whithead and Martoch)				

## Early adulthood years

In early adulthood the responsibility to establish, maintain and further physical literacy is in the hands of the individual. The motivation to do this will be a direct result of the quality of the experiences that have been encountered in the preceding years. These experiences need to have developed a positive attitude to physical activity. Specifically they need to have been enjoyable, and should have developed movement competence and promoted self confidence and self esteem. In addition these young adults should value physical activity for its contribution to the quality of life and take active steps to make it a regular feature in their lives. Where all those who have been in a position to influence an individual in the area of physical activity have been encouraging, supportive and empathetic, the young adult should readily take steps to adopt an active life-style. The young person who is physically literate will not only move with fluency and control, but will also carry him/herself well, evidencing confidence and a developing self-assurance. Significant others here will include peers, family, colleagues and personnel in the sports, medical and leisure fields. Contexts for this continued participation need to be established and maintained in both the public and private sector. Government and local policies will be central here if every young adult is to have access to activity settings.

Equally local clubs and leisure facilities need to welcome these young people. Messages from the media will also be influential.

## **Adult years**

In adulthood, where physical literacy has been established, individuals will readily engage in physical activity as a regular aspect of their lifestyles. They will appreciate the intrinsic value of physical activity, as well as its contribution to health and well-being. Participation will be valued for the pleasure and fulfilment it brings, as well as for the challenge and personal development that it offers. There is ample opportunity for this physical literacy to be enriched and furthered through the individual taking opportunities to increase their physical competence and to learn more about the importance of activity to a healthy life. Significant others and environments that are needed to support this continued involvement are the same as those for the young adult. Spouses, partners and family members will play an important part at this stage, not least in facilitating participation, but also in encouraging the individual to take up different Movement Forms, perhaps more appropriate to the adult in the middle years. Facilities as mentioned above are essential for physical literacy to be maintained.

## **Older Adult years**

In older age, physical literacy needs to be sustained within the context of changes in the physical potential of the individual. With a sound understanding of the value of physical activity and a life-time of positive experiences in exercise, the older person can embrace physical literacy in a modified form. Family, peers and the medical profession are all significant here and opportunities for activity should be readily available in the local environment.

## **Conclusion**

The first three phases of a physical literacy journey are likely to be guided and supported by significant others in an individual's life, however the latter three stages will be in the hands of the individuals themselves. It cannot be stressed too strongly that the grounding in the first three phases, in almost all cases, will have significant repercussions in the later years.

## **End note**

This short paper has been written from a background of the situation in England. A valuable exercise would be for those from other countries to critically evaluate, the content of the text and the table and create a table that reflects the situation in their own country.

This paper is a re-presentation of part of an article by Whitehead, M. E. with Murdoch,

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## Physical literacy as a Journey

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Liz Taplin

### Abstract

*Whitehead (2013) states that physical literacy is 'best seen as a journey; a journey unique to each individual.' This article examines Whitehead's statement and establishes the relevance and usefulness of adopting the journey metaphor. Furthermore, life history will be suggested as a method of recording and mapping an individual's physical literacy journey. The article uses, and builds on, ideas presented by the author at the International Physical Literacy Conferences in Banff (Canada) and at Wyboston Spa (UK) in 2013.*

This article considers the premise that physical literacy is 'best seen as a journey; a journey unique to each individual' (Whitehead, 2013) and aims to examine the appropriateness of this claim. The discussion is based on an acceptance of the most recent definition of physical literacy that it is:

*... a disposition to capitalise on our human embodied capability, wherein the individual has the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the life course. (Whitehead, 2013)*

In addition, it will be suggested that the use of life-history is one method that can be used to record physical literacy journeys and can play a role in charting, or mapping, the progress an individual makes on their physical literacy journey.

Whitehead (2010) suggests that physical literacy is a journey from cradle to grave and that every individual travels their own unique physical literacy journey. Some people, mistakenly, see physical literacy as an end point. It is often, mistakenly, seen purely as a level of skill that needs to be achieved in childhood before an individual can move onto more complex activities. This is most certainly not the case (Whitehead, 2013). Whilst childhood is a critical phase for developing physical literacy, it is important that physical literacy is seen as a lifelong disposition. It can be hard work developing physical literacy, but it is relatively easy to become physically illiterate at any point during the life course.



Whitehead (2010, p12) states that 'physical literacy is a lifelong asset, enriching life at all stages' but it is also a disposition that has to be nurtured and maintained, otherwise it will be lost. In this respect, seeing physical literacy as a journey, rather than a destination, is most apt.

The phrase 'physical literacy is a journey' is a metaphor, which is simply a linguistic tool used to explain a particular idea. Lakoff & Johnson (1980) suggest that using metaphor is a way of explaining abstract ideas in a concrete fashion which helps shape the way one sees the world. Thus, using the 'physical literacy is a journey' metaphor helps to make sense of the concept. Furthermore, Lakoff & Johnson (1980) suggest that as individuals and/or groups become familiar with a particular metaphor, they begin to feel confident with its meaning to such an extent that the metaphor becomes a reality. As this reality becomes stronger it begins to be acted upon. For example, if we understand physical literacy as a journey throughout life, we are more likely to understand that developing our physical literacy is an on-going process; or a marathon as opposed to a sprint.

With physical literacy being a disposition which needs maintaining throughout the life course, a challenging set of circumstances faces each individual. The decisions and actions required are not dissimilar to those taken on a demanding journey, where the traveller has decisions as to what mode of transport to take; what route to take; where to have rest; how to cope with breakdowns or unexpected delays. In terms of developing physical literacy, the comparisons are clear to see; the individual has to decide what activities to engage in, how often to participate, how to improve, how to deal with injury and other setbacks.

Lakoff & Johnson (1980) explain that the journey metaphor focuses on content and progress, which defines the path travelled. The more widely the individual travels, the more they will see; and that the more interesting the journey, the more rewarding the experience will be. Again, the comparisons are clear to see as Whitehead (2013) suggests physical literacy is dependent on the individual engaging in a variety of movement experiences – movement of different types, in different environments and under different circumstances.

Whitehead with Murdoch (2006) suggest there are six life stages through which the physical literacy journey travels: infancy (birth – four years); childhood (five to eleven years); adolescence (eleven to eighteen years); early adulthood (eighteen to 30 years); adulthood (30 – 65 years); and older age (65 years +). Each of these life stages is equally important and each will have its distinct characteristics. These characteristics will vary from person to person, as each individual experiences a unique set of challenges.

Whitehead (2010) also discusses the importance of the key elements of physical literacy; in particular she cites the way in which motivation, confidence, competence, and knowledge and understanding are at the heart of the disposition. It is how these

elements combine and interact that enable an individual to make progress (or otherwise) on their physical literacy journey. These elements feed off each other, with each being as important as the other. The more movement experiences an individual has, the more effective, and far reaching, the cycle becomes and the more rewarding the journey.

One aspect where the journey metaphor is particularly helpful is in understanding that physical literacy is not a state that is reached and then persists throughout life. Physical literacy can be a quite fragile state and easily threatened. A careless hurtful comment; activities that are not developmentally appropriate; and lack of opportunity to learn and practise are just a few of the obstacles that can block the way. Consequently, the journey is not always straight forward (Whitehead, 2010; Taplin, 2011). It does not start at a set point and then move onwards and upwards in an effortless straight line. There are going to be twists and turns and setbacks and most certainly the journey will go into reverse, or come to a standstill, at some point during the life course. Consider the setbacks caused by illness, when the individual cannot participate; or the sudden awkwardness one feels when taking up a new activity; or when social pressures conspire against participation.

Having argued the case for accepting the journey metaphor, a dilemma arises when trying to record an individual's progress. Whitehead (2013) strongly advises against the idea of 'assessing' physical literacy, fearing that individuals (particularly children) will be compared against each other or against some rigid, official national norm. The very fact that these are unique journeys rules out any direct comparison. However, recording the stories and analysing common themes and/or patterns is useful, particularly for identifying ways in which the individual can be guided along their way.

While quantitative methods of data collection can be useful to chart progress on a journey, qualitative methods provide wide opportunities for all elements of physical literacy to be considered side by side. This is apposite in respect of charting a physical literacy journey with the affective, physical and cognitive elements being all but inseparable. Indeed qualitative data collection provides an opportunity to look at individuals as a whole and to give meaning to their world (Creswell, 2007).

Research is underway which uses the life history method to create stories which illustrate concepts of physical literacy and raises issues that need to be addressed (eg Taplin, 2010). The stories emerge from an interview process and can be used to chart an individual's journey; to explain what has happened previously; how and why a person has taken a particular path; and crucially, how to guide that person in the right direction in the future.

One such story is that of Alpie, aged 25 years at the time of interview (Alpie, personal communication, November 11, 2012). His parents were both physically active and from the moment Alpie was born he had access to a world full of movement. Ball games,

toddlers' gymnastics, jumping in puddles, chasing the dog, learning to swim, were all everyday occurrences throughout infancy and childhood.

Alphie enjoyed a very positive physical education experience at school. A range of activities and a team of caring teachers gave him an exciting introduction to team games and sport. By the time he was fourteen, Alphie was playing at county level in both cricket and rugby. By the time he was sixteen he was playing rugby in the academy squad at a professional club. If one had taken a snapshot of Alphie's physical literacy journey at any point up to the age of 23 years, an extremely positive physical literacy profile would have been seen – competent, confident and motivated, with physical activity (and sport in particular) at the heart of Alphie's being.

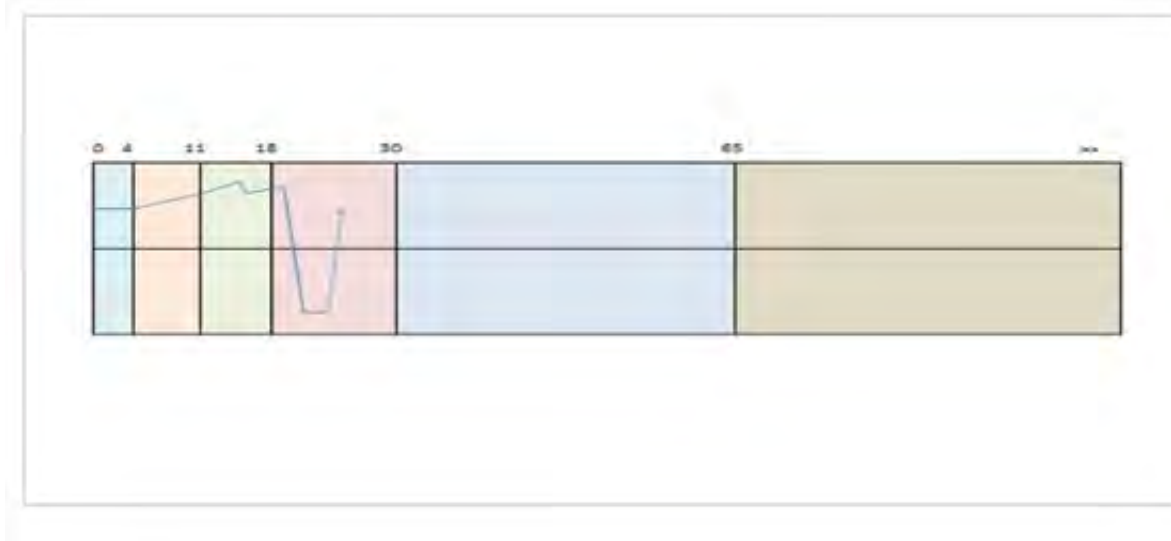
Then disaster struck. At the age of 23 he broke his right leg whilst playing rugby; he smashed the fibia and tibia and had to have a rod inserted inside the bone, with bolts at the ankle and just below the knee. Recovery was slow and painful.

A year after his accident, Alphie tried to play rugby again, but the pain was too great. It suddenly dawned on him that he might never play the game he loved again. It felt as if his world had ended. Unable to play sport or to engage in any meaningful activity, Alphie became depressed and found temporary refuge in drink and pain killers. He put on weight and he walked with a pronounced limp. Everything in his life - work, relationships, sport - seemed to be at rock bottom. Then, seemingly out of the blue, he decided to spend a year in Australia, where he got a job that required him to be physically active. He began to swim and he started going to the gym. He lost weight. He then tried running and found he was pain free for the first time in two years. He found a new group of friends and became one of those outdoor Aussies, doing kickboxing in the park and having a kick about with a football. Life looks brighter and he is at peace with the world. Alphie's physical literacy journey seems to be back on track.

Having captured the story, it is possible to plot the journey on a life history map. It is important to emphasise that this is not statistical information and the map (Fig 1) is not a graph. It is purely a visual representation across the timeline of the individual's life.

The horizontal axis represents the age in years, with the colour coding showing the life stages. The vertical axis represents the interaction between the elements of motivation, confidence, competence, knowledge and understanding, in other words the essence of physical literacy. While qualitative methods were used to gather data across all elements of physical literacy it is judged that the end result is worthy of discussion. The horizontal line across the middle, is an imaginary one that represents the tipping point between being physically literate and physically illiterate. Whitehead (2013) suggests that if the individual fails to display one or more of the elements of physical literacy, then they are in danger of becoming physically illiterate and therefore the tipping point must exist. Likewise, there appears to be a trigger, or significant event, that causes the journey to change direction.

Figure 1: Alpie's physical literacy map



If we look at Alpie's physical literacy map, the twists and turns of his journey are clear to see. We could take one event, or one period of his life, the micro journey, and examine the context in more detail. We can make the point that despite having a positive physical literacy profile in childhood and adolescence, we never know what is going to happen next. The devastating injury, that no one could have predicted, resulted in Alpie's physical literacy profile crashing and for a short period, we could certainly describe him as being physically illiterate – he lost motivation, confidence and competence; he was unable to value physical activity; and was unable to take the steps necessary to participate. The map also illustrates the moment Alpie took responsibility and began making decisions whereby he started heading in the right direction once more.

Perhaps the most striking aspects of Alpie's journey, highlighted by the map, is not only the spectacular crash; but also the ability of this particular individual to re-start his journey. The message must be that there is always a way forward and that no matter what age, or how desperate the situation, the individual can make progress if the right conditions exist. Forces need to be in play which release the trigger. In Alpie's case, the place physical activity had in his life prior to his injury and the positive journey he had previously experienced, ensured that he was able to find his way back onto the right path. The trigger seems to have been the weight loss which heralded a return to fitness, which in turn gave him the confidence to take responsibility for his progress. Perhaps it was just a matter of time – the time needed for him to fully recover from his injury. Fortunately, when the time was right, Alpie found himself amongst a new peer group which encouraged and cajoled him to re-engage.

In conclusion, Lakoff & Turner (1989) reflect on how frequently we use the 'life as a

journey' metaphor and how comfortable we are with it. They suggest that it is natural to assume a purposeful life as being one with a series of paths towards set, or unknown, destinations, thus making life a journey. Whitehead (2013) frequently returns to the journey metaphor as she clarifies physical literacy. Examples include her observations that 'journeys may stall on account of a range of personal circumstances' and 'journeys can re-start and flourish'. She explains that 'each individual will be on their own personal physical literacy journey' and that the important issue is that 'individuals are making progress' (Whitehead, 2010, p38). She advises that some individuals 'may be travelling very slowly' (2010, p39) but 'even a small step on their individual journey is valuable and should be celebrated' (2010, p39).

This article advocates the usefulness of the 'physical literacy as a journey' metaphor, as it both explains the concept and helps make it a reality. Furthermore, the article suggests life history is one way in which a better understanding of an individual's physical literacy journey can be developed. By recording, retelling and mapping the story, we are able to track the individual's journey, enabling sense to be made of the past, in order for progress to be made in the future.

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## Translating Physical Literacy into Practical Steps: the Role of Pedagogy

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*Len Almond*

### Abstract

This paper discusses a number of pedagogical implications of working to promote physical literacy. It looks at a pedagogy for translating physical literacy into action steps, a pedagogical process, pedagogical skills, relational pedagogy and the importance of giving learners a voice. The paper challenges practitioners to reflect on their work with learners and develop a pedagogy of engagement.

### Introduction

It was emphasised in an article in *Physical Education Matters* (Almond and Whitehead, 2012) that the definition of physical literacy proposed by Margaret Whitehead was simple as well as complex. Its simplicity was seen as a major strength because it clearly articulated a vision of what could be achieved. However, this simplicity needs to be translated into meaningful components that enable practitioners to guide their practice and implement key messages and it is this process that is complex and demanding.

In the context of working with school age participants the key features of physical literacy have to be made accessible to the unformed and uninformed minds of young people. Their ability to evaluate life plans and make choices about what to do with their lives has not yet developed or more likely may not even have been considered. If we are to develop an understanding of physical literacy and how this relates to the importance of being physically active in purposeful physical pursuits throughout the lifecourse, there is a need to provide a detailed vision of what is entailed in physical literacy for all age groups, as well as clear and specific guidance to inform practice.

What are the building blocks that enable young people and adults to become physically literate?<sup>1</sup>

### Developing a pedagogy for translating Physical literacy into action steps<sup>2</sup>

In responding to this question and appreciating its implications, practitioners need to

have a clear understanding of physical literacy so that they can develop and deliver an authentic curriculum, that is, one true to the principles of the concept. This curriculum will aim to ensure that all young people and adults:-

- Learn to love being active in a variety of purposeful physical pursuits
- Become competent performers in a range of purposeful physical pursuits
- Learn to recognise that being active in these pursuits can be rewarding and pleasurable and enable them to develop a commitment to an active lifestyle
- Have the confidence to explore participation in a wide range of purposeful physical pursuits and thus widen their life choices
- Learn to make informed decisions about the kind of purposeful physical pursuits they want to engage in on a regular basis
- Become perceptive and intelligent performers in their chosen purposeful physical pursuits
- Actively evaluate their life habits and patterns with respect to participation in purposeful physical pursuits that can enrich their lives.
- Withstand/disregard negative messages from significant others about the relevance of purposeful physical pursuits in their lives
- Learn how to accept responsibility for their own wellbeing and what they can do with their lives
- Acquire a sense of empowerment and agency - an ability to make choices and to control the procedures needed to achieve goals that the person values
- Understand that regular participation in purposeful physical pursuits develops a resource that enhances all round health and wellbeing and, as a result, people are more likely to remain fit and healthy throughout the life-course and into old age.

These aspirations paint a comprehensive and indeed challenging vision of what could be achieved in physical education and other activity settings. In addition they form the basis for the educational validity of physical education.

However, how can these key principles of physical literacy be translated into practical steps and meaningful ways of engaging with purposeful physical pursuits? A full explanation of this process would need to be very detailed so, for the purposes of this article, it is proposed that only two aspects will be addressed. The first is a neglected aspect of physical education: how can practitioners engage with young people (or adults) and promote purposeful physical pursuits? The second relates to what the essential aspects of physical literacy are that need to be explored through purposeful physical



pursuits.

In order to address these two aspects, a focus on pedagogy will be used to demonstrate how the key principles of physical literacy can be used to guide practice. Underpinning this process is the idea of a pedagogical process and pedagogical skills.

### **A Pedagogical process**

The pedagogical process of working with young people (or adults) is associated with helping them to develop as persons with autonomy and independence, to learn to 'love being active' in such a way that they become empowered to take responsibility to create a life-plan that includes purposeful physical pursuits that satisfies and offers challenges. The ability to bring this about is a crucial challenge for all practitioners and will entail the capacity for:

- Nurturing positive and enabling environments and establishing caring and productive relationships with learners
- Cultivating, shaping and nourishing appropriate dispositions that can enhance a person's quality of life
- Establishing a pedagogy of engagement

Practitioners are needed with the professional skills to engage with people and help these learners to learn to love being active, recognise purposeful physical pursuits as an important priority in their lives, appreciate what they can offer, and care about their involvement and commitment. To achieve this, practitioners also need to foster learners' capacities such as responsibility, independence, empowerment and agency so that they are able to make decisions about the kind of life they want to pursue and are able to make informed choices. However, to acquire the ability to do these things, practitioners will have to rethink their practices and adopt specific pedagogical practices and skills.

### **Pedagogical skills<sup>3</sup>**

The pedagogical skills required by practitioners are diverse. For example they need to connect with individual learners in such a way that kindles interest and enables learning to take place.

This includes reaching out to learners who are:

- Unmotivated/Reluctant participants e.g. those who have been alienated from physical activity

- Shy and reluctant
- Hard to communicate with/hard to reach
- Lonely or disinterested people
- Disadvantaged and disabled

Practitioners must engage all young people with challenges that will involve them and draw out their confidence and willingness to participate. This engagement process needs a hook that stimulates their curiosity and provides challenges that engage their interest as well as practices that are playful and also allow them to develop their confidence. In this process, the practitioner becomes a facilitator who is enthusiastic and empathetic. As a facilitator, the practitioner creates enabling environments and uses active learning as tools for promoting a love of engagement in purposeful physical pursuits, helping young people 'get on the inside' of what is available, recognising the attractions of these various opportunities.

Self-directed activities need to be seriously considered because they are recognised as intrinsically satisfying and are more self-engaging and self-fulfilling than imposed activities and enable learners to flourish. We need to consider that flourishing is also associated with people who feel in control of their own lives.

Within this process, the teacher as a facilitator needs to recognise the need to stretch the capabilities, attitudes and interests of individual students. The teachers' understanding of when and how this can be achieved needs to be in tune with the way they are able to shape the opportunities that they make available. This is an important element in promoting a personal physical literacy journey.

Allied to a pedagogy of engagement is a commitment to building productive working relationships which could be called a relational pedagogy.

### **Relational pedagogy (building productive working relationships)<sup>4</sup>**

Relationships and a social network are a central and valuable feature of human life which is fundamentally dialogical. It is through interactions with others that we are able to develop a capability for understanding and discovering much about ourselves. Indeed, much of who we are and how we learn is relational. Our identity is defined in dialogue with others and sometimes in opposition to what others want to see in us. We have a need for relationships and social contact that is natural and life enhancing and a failure to recognise this need is to risk our health and wellbeing.

Young people's relationships with their teachers also have an impact on how they access opportunities in the curriculum, how they feel about themselves as learners and their accomplishments, as well as how far they are engaged in school life. In the same way, relationships with their peers can have both positive and negative influences.

We are partly shaped by recognition or lack of recognition by our peers and a person can suffer real distress or damage as a result of comments from peers that may reflect back a demeaning picture or even an image of inferiority. This may well influence how well young people take up opportunities available to them. This illustrates the crucial professional roles that teachers have in physical education. Practitioners have a role to play in how they engage productively with young people and establish positive working relationships and they also have to be aware of the relationships within groups of young people and nurture positive outcomes. The ways in which young people engage with each other and interact is an important area to consider. Practitioners need to encourage all young people to respect and help each other in the process of shaping positive images of a person's self. They need to be alert to instances where a young person's self-respect is threatened by inappropriate comments from significant others amongst their peers. This is just as important as facilitating opportunities for young people to improve their physical performances and accomplishments. This can only be accomplished in a community in which there is a shared commitment to action with a common understanding of the significant task in hand<sup>5</sup>.

There is a need to empower young people to acquire positive interpersonal dispositions, to take responsibility and recognise that their actions can have positive and negative consequences on others. This must be reinforced by a positive ethos within the running of a physical education community in a school (and also a sports club). A sense of belonging and a shared commitment to stimulate a real love of purposeful physical pursuits needs to be generated, as well as a desire to reach all young people and recognise that the context of this engagement can foster positive interactions.

### **Creating the idea of 'Voice' in Pedagogy**

The idea of a 'voice'<sup>6</sup> is crucial for the development of pedagogy because it accepts that all young people (and adults) have a role to play in their own development. Giving people a 'voice' entails implementing structures that enable the voices of students (or adults) to be seriously considered together with the development of appropriate communication channels and procedures for listening to young people's concerns, interests and ideas. Young people should be involved in all the important decisions that affect their wellbeing. Finally, teachers should be seen to be responsive to young people and prepared to consider and implement ideas that can improve their own practice.

### **Principles that should guide giving learners a voice**

Practitioners need to:

- Have a genuine desire to hear what young people (or adults) have to say
- Recognise that young people (or adults) can contribute much to the learning process and can make a real difference
- Give learners the freedom to express a seriously considered viewpoint without feeling disadvantaged
- Listen to learners' concerns and suggestions and be responsive to their needs
- Ensure that consultation topics are seen as important and serious
- Ensure that everyone is treated as an equal member of any consultation group
- Consult with young people about 'what' purposeful physical pursuits are accessible to all pupils
- Be aware of learners' preferred ways of learning
- Ensure that any action taken following consultation is explained and justified to enable students to understand the wider context (alongside their own input) that shapes decisions
- Understand that there are a number of young people in each school (as well as adults in a community) who could be called the underserved – they rarely engage in any sort of purposeful physical pursuits. This group of students (or adults) need to be identified, engaged and action taken.
- Allow learners to take responsibility for their own practice

Thus, a practitioner's responsiveness, attentiveness, watchfulness and perceptiveness are essential to good communication strategies to generate a shared meaning and an understanding of how to incorporate a 'voice' for young people into the practice of physical education.

However, prior to these pedagogical processes the conditions have to be created for learners to acquire the attitudes, abilities and accomplishments that underpin their understanding of how taking part in purposeful physical pursuits can open up their horizons to new experiences. These new horizons can offer different sorts of experiences that can excite, challenge and become absorbing activities that add immensely to the joy of being active and finding satisfaction in learning and accomplishment.

### **Creating a supportive environment**

Donald Soper made the claim that 'you change society to make people better, not the other way round' (The Guardian, 21st January 1993). An individual can only (or is more likely to) behave responsibly or learn to care about others if the environment permits and/or encourages this. Underpinning this pedagogical stance is a commitment to creating or maintaining a nurturing and caring context. This context is one that demonstrably stimulates and encourages every individual, respecting differences and nurturing strengths. Soper's claim contains a great deal of insight because it has particular relevance for the idea of a nurturing and caring community that provides appropriate environments for young people to develop as persons and acquire a commitment to purposeful physical pursuits. In terms of physical literacy, there is a need to consider carefully what kind of ethos and culture is appropriate for promoting independence, empowerment, social learning and a sense of belonging, together with helping young people to have the power to make informed decisions and the ability to pursue goals that they have reason to value.

Advocates and ambassadors for physical literacy have to consider how the ethos, culture and environment for learning of individual physical education departments can be changed to assimilate and accommodate these additional and valuable 'goods'. It is important that the environment, the school climate or the ethos of the way the physical education department functions is concerned with the collegiality and solidarity of the community in which learners are acquiring valuable qualities, abilities and accomplishments.

Teachers with their learners should be part of a community that has established an ethos that is conducive to the following:

- All individuals are valued
- There is a caring and considerate atmosphere
- There is a tolerant and sensitive attitude towards individual differences, needs and interests
- Fairness for all is promoted in the distribution of scarce goods
- Everyone is respected and trust is encouraged
- There is reflection on the consequences of personal actions and collective responsibility
- A constructive sense of the person is developed in which positive interactions and relationships with others are stimulated and pursued

These conditions can only be established when it is recognised that a set of common purposes and shared understandings about the enterprise of creating a learning environment and adopting appropriate pedagogies are desirable and can lead to

successful common action. Just as teachers plan the content of specific purposeful physical activities to establish continuity and coherence, progression as well as development, they have to consider carefully how they can create the conditions that enable the development of a wide range of accomplishments associated with physical literacy (not just sport skills) for all their learners. Such a proposal reaches the very heart of fostering physical literacy.

## Conclusion

In exploring how to translate physical literacy into practical steps, the focus has been on a pedagogy of engagement, a relational pedagogy and giving young people a 'voice' in their education. These are important steps that will challenge teachers to improve their practice and provide a more educationally valid experience for all young people. This is a huge claim but one that I would defend. There is still much to do and the Physical Education Matters articles in 2012 and 2013 provide a number of additional ideas; it is important that all these ideas are developed further. We cannot expect teachers to move from one position to another without careful consideration of the 'problems of practice' and the provision of evidence-based guidance that can truly guide and inspire teachers. Much of this article has focused on teachers but the content is just as applicable to adults.

Nevertheless, careful reading of this article and the whole of this Bulletin will provide food for thought and start us on a journey to discover new ways of working.

<sup>1</sup> See the following article in this Bulletin: What is the value of Physical Literacy and why is Physical Literacy valuable?

<sup>2</sup> See also Almond and Whitehead (2012) and Whitehead with Almond (2013) for more comprehensive ideas on this topic.

<sup>3</sup> See Almond and Whitehead (2012) for further ideas.

<sup>4</sup> For more information see D.H.Hargreaves (2004) and Bigger, S. (2010)

<sup>5</sup> For a more detailed discussion of this topic see chapter two of Physical Education in Schools (Almond, 1996; p.21-33).

<sup>6</sup> For more information on student voice see D.H.Hargreaves (2004). Flutter, J., and Rudduck, J. (2004) and Ruddock, J., & Flutter, J. (2004), MacBeath, J., Demetriou, H., Ruddock, J. and Myers, K. (2003), Rudduck, J. & McIntyre, D. (2007)

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## Creating learning experiences to foster physical literacy

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*Margaret Whitehead & Len Almond*

### Abstract

This paper\* builds from the previous paper (3.1) and translates broad recommendations concerning pedagogy into specific elements of practitioner practice. It aims to provide some answers the question 'How is physical literacy nurtured?' All the recommendations are pertinent to all practitioners including teachers, coaches and those working in the leisure industry.

### Introduction

All practitioners working to promote physical literacy should adopt a common pedagogical framework. This framework should ensure that learners of all ages have experiences that:-

- are rewarding and enjoyable, thus enhancing motivation
- have a positive effect on their self confidence and self worth
- enable them to experience progress and success in a wide range of purposeful physical pursuits and in the effective employment of specific movement patterns
- empower them to make decisions in respect of their involvement in purposeful physical pursuits
- enable them to appreciate the value of physical activity for lifelong health and well-being
- energise them to be proactive in their participation in physical activity

Taken together it is suggested that the characteristic that unites all these experiences is a sense of an enabling engagement in physical activity. In the sections below we set out practical suggestions that should ensure that learners make progress on their individual physical literacy journey.

### Experiences that are rewarding and enjoyable and thus enhance motivation

To provide learners with experiences that are rewarding and enjoyable and thus



enhance motivation, practitioners create a positive and encouraging ethos throughout all sessions. The learning environment is stimulating and attractive. Wall displays engender interest in physical activities, include a wide variety of examples of performers and performances, and are changed regularly. Good organization, the sharing of the intentions of the session and clear instructions throughout, engender a feeling of security. Appropriately varied tasks and expectations, together with supportive praise and guidance that differentiates between the needs of learners, confirms that all learners can succeed. The practitioner's presentation is lively and varied, thus engaging learners' interest. Learners look forward to sessions, anticipating positive experiences. Carefully planned sessions and enthusiastic teaching ensures that all learners can experience the satisfaction of success – which is key to fostering motivation.

***This experience is likely to be realised where practitioners:***

- *are enthusiastic and encourage all learners*
- *conduct sessions that are purposeful, lively and varied*
- *adopt a 'can do' approach with each learner*
- *ensure tasks are within reach of learners*
- *use praise as appropriate with all learners*
- *select and use the most appropriate feedback to each individual*
- *facilitate learning by e.g. good organisation, clearly explained learning episodes, differentiation, thus giving sufficient time for progress to be made by all*

**Experiences that have a positive effect on learners' self confidence and self-worth**

To provide learners with experiences that have a positive effect on their self confidence and self-worth, practitioners provide opportunities for all learners to come to terms with their individual potential and to have their achievements recognized by the practitioner. The practitioner has high but realistic standards. Above all the learners feel secure in the situation, knowing that challenges will be within their grasp and that the practitioner will acknowledge their efforts and their progress, however small. Importantly learners feel included at all times and know that they are valued. They have experiences that endorse their self-worth and develop their self awareness and pride in their personal performance and potential. This requires that the practitioner knows every learner well and takes time to interact with each learner. The practitioner judges learners' progress from the standpoint of an individual's previous achievements, rather than in comparison with the performance of others. Progress will be celebrated alongside achievement.

To promote learners' ability to empathise and work with other learners, the practitioner provides opportunities for learners to engage in a variety of group situations. Such work, demanding particular sensitivities and social skills is carefully planned, perceptively supervised and as appropriate, is subject to feedback that re-enforces effective

interaction. The respect shown to all learners by the practitioner sets the example to the learners in their interaction with each other. Mutual support and constructive help is the norm. The atmosphere of sessions shows care and trust between all involved. Behaviour that is insensitive, demeaning, selfish or aggressive is totally unacceptable, while behaviour that shows a co-operative spirit and a caring, supportive attitude to others is re-enforced and praised. Practitioners establish an ethos of fairness and trust in all aspects of sessions.

***This experience is likely to be realised where practitioners:***

- *ensure that they know all learners as individuals, both by name and in respect of where they are on their physical literacy journey*
- *adopt a caring, empathetic approach with all learners*
- *ensure that each learner feels valued and is included at all times*
- *ensure that all learners experience success, being challenged as appropriate*
- *are optimistic and have high, but realistic standards*
- *recognise and reward effort, progress and achievement*
- *enable learners to develop self awareness and pride in their personal performance*
- *adopt ipsative (see note at the end of the paper)\* assessment*
- *ensure that learners respect each other and are encouraging and supportive of other class members*

**Experiences that enable learners to make progress and have success in a wide range of purposeful physical pursuits with the effective employment of specific movement patterns**

To provide learners with experiences that enable them to make progress and have success in a wide range of purposeful physical pursuits, demands careful thought and planning on the part of the practitioner. Essential to the promotion of learners' progress in achieving the attribute of physical literacy that refers to their ability to 'read' the environment and respond with fluency and intelligence, requires practitioners in the school setting, to ensure that learners are able to participate effectively in activities that cover all Movement Forms (See Bulletin paper 3.4 for more detail concerning material to be covered)

Attention to promoting physical competence and confidence is at the heart of practitioners' interaction with learners. Through the use of a range of imaginative challenges, tasks, situations, practices and applications the practitioner guides the learners to be ever more secure in their employment of movement patterns. (See Whitehead et al 2010) Learners need time to practise and refine what they are learning, thus providing the opportunity for real progress and for movement patterns to be established, remembered and applied on future occasions. The practitioner is observant and skilful in articulating meaningful and productive feedback to learners. Assessment for learning is used.

***This experience is likely to be realised where practitioners:***

- provide opportunities for learners, within the curriculum and in extra-curricular time, to engage in purposeful physical pursuits that exemplify all Movement Forms
- involve learners in progressive challenges both in respect of reaching personal movement goals and in working with others in co-operative and competitive movement contexts
- devote sufficient time to any purposeful physical pursuit for learners to make progress
- work with learners as individuals, using a mastery approach in developing specific movement patterns
- use an assessment for learning approach in their feedback
- deploy astute observation skills and the ability to describe movement, this founded on a sound knowledge of the constituents of movement and the way these combine to form movement patterns

**Experiences that empower learners to make decisions in respect of their involvement in purposeful physical pursuits**

To provide learners with experiences that empower them to make decisions in respect of their involvement in purposeful physical pursuits practitioners establish an ethos of shared learning in all sessions. While the practitioner remains responsible for the work every opportunity is taken, as appropriate, for the learners, to play a part in selecting tasks within sessions, including evaluating their own movement learning and in planning sessions and units of work. The practitioner encourages learners to ask questions and to engage in discussion concerning the learning challenges. Open ended tasks are set, as appropriate, giving learners freedom to explore in their own way, and calling on them to

think for themselves. Opportunities are provided, as appropriate, for learners to select the level of challenge they take up. Practitioners share with learners the constituents of movement and how these are combined to create effective performance. Using this understanding learners are encouraged to evaluate their own performance, in other words to take ownership of their own learning, setting their own targets and engaging in self-evaluation. Learners begin to appreciate that it is ultimately their responsibility to monitor and improve their work. In this way, they are learning to be more independent and take responsibility for their own progress – both abilities that are important for all learners to acquire.

Practitioners involve learners, as appropriate, in discussion concerning the goals to be achieved in a session or unit and how these goals might be realised. Learners are also involved in reflective debate about the effectiveness of these plans in reaching the intended goals. In this way learners are to be given opportunities to make choices and exercise their independence, secure in the knowledge that the practitioner will respect their contributions and ideas, and guide them as appropriate.

***This experience is likely to be realised where practitioners:***

- *encourage learners to ask questions*
- *engage in discussion with learners*
- *present open ended tasks and problem solving situations which require learners to think for themselves*
- *work to enable learners to self-assess and thus enable them to take responsibility for their own learning*
- *allow learners to select tasks and challenges on which to work*
- *involve learners in planning aspects of sessions*
- *involve learners in planning Units or work*
- *involve learners in reflecting on the outcomes of sessions and units of work*
- *respect and act on learners' views*

**Experiences that enable learners to appreciate the value of physical activity for lifelong health and well-being**

To provide learners with experiences that enable them to appreciate the value of physical activity for lifelong health and well-being, practitioners take the opportunity to highlight the effects of exercise on the body and to discuss the wide health benefits of exercise. Appropriate situations are created in which learners are called on to recognise, reflect on and discuss the way that movement challenges draw on and develop the functioning of their body systems. Learners are involved in reflective debate concerning the wide range of positive effects of an active lifestyle with reference to their flourishing in the broadest sense. Learners may keep a diary which both records their involvement in physical activity and encourages them to reflect on these experiences. Topics such as the importance of appropriate eating habits and sleeping patterns are also addressed, as appropriate.

The knowledge and understanding gained in these experiences ensures that learners recognize that being active is an important priority. Furthermore learners appreciate that the benefits of exercise extend beyond their embodied dimension such as its impact on mental health, social well being, as well as on the overall quality of life.

Practitioners interact with sensitivity with learners, helping individuals identify where their interests might be in relation to participation in purposeful physical pursuits. Class discussion could also cover the availability of local facilities where different purposeful physical pursuits are taking place.

***This experience is likely to be realised where practitioners:***

- *plan sessions so that learners can experience and recognise the wide ranging health benefits of activities*
- *encourage learners to reflect on and discuss the effect of exercise on their various body systems*
- *encourage learners, as appropriate, to be alert to current medical thinking on the benefits of exercise, such as the concept of 'exercise as medicine'*
- *engage learners in debates that re-enforce the wide ranging benefits of an active lifestyle*
- *listen to and respond sensitively to learners' views and experiences*

**Experiences that energise learners to be proactive in their participation in physical activity**

We suggest that if learners have the foregoing five experiences that they will be energised to take part with drive and enthusiasm in purposeful physical pursuits within the school and beyond. Practitioner encouragement will ensure learners are motivated to be involved. Practitioner attention to the learners as individuals will promote their movement competence and self confidence. Discussion of key areas of knowledge and understanding, as well as the opportunities given to learners to make decisions and to take responsibility for their own participation and progress, will lay the ground for thoughtful and constructive consideration concerning future participation on the part of each individual.

***Learners are likely to be energised to participate in the future where practitioners:***

- ensure that involvement in purposeful physical pursuits is a positive and rewarding experience
- ensure each individual makes progress
- engage learners in lively/dynamic movement challenges
- encourage learners to reflect on their experiences and discuss approaches to maintaining active participation throughout life

## **Conclusion**

We suggest that where practitioners have followed the suggestions above, learners will have been given the opportunity to make progress on their individual physical literacy journey. This mode of pedagogy has the learner at its heart and involves the practitioner in critical reflection of their own teaching. This is the goal of all physical activity experiences – to ensure that every learner has the motivation, confidence, physical competence, knowledge and understanding to value physical activity and to take the responsibility to develop and establish an active lifestyle, in other words to be physically literate.

A pedagogy of engagement is a practitioner's tool to achieve this goal.

The heart of this enterprise is to provide those experiences that engender a love of being active: an attitude that sees participation as a rewarding, fulfilling and enriching experience. While this attitude is informed by knowledge and understanding of the far reaching benefits of an active lifestyle, the profound satisfaction of participation is founded, crucially, on the quality of experience of each learner.

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## Physical Literacy and Fundamental Movement Skills: an Introductory critique.

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*Len Almond*

### Abstract

In this article I shall identify some problems with the association of physical literacy with fundamental movement skills (FMS). The literature on fundamental movement skills is vast and a thorough examination of this association would need to address both the research underpinning FMS and the comprehensive resources that have sprung up recently. Such a task is a massive undertaking but for the purposes of this article I propose to identify some key issues that immediately spring to mind. My purpose in doing this is to raise awareness of the complexity of an association between FMS with physical literacy and to stimulate a thorough debate and the development of a more informed understanding of what is implied by an association of FMS with physical education. My hope is that such a debate will generate more informed guidance and more clarity in the vision of what constitutes quality physical education and what it can look like.

### The Association between Physical Literacy and fundamental Movement Skills

An examination of a number of international sources clearly establishes that in many countries resources are being produced that make a direct association between physical literacy and fundamental movement skills.

On the Physical and Health Education Canada website<sup>1</sup> they define physical literacy as:

“Individuals who are physically literate move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person. Physically literate individuals consistently develop the motivation and ability to understand, communicate, apply, and analyse different forms of movement. They are able to demonstrate a variety of movements confidently, competently, creatively and strategically across a wide range of health-related physical activities. These skills enable individuals to make healthy, active choices that are both beneficial to and respectful of their whole self, others, and their environment.”

On the same website, it says:

“To become completely physically literate, children need to master the fundamental



movement skills”

So, clearly fundamental movement skills are seen as a central focus for physical literacy. In another source, ‘The Assessment and Measurement of Physical Literacy in Children’ commissioned by Sport Northern Ireland it is proposed that:

“The study should compare a range of representative fundamental movement skills in children who have experienced structured programmes, with a similar number of children who have not experienced such programmes.”<sup>2</sup>

Once again there is a clear association between physical literacy and fundamental movement skills. In the same way, ‘Fundamental movement skills and Physical Literacy’ is the title of a factsheet compiled by Sheelagh Quinn for Coaching Ireland (website [www.coachingireland.com](http://www.coachingireland.com)) in which she says that:

“To develop physical literacy a child should first master the fundamental movement skills. Having these skills is an essential part of enjoyable participation and a lifelong interest in an active lifestyle. Physical literacy is the foundation of the LISPA framework and provides children with the tools they need to take part in a wide range of physical activity and sports, much in the same way as numeracy and literacy skills prepare a child for a life of work or study” (p.4).

Sport New Zealand introduced ‘Developing Fundamental Movement Skills’ in 2012 as a resource for teachers, coaches, parents, children and others who want to support the development of fundamental movement skills in children aged 5–12 years in a fun and purposeful way.<sup>3</sup> Though this resource on fundamental movement skills in New Zealand does not make a direct association with physical literacy, this relationship can be confirmed by Athletics New Zealand when they say on their website<sup>4</sup>:

“Through the improvement of physical literacy (fundamental skills such as running, jumping, and throwing), the LTAD model will help develop a lifelong involvement of New Zealanders in physical activity and sport participation as well as producing future athletes.” This confirms a clear association with long-term athlete development.

Keegan (2013) in a recent and significant report (Getting Australia moving: establishing a physically literate and active nation a game plan) says that this report is drawn from popular physical literacy programmes in the UK, USA, Canada and New Zealand. In this report they briefly unpack physical literacy (p.4) and go on to associate the long term athlete development approach with physical literacy and outline six stages in this development beginning with Active Start (0-6).

In Australia, a new draft Australian Curriculum Health and Physical Education: Foundation to Year 10 draft<sup>5</sup> has been released for consultation. One of the strands is ‘Movement and Physical Activity’ and within this strand it proposes that:

“The content in this key idea lays the important early foundations of play and

fundamental movement skills. It also builds upon these to support lifelong participation and enhanced performance in physical activities” (p.7).

It clearly associates fundamental movement skills with promoting lifelong participation together with enhanced performance. In a similar way many countries now see fundamental movement skills as central to physical education and the foundation to competent and confident participation in a range of physical activities. This appears to be an uncritical assumption in all the sources that I have read, an assumption that the case has been made and there is no need to further debate. This assumption needs to be open to debate and needs to be challenged, especially when it is associated with physical literacy. Has research established that fundamental movement skills model is the best approach for physical education compared with other approaches? It does not appear that convincing evidence has been presented.

### **Problems with the Connections between fundamental Movement Skills and Physical Literacy**

In an analysis of these sources, fundamental movement skills are usually listed under three categories: locomotor, stability (sometimes they are called body management skills) and manipulative skills. So, for example in a recent course<sup>6</sup> entitled ‘Early Years PE - Laying the foundations of physical literacy,’ there is a clear reference to basic movement competence which is seen as developing agility, balance and coordination (the ABCs) through a basic movement framework including locomotion, object control and stability.

This perspective gives the impression that all movement experiences in the early years and the primary school (or elementary school) should be based on these three categories. If this is the case why are dance, adventurous activities and swimming not associated with fundamental movement skills?

The list of fundamental movement skills in three categories creates a special problem because to some teachers or practitioners the list can be seen as a set of ‘I Can’ challenges that can be taught in isolation and can be seen as a ready-made physical education programme. This would hardly represent a quality physical education programme. Clearly, this is not what advocates of fundamental movement skills would expect to see but it highlights a potential danger for many inexperienced teachers. It provides clarity about what they have to teach and a list of what they have to cover. However, will this approach provide a range of positive experiences for **all** young people? It highlights also the possibility that the teaching approach in these circumstances will be didactic and negate creative and self-directed learning.

One of the main problems with traditional forms of teaching games is the separation of learning techniques from playing a game. It was assumed that there would be some form of transfer. This separation also brought about a drill style approach to learning a technique with the learners positioned in regimented rows. This raises a further problem

because teachers usually refer to techniques as skills. However, skills refer to the application of techniques to specific game situations and it is only recently that this has been fully realised and practices introduced to match practice with what happens in a game. There is a great danger that this will happen with the way that fundamental movement skills are perceived.

In England the Youth Sport trust has developed a new resource and training programme called Start to Move: developing physical literacy<sup>7</sup> aimed at 4-7 year olds. On their website there is a clear association with fundamental movement skills but one of their aims is to “teach PE using the same approach used in literacy i.e. learn an alphabet of movement skills, combine them into movement words (multi-skills), and develop movement stories (e.g. a 2v2 game)”. This raises a key point about physical literacy because an association is being made about movement experiences with words like ‘alphabet’, ‘words’ and ‘stories’. In other words there appears to be a sense in which a movement vocabulary is being established.

Whether there is any evidence to support this position it is difficult to establish but it does appear that the development of movement competence in physical literacy is seen as the same as developing literacy. I would have some doubts about making such a connection and assuming that it is literacy. I believe this is a major problem that needs to be addressed.

One of the crucial features of the recent Whitehead definition (2013) of Physical Literacy is the notion that motivation and confidence are central to making a commitment and maintaining an interest in purposeful physical pursuits. In pursuing a fundamental movement skills approach, the content and pedagogy associated with it may be appropriate for some young people. There may be young people who are already active and recognise a challenge in these sorts of tasks. Other young people may simply love being active and they don't mind what opportunities they are presented with.

However, there are young people who are cautious and shy, lonely, disinterested or hard to communicate with. There may be others who find the challenges of fundamental movement skills too much for them, as well as those who feel they may be exposed to ridicule. There are always young people lacking in confidence and do not enjoy physical pursuits whilst others have no interest in sports and their interests need to be addressed. This kind of a scenario can be difficult to handle and as a result the pedagogy has to be flexible so that teachers can reach out and connect with a wide variety of interests and capabilities, and enable all young people to identify with a purposeful physical pursuit that gives them confidence and a sense of achievement.

The motivation and confidence to engage with purposeful physical pursuits and maintain an interest in them comes from the way content is presented and the interactions with the teacher. If a young person can learn to love being active and the tasks they

encounter are manageable, realistic and stimulate progressive development, this will reinforce a love of being active. This is central to motivation, however if confidence is to be gained, it is important that content is selected that is within a young person's capabilities.

If fundamental movement skills were associated with a pedagogy that can deliver these features for all young people and provide convincing evidence, this would be a major step forward and counteract many criticisms. This would involve also a consideration of personal learning journeys and the immediate relevance of fundamental movement skills to each young person rather than simply a pathway to sport. There must be an intrinsic satisfaction linked to their engagement. According to a recent report from Sport England (Sport England, 2012) emotional engagement or attachment to sport at age 11-16 is linked to forming a sporting habit for life.

Nevertheless, the key to unravelling concerns with fundamental movement skills should be the aspirations of a teacher's pedagogy and its link to a robust understanding of what physical literacy entails. Understanding must be based on a thorough reading of the literature together with an opportunity to test their understanding and tease out any concerns. At the present moment, much of the literature surrounding fundamental movement skills reveals an inadequate grasp of physical literacy and what it entails.

### **What does Research say about fundamental Movement Skills?**

Mark Tremblay (2010) has suggested that:

"If physical literacy is to become a key outcome of physical education curricula, which we firmly believe should be the case, appropriate metrics must be in place to evaluate the key domains of physical literacy" (p.26).

In a later paper concerning major initiatives in childhood obesity and physical inactivity (Tremblay, 2012) he goes on to elaborate further this proposal in more detail: He says:

"The aim of physical education, community sport and active living initiatives is to systematically develop physical competence so that children are able to move efficiently, effectively and safely and gain an understanding of what they are doing." (p.167).

This an acceptable statement but he goes on to say:

"The outcome – "Physical Literacy" – is as fundamentally important to children's education and development as numeracy and literacy. "

This association with numeracy and literacy may be one reason why physical education and sport have seen the idea of physical literacy as a convenient term to add an educational justification to the value of sport in the community and physical education in schools. However, Tremblay goes to say:

“Physical literacy is a construct that captures the essence of what a quality physical education or a quality community sport/activity program aims to achieve.”

I have no problem with this statement. However, he enters into a more complex debate when he makes a claim about physical literacy that:

“It is the foundation of characteristics, attributes, behaviours, awareness, knowledge and understanding related to healthy active living and the promotion of physical recreation opportunities”

His claim becomes even more problematic when he suggests that:

“Physical literacy is deemed to have four core domains: a) physical fitness (cardio-respiratory, muscular strength and flexibility), b) motor behaviour (fundamental motor skill proficiency), c) physical activity behaviours (objectively-measured daily activity), and d) psychosocial/cognitive factors (awareness, knowledge and understanding).”

I find these claims difficult to accept because they fail to address some of the key features of physical literacy such as making decisions about the role of purposeful physical pursuits in people’s lives, the role of agency and empowerment, learning to take responsibility and how young people (as well as adults) come to value these pursuits (which may be central to maintaining an active lifestyle). The current list represents a lack of understanding about physical literacy (Whitehead, 2013) and represents a Canadian perspective that has some major limitations. Tremblay does not raise any criticisms about fundamental movement skills, it is almost a taken-for-granted premise, and this is typical of a very worrying trend within most of the research literature on this topic that needs to be addressed. A concerted effort must be made to challenge current thinking.

Assessment of physical literacy in Tremblay’s article appears to focus on a narrow range of specific items in which researchers have objective assessment procedures. However, this approach neglects how a young person’s individual physical literacy journey develops over time. This would involve a portrayal from an insider’s perspective and attempt to unravel the components of change, the different motivations, unfolding and emerging interests, the challenges faced and the type of decisions made, together with the impact and relevance of significant others. This is a very different agenda.

On a further point, what kind of cues can practitioners use to develop an understanding of how a personal physical literacy journey unfolds so that they support young people and enable them to energise their lives and open up possibilities for enriching their life. This would represent a new research agenda but an important one and it would be of real significance for practitioners and teachers.

McKean (2013) explores the concept of physical literacy in children and raises some key questions.

“Physical education in schools has become an important issue in the fight against obesity and maintenance of general health. The concept of physical literacy is not a new one and has become a key aspect of modern philosophies underpinning physical education. .... There has been much published on the importance of physical literacy, however the common definitions of physical literacy fail to include the ability of the individual to move their body in the way it was designed to move” (p.1).

He goes on to make a connection between physical literacy and what he calls the fundamentals:

“Current research suggests physical education in schools should have a physical literacy approach inclusive of the Fundamentals including body control skills, locomotors skills, as well as sending-receiving skills, and object manipulation skills” (p. 1)

But, later he suggests that:

“Those movement competencies underpinning this capability certainly require further research and suggest the scientific community involved in physical literacy need to more clearly define such movement competencies”.

In his conclusion, he makes a plea to all researchers involved in fundamental movements and physical literacy:

“Researchers should consider the importance of understanding underpinning movement competencies and developing research to firstly better define such movement competencies and secondly to determine the role they may play in establishing guidelines for school based physical education and long term health.”

This is an important word of caution.

## Conclusion

In raising awareness about the way that fundamental movement skills are associated with physical literacy, I have tried to show that there is considerable confusion and misunderstanding in the way that people think about this connection. By quoting from a number of texts, it is clear that the connection is simply assumed.

Within these assumptions I have identified a number of difficulties: associating physical literacy with the alphabet, words and sentences can be misleading and can create a false link. By listing a number of skills within different categories, this move has the potential to reduce teaching to a series of ‘I Can’ challenges and a rather simplistic approach to quality teaching.

In the research field, physical literacy presents a new challenge by opening up the possibility that we can explore the concept in ways that are relevant to a person’s physical literacy journey. It could also provide cues for practitioners to support young people.

In this short article, it is impossible to address many shortcomings in the literature, so only a small number of problems have been identified. However, this may stimulate colleagues to respond and generate a real debate. I shall await such news with great eagerness. Nevertheless, a comprehensive critique is needed.

1 This can be accessed on <http://www.phecanada.ca/>

2 This can be accessed at <http://www.sportni.net/>

3 This can be accessed at <http://www.sportnz.org.nz/>

4 This can be accessed at <http://coaching.athletics.org.nz/>

5 This can be accessed at: <http://consultation.australiancurriculum.edu.au>

6 This can be seen on: <http://www.independentcoacheducation.co.uk/>

7 See the Youth Sport Trust Start to Move website <http://www.starttomovezone.com/>

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## **Content Implications of Working to promote Physical Literacy**

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*Margaret Whitehead*

### **Abstract**

This paper locates the issue of curriculum content within the philosophical roots of physical literacy in relation to the importance of interaction with the environment.

It sets out briefly the concept of movement patterns and their development and argues for the importance of a broad and balanced experience in a range of Movement Forms. Finally the paper suggests an alternative approach to the use of extra-curricular time. In these ways it provides some answers to the question 'How can we foster the development of physical literacy?'

The content of this paper is a re-presentation of material from Chapters 5 and 15 in Whitehead (ed) (2010) and Chapter 4 in Capel and Whitehead (eds) (2013)

### **The central importance of Interaction in the philosophical Foundation of Physical Literacy**

The first paper in this Bulletin explains the history of the development of the concept and the way in which existentialism can be seen to provide a sound justification for nurturing the motile potential afforded by our embodied dimension. It was suggested that we create ourselves through interaction with the environment. Without this interaction there would be no development and indeed no human life as we know it. It was suggested that any human dimension that afforded individuals the opportunity to interact with the world was of undisputed significance. The embodied dimension, being one medium of interaction is, therefore, worthy of serious attention and development.

The corollary of this is that fostering physical competence is of value and the more so if this competence can open the door to a rich variety of interactions.

### **Movement patterns as the Building Blocks of Physical Competence**

As is detailed in Whitehead (2010 Ch15) movement patterns are suggested as the building blocks for the development of physical competence within the physical literacy

capability. These movement patterns are referred to as general, refined and specific. An example of a general pattern would be sending. Sending is refined into types of sending such as throwing and bowling, and these refined patterns become specific when honed for use in a particular physical pursuit such as throwing the javelin, bowling in cricket or shooting in basket ball. The key to progressing from general to refined and specific patterns is the ability to apply movement capacities such as balance, co-ordination, dexterity and hand-eye co-ordination. (See Whitehead 2010 Chapter 15 for a full discussion of this topic)

The ability to use movement patterns is essential to effective and rewarding participation in physical activities. Patterns are, therefore, not ends in themselves but means to enable movers to engage in the wide variety of physical pursuits available in a culture. In fact there is a reciprocal developmental relationship between patterns and pursuits. The ability to use a cluster of patterns facilitates effective participation in activities and within that participation the patterns themselves will become more firmly established and more readily applied in subtly different ways to respond to ever changing challenges.

It follows from this short explanation that the wider the variety of contexts in which movement patterns are applied, the richer and more robust will be the individual's bank of patterns. It is thought provoking to consider the very many different movement contexts available, and to reflect on the myriad of ways in which movement patterns are called on.

There is a direct link here to the existential principles outlined above in that experiences of interacting with the environment will enable participants to appreciate an aspect of their potential and gain real satisfaction in this close relationship with the world.

## **Movement Forms**

As set out above, movement patterns are the building blocks of effective participation in physical pursuits and thus provide the foundation of physical competence in physical literacy. To realise physical potential and develop and challenge these movement patterns learners need to have experience in a wide range of physical pursuits. There is no doubt that there are far too many pursuits for all to be included in the school curriculum. It is, therefore, necessary to look carefully at the range of activities that might be addressed (as appropriate to a country or culture) and to categorise these so that an effective sampling can take place in school.

Over the years a number of categorisations have been proposed in UK, both in successive National Curricula and as designed by Institutes of Higher Education running Physical Education Teacher Education. Building from these models, Murdoch and Whitehead (in Whitehead 2010 Chapter 15) proposed six Movement Forms. These are:

Adventure; Aesthetic and Expressive; Athletic; Competitive; Fitness and Health and Interactional/Relational. Each Form has a unique 'essence' and takes place in a different situation in respect of both the physical environment and the relationships with others. Each Form makes particular demands on the embodied dimension in drawing from particular clusters of movement patterns. The characteristic nature or 'essence' of activities within each of the six Movement Forms can be described as follows:-

- Activities in the Adventure Form have a main focus on *meeting risk and managing challenge* within natural and often unpredictable environments.
- Activities in the Aesthetic and Expressive Form have a main focus on the *embodied dimension being used as an expressive instrument* within a creative, aesthetic or artistic context.
- Activities in the Athletic Form demand a main focus on the performer reaching *personal maximum/optimal power, distance, speed and accuracy* within a competitive and controlled environment.
- Activities in the Competitive Form have a main focus on the achievement of predetermined goals through *the outwitting of opponents while managing of a variety of implements and objects* in a challenging and changing contexts.
- Activities in the Fitness and Health Form have a main focus on *gradually improving the function of the body both qualitatively and quantitatively* through regular, repetitive participation.
- Activities in the Interactional/Relational form are characterised by a main focus on *recognition, and appreciation of empathy between people and groups* as they move together in a social context.

What is important is that learners have experience of activities that together exemplify ALL Movement Forms. This will ensure a comprehensive coverage of a range of movement patterns and challenges in a wide variety of situations and environments. This breadth of experience is desirable in giving individuals every opportunity to realise their potential. Each individual will find satisfaction and success within some Movement Forms rather than in others, as the essence of one Form may hold greater appeal in relation to the personal characteristics and aspirations of that individual. Examples of activities that could be seen to fall under each Form are suggested in Table 1.

<b>Movement Form</b>	<b>Examples of physical activities/pursuits (UK)</b>
Adventure	Climbing; abseiling; orienteering; skiing; skating; surfing;
Aesthetic and Expressive	Dance: modern, contemporary, jazz, ballet, tap; rhythmic gymnastics; synchronised swimming
Athletic	Gymnastics; track and field: javelin, discuss, pentathlon, relay, high jump, long jump, triple jump, hurdling; swimming strokes
Competitive	Football; cricket; netball; bowling; volleyball; rugby, basketball
Fitness and Health	Aerobics; pilates; circuits; yoga; resistance work in the gymnasium; weights
Interactive/Relational	Group activities; dance: country, line, folk, social; camping; walking/rambling

Table 1 Examples of physical pursuits/activities that exemplify the characteristics in each Movement Form.

Table 1 Examples of physical pursuits/activities that exemplify the characteristics in each Movement Form.

It is the case that some activities could well be seen as examples in a number of Movement Forms. However in ascribing an activity to a Form, the teaching must reflect the characteristics of that Movement Form. For example swimming could be taught in contexts in which it could be seen as falling within the Adventure Movement Form or the Competitive Form, and Gymnastics could be so presented that it represented an example of the Competitive Movement Form or the Interactional/Relational Form.

It is the case that in many national curricula a series of activities are suggested or mandatory. However a wide range of types of activity are seldom taught in school physical education and even where they are included, the time allocation given to each can differ significantly.

To accommodate the need for a wide range of activities to be covered in the interests of fostering physical literacy, it is recommended that an equal amount of time is given to each Movement Form and this should be the rationale for the design of a curriculum.

As set out in Table 2 a possible design is to select three Movement Forms to be covered in any year. Within this arrangement no more than two activity examples from each Movement Form would be covered during each year. If there were two periods of physical education a week, this would give the equivalent of a terms' work (i.e. one period a week) in each of the three Movement Forms each year. Activities from within each Form would have to be selected carefully. In Year 7 learners might have a period a week for two terms of gymnastics, a period a week for one term on each of creative dance, synchronised swimming, hockey and tennis.

Movement Form	Adventure	Aesthetic and Expressive	Athletic	Competitive	Fitness and Health	Interactional /Relational
Year 7		✓	✓	✓		
Year 8	✓			✓	✓	
Year 9		✓	✓		✓	
Year 10	✓			✓		✓
Year 11		✓			✓	✓

**Table 2** An example of coverage of all Movement Forms in Years 7 – 11

Table 2 An example of coverage of all Movement Forms in Years 7 – 11

Time allocation will always be an issue, as will staffing and facilities. However it is suggested that if the time was used on fewer activities, learners would experience more progress, enjoyment and satisfaction. The pleasure of being active, and thus the motivation to take part, is very significantly rooted in successful performance of an activity. Learners leave lessons confidently reflecting – “I can do it! I am good at this!” Brief coverage of a large number of activities, whatever these activities might be, has, it is believed, been responsible for a lessening of motivation and confidence, as well as little development of physical competence. There are certainly a good many in the profession who identify that the problem with some current curricular programmes is associated with learners working on a very wide range of activities and never having the time to develop the necessary appreciation of an activity, the specific movement patterns required and an understanding of how these patterns are employed in a particular context. Teachers should appreciate the value of experience sustained over a longer period of time and the real achievement in physical competence that this can foster. More time devoted to fewer activities will undoubtedly present a challenge to practitioners, demanding resourceful and imaginative teaching. However there are real benefits to be accrued, significantly in promoting the confidence that comes from successful participation.

Experience in a wide range of Movement Forms not only promotes establishment of movement patterns and thus physical competence, it has the potential to foster the attributes associated with making progress on a physical literacy journey - as set out in the second paper in this Bulletin. For example learners will:-

- experience success and progress and thus acquire *motivation*
- develop of a range of specific movement patterns and their constituent movement capacities, thereby enhancing *movement competence and confidence*
- have experience of a range of environments in which to develop *effective interaction*

- have experience of working alongside others in different ways to nurture *understanding and empathy*
- have experience of using initiative and imagination in interacting with unpredictable environments, thereby encouraging *self confidence and independence*
- have experience of using movement as an *expressive* medium
- have first hand experience of coming to appreciate *embodied health*

Some involvement in all Movement Forms will extend the participant's experience and provide learners with a rich repertoire from which they can select activities beyond the school. In addition this wide experience will provide a resource of options for individual so that needs and interests can be met throughout the lifecourse. Should individuals want to test themselves out against others, should they wish to be part of a group or should they wish to be involved in artistic and creative activity they will have had experiences that will inform their choice of activity.

### **A Re-Assessment of the Role of extra-curricular Activities**

The corollary of the suggestions made in the section above is that learners would have experience of only a small sample of physical activities. There will be a good many activities that learners will not have experienced. To counteract this limitation, it is suggested that practitioners in school look again at the extra-curricular provision. An ideal scenario would be one in which all learners are catered for and welcomed in the time outside the curriculum. The outcome in England would mean that this time would cease to be seen as solely the territory of the most gifted, as is the case in many schools.

The time could be so organised that there are at least three clear purposes for, or motivations, to take part in activity after school. Learners could take part in order to:-

- widen their experience of activities beyond those in the timetabled curriculum
- work further on movement patterns and/or activities introduced in curriculum time which they are finding demanding. This might be to have more time to practice hand-eye co-ordination or perhaps to develop strength and balance
- challenge themselves to apply movement patterns in more demanding situations, often involving competition.

This change would only be possible if there was a clear:-

- change in the perception of extra-curricular work by participants and practitioners alike, one that encourages all learners to be motivated to take part
- relationship between curriculum work and extra-curricular activities, both in respect of learner aspirations and in relation to enhancing experience beyond what is covered in curriculum time
- dialogue between practitioners leading work inside and outside the curriculum

A re-presentation of the focus of extra-curricular time would open the door to participation by all, with the goal of every learner taking part after school at least twice a week.

In fact this does happen in some schools in England – showing that it not an impossible goal. It is certainly a highly desirable goal and one that would be of great benefit to many young people.

At the heart of a programme of this nature are teaching approaches that are genuinely learner centred. All learners are catered for, whatever their level of expertise, and there is no sense that the practitioner is teaching the activity rather than the learners. Planning and teaching are designed in relation to the needs of the learners rather than strictly adhering to the technical requirements of the activity.

A programme of this nature could be attractive to all. Extra-curricular activities would no longer be seen as designed specifically for competitive team sport for the most talented. The activities would be open to all. Learners from different year groups would work together. It is understood that this proposal creates challenges concerning staffing, facilities and transport. However the effects of such a programme would be far reaching and undoubtedly beneficial in fostering physical literacy.

## Conclusion

The selection of content is significant both from a philosophical perspective and for the effective development of physical competence. In addition width of experience will foster the development of the attributes of physical literacy and furnish the individual with experiences that can inform lifestyle choices.

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## The Importance of Movement in Early Development – the Foundation of developing Physical Literacy

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*Sally Goddard Blythe*

### Abstract

Movement and the acquisition of upright posture have played a major role in the evolution of the human brain. Human movement is not simply the expression of motor intention but is the product of coordinated brain function and is the primary medium through which a child interacts and learns about the world, and its relationship within the world. In the process of interaction sensory integration takes place on which stable perception depends and non-verbal and verbal language is articulated. A growing body of research indicates that immature neuromotor skills are linked to lower educational performance, and examples of the role of movement in developing neuromotor skills in the first year of life are described.

### Introduction

Einstein observed that all forms of life share the characteristic of motion. In common with other animate creatures, humans have evolved to move and through movement. In the first year of life, posture, gesture and movement act as a child's first expressive language (mime) and even sensory experience is the product of stimulation to specialised receptors which respond to different frequencies of motion. Perception (the brain's interpretation of sensory information) is not based purely upon information derived from individual senses, but is the product of multi-sensory experience integrated, entrained and adapted over time through the medium of movement.

It is no coincidence that development of the infant brain follows a predictable sequence with cortical areas involved in motor control maturing ahead of those involved in sensory development with the association areas being the last to mature, continuing their growth into the twenties and thirties (Spreeen et al. 1984) Since Descartes we have become accustomed to believing that thought and consciousness drive human behaviour, but there is an increasing body of evidence to support the theory that areas in the brain involved in motor function are active in advance of conscious awareness (Haggard and Elmer 1999, Haggard et al. 2002).

Wolpert (2009) maintained that,

“We have a brain for one reason and one reason only -- that's to produce adaptable and

complex movements. Movement is the only way we have of affecting the world around us. I believe that to understand movement is to understand the whole brain. And therefore it's important to remember when you are studying memory, cognition, sensory processing, they're there for a reason, and that reason is action."

"We visualise, think and dream in movement" (Berthoz 2000). Movement is the most important function of the brain, facilitating complex and adaptable behaviour. It is the product of sensory feedback, planning and anticipation of the consequences of an action, "projecting on to the world its pre-perception, hypotheses and interpretive schemas". (Berthoz 2012)

Perception and control of movement are not solely located in the motor area of the cortex but involve communication between many areas. Barton (2012) posited that,

"There is no clear separation between sensory-motor and cognitive specializations underpinning such skills, undermining the notion of executive control as a distinct process. Instead, I argue that cognitive evolution is most effectively understood as the elaboration of specialized systems for embodied adaptive control".

In this context, movement is a child's first language. At birth, the infant has minimal control over its own body, but the child is furnished with a series of reflexes and spontaneous movements to support survival in the first months of life, which also provide rudimentary training for many later more complex skills. In order to become self-reliant, physically, socially and emotionally, the developing child must first learn control of the body. Confidence in the use of the body is its primary pre-school education, which continues to develop and adapt through the remainder of life.

Control of the body begins with development of posture and muscle tone, which act as anti-gravity forces, facilitating not just autonomous movement, but also providing the gravitational security necessary to afford a stable reference point for control of balance, coordination, centres involved in the control of eye movements and spatial orientation. Spatial orientation also supports important aspects of emotional as well as physical stability (Blythe, 1988, Goddard Blythe 2014).

The process of maturation within the central nervous system (CNS) on which these functions depend is hard wired into the healthy infant brain, but to unfold its possibilities, maturation is *inter*-dependent with physical interaction with the environment and social engagement. Movement opportunity and experience help to form connections within the CNS which provide the basis for a repertoire of expressive techniques (motor vocabulary).

The psychologist and educator G. Stanley Hall observed that the development of the growing child appears to parallel the evolution of the human species. Although the recapitulation theory is now outdated in the literal sense, in the first year of life the human infant does mirror its evolutionary history in terms of the motor and postural skills it acquires and increased connectivity within the neural substrates involved. This is a dual process of maturation *and* experience.

Kohen-Raz (1996) explained that posture is not only,

"a basic neurophysiological apparatus which ensures physical stability and mobility of

the organism against the pull of gravity, but primarily is a central *neuropsychological* system which embraces a wide range of functional levels, from spinal reflexes to higher mental processes”.

He went on to say that viewed from such a perspective, it is evident that,

“postural control and consciousness, the precondition of all differentiated and complex mental activities, are intimately related”

and that,

“the mental capacity to differentiate between and inner and outer world, the awareness of an autonomous self in the universe, is rooted in the human ability to assume an erect and adaptable posture, a “stance”, a “standpoint”, which serves as a point of reference not just to perceive but to understand the world”.

### **Relationship between neuromotor function and performance**

There is a growing body of evidence which reveals a correlation between maturity in neuromotor skills and educational performance. Neuromotor skills can be evaluated in a number of ways, one method being the assessment of primitive reflexes and postural reactions at key stages in development – the presence or absence of these reflexes at specific times in development - providing recognised signposts of maturity in the functioning of the CNS.

Primitive reflexes emerge in utero, are fully present at birth in the full term infant (40 weeks gestation), and are inhibited in the first six months of post natal life. Examples of primitive reflexes include the rooting, suck, grasping, tonic neck, tonic labyrinthine and Moro reflexes Postural reactions (sometimes referred to as postural reflexes) are reactions to change in position, which develop in the first three and a half years of life and provide a foundation for sub-conscious control of posture, balance and coordination in a gravity based environment. Examples of postural reactions include head-righting, amphibian and segmental rolling reflexes. The continued presence of primitive reflexes beyond the normal time of inhibition, and/or under-developed postural reactions after three and a half years of age provide evidence of immaturity in the functioning of the CNS (Peiper A, 1963, Capute A, 1986).

Retained primitive reflexes are accepted signs of pathology in conditions such as cerebral palsy, and may be disinhibited in the progression of demyelination diseases such as multiple sclerosis and Alzheimer’s disease, but continued primitive reflex activity in the absence of identified pathology has been a ‘grey area’ for many years, with many experts maintaining that residual primitive reflexes cannot persist in the school aged child in the absence of pathology. Despite this prevailing academic view, there is evidence to support the theory that immature primitive and postural reflexes are present in sections of the general school population and are linked to educational under-achievement (McPhillips et al.2000, Goddard Blythe 2001, McPhillips and Sheehy 2004, Goddard Blythe 2005, 2011; Griffin 2012), play a part in aspects of attention deficit hyperactivity disorder (ADHD) (Taylor et al. 2004) and interfere with the motor aspects of speech (Giffhorn and Quei er 2012).

Studies which have used the The Institute for Neuro-Physiological Psychology (INPP) developmental screening questionnaire (Blythe and McGlown, 1979) – a questionnaire which covers aspects of early development from family history through pregnancy and birth up to school age - have consistently demonstrated a relationship between a cluster of adverse events in the first years of life, early signs of motor delay and later educational under-achievement (Goddard and Hyland 1998, Bharwani S et al. 2013).

An analysis of the developmental history of nearly 15.000 children carried out between 2001 and 2002 as part of The Millennium Cohort Study found that babies who were slow to develop their motor skills relating to sitting unaided, crawling, standing and taking their first walking steps were significantly more likely to be identified as behind in their cognitive development, and also likely to be less well behaved at five years of age (Hansen et al. 2010).

There is also evidence to support the theory that persistent abnormal reflexes and respond to specific physical programmes of remedial intervention (Bender 1976, O'Dell and Cook 1996, McPhillips et al.2000<sup>1</sup>, The North Eastern Education and Library Board Report 2004, North Eastern Education Library (2004), Goddard Blythe 2005, 2011, Giffhorn and Queißer 2012), indicating that movement plays an important role in the integration of early reflexes, the developmental of postural reactions and the ability to measure and control release of energy, and the speed and choice of direction needed to coordinate actions.

These findings raise questions as to why early motor development and cognitive functioning are inter-dependent, and how movement facilitates integration between the senses and entrains sensory-motor function?

At birth, connections from lower brain centres to the superficial layer of the cortex are only tenuously formed. The neonate is equipped with a series of survival responses to various environmental stimuli which enable him to breathe, to “root” for the breast, to suckle and to grasp. He also has a series of reflex reactions which evoke response to change in position. These innate reflex responses are mediated at the lowest level of the brain – the brainstem – but as connections to higher centres in the brain strengthen during the first weeks, months and years of life, the functional direction and organised control of movement proceeds from the lowest (brainstem) to the highest level of the central nervous system (cortex). “The process of corticalization is characterised by the emergence of behaviours organised at sequentially higher levels in the central nervous system with lower levels being recruited into the service of higher functions as maturation takes place” (Spreeen et al.1984).

Children’s motor development is dependent primarily on overall physical maturation, especially skeletal and neuro-muscular development combined with physical interaction with the environment. Children need opportunity for exercise, repetition and practise, not only to develop strength but also control and dexterity. The brain learns by doing and the more an action is repeated the better the brain becomes at anticipating it and sending the right commands with the cerebellum playing a key role in the fine tuning of motor actions and the automisation of rehearsed movement sequences (Ito, 2008). Infants have a natural range of rhythmic motor activities which involve kicking, waving, punching, stretching, rocking, bending and twisting and these rhythmic activities, or

primary movements, afford an important transition from uncoordinated activity to coordinated motor behaviour (Thelan E, 1981).

Primary movements occur in the context of opportunity and practice. Opportunity requires the space and time to experience physical activity in all sorts of different ways, from the gross motor movements involved in swinging, rocking, rolling, crawling walking, running and jumping to the fine motor skills needed for feeding, speech and writing. These early movement patterns are later repeated, re-calibrated, and refined as more advanced postural skills are acquired to build a flexible motor vocabulary adaptable to the needs of the environment.

Development of hand-eye coordination in the first weeks of life provides one example of how early reflexes assist in the process.

The visual world of the neonate is very different from the visual-perceptual world of an adult. Focus is blurred and restricted to near distance; the eyes are drawn to outlines and edges rather than central features and are sensitive to contrast. The Asymmetrical Tonic Neck reflex (ATNR), active in the first 4 months of life, is a response to rotation of the head to either side, which elicits extension of the limbs on the jaw side and flexion in the occipital limbs. Rotation of the head also involves movement of the eyes in the same direction as the head, compelling the eyes to follow movement of the extending arm and hand, helping to increase infant's focusing distance from near point to arm's length and back again, and from central vision to peripheral vision. (Figs. 1 and 2). Within only a short period of time, the extending arm and hand will come into contact with objects, and through a combination of moving, seeing, proprioceptive feedback and touching, the infant starts to understand the rudiments of space and distance. Only a few months later, the ATNR will be inhibited - as the transition from reflex reaction to increased voluntary control progresses - oculo-motor function and visual perception also mature (Fig. 3).



Figs. 1 and 2 ATNR influencing eye-hand coordination in a neonate





Fig. 3. Infant at 22 weeks able to bring the hand and eyes to the midline to coordinate reaching.

Visual functioning will continue to develop in co-operation with movement activity for many years. Crawling represents another stage in the process, when for the first time vestibular, proprioceptive and visual systems operate together in a new relationship with gravity, with the hand-eye coordination involved taking place at the same visual distance a child will use to read and write a few years later (Fig. 5). Fig. 5. Space, depth and weight bearing are explored from the quadruped position.



### **Fine motor skills**

Development of the pincer grip needed to hold and use a writing implement provides another example. If an object is placed in the palm of a neonate's hand it will grasp the object by curling its fingers successively around the stimulus, beginning with the middle finger, followed by the ring and little fingers, index finger and thumb (Prechtl 1953) with the thumb usually nestling underneath the index finger (Fig 6).

Fig.6. Palmar grasp reflex in 4 day old baby



The Palmar Reflex remains present in healthy infants up to the fifth month of life gradually being inhibited by the age of one year. By the fifth month, the infant starts to be able to let go of an object, although initially this may occur as much by accident as design. This is the stage when the infant will start to drop toys or food and then whimper in frustration when it cannot retrieve the object itself. Parents quickly tire of the game, but the infant is learning to do something very important. He is learning how to “let go”. This is a precursor to being able to bring the thumb and forefinger together without the whole hand opening or closing. Modification of the palmar reflex occurs in combination with other motor experiences. When placed in the prone position, the action of using the hands to support the weight of the body also helps to moderate sensitivity to touch in the palmar region of the hand and inhibit the grasp response (Figs. 7 and 8).

Figs. 7 and 8. Upper body weight supported using the arms and hands, helps to inhibit the Palmar reflex and develop head, neck and upper body strength

Fig. 7 Hands still under influence of palmar grasp reflex at 3 months



Fig. 8 Palmar grasp reflex significantly integrated at 22 weeks



Voluntary release of objects and thumb and forefinger opposition are necessary for many fine motor skills tasks, particularly holding a pencil to write. When a child is learning to write initially he will tend to replicate earlier patterns. He will for example, use a cross-palmar grasp with the whole hand clutching the chalk or pencil and usually with the arm turned inwards. As the arm is not well supported on the writing surface initially the child uses gross rather than fine motor actions to draw or write. A little later, a similar grasp is used but the child notices that he can control the pencil better if he extends his index finger. Eventually he will learn to use a tripod pincer grip with the third finger supporting the pencil, the forearm supported on the surface and the arm turned outwards enabling him to use fine motor actions. This later dexterity relies on successful completion of earlier stages. If a school aged child is still influence by the palmar reflex, manual dexterity will be impaired and may be observed in the type of pencil grip used (Fig. 9).

Fig. 9. Palmar grasp reflex evident in the writing grip of a school aged child



The relatively uncontrolled postures, gestures and attitudes of the infant form the basic motor vocabulary for the most refined and expressive movements utilised in dance, art and musical expression, the physical prowess of the athlete, the creative ideas of the academic and the scientist, and the skill of the craftsman. The difference between these abilities is in the range, release and voluntary control of the movement patterns involved,



acquired through maturation, experience and training. While this process begins in infancy, skills continue to be developed over time through experience and practice, a process well recognised in past forms of education at risk of being ignored as children are encouraged to play and to learn with the aid of e-technology through virtual versus physical reality. Physical literacy begins with mastery of the body in space, the physical sense of self and security in space and the development of a rich vocabulary of non-verbal skills as well as supporting verbal expression.

<sup>1</sup> McPhillips used exercises based on movements originally devised by Peter Blythe at The Institute for Neuro-Physiological Psychology (INPP) in this study.

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## Growing Physical Literacy in the Young Child

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*Patricia Maude*

### Abstract

This paper is based on the premise that childhood lays the foundation for the journey in physical literacy that commences before birth and continues throughout life. To provide an extensive and comprehensive foundation is the challenge for all who work with or legislate for the well-being of the young, in ensuring that all children achieve their potential and lead happy and fulfilling lives. The discussion in this paper sets out the importance of enabling the growth of all aspects of physical literacy in young children, both through maximising opportunities to develop physical competence and through the provision of stimulating environments and scaffolded support and intervention to promote cognitive, social and emotional development.

### Introduction

The Early Years are exciting times for children's physical development as they grow, constantly changing in size and shape, and for their movement development, as they gain awareness of the body and explore the increasingly vast range of movement experiences in their ever-expanding environment. Childhood is the time to learn how to move, to find out how to become physically competent and to discover how to use movement to access all other areas of learning. Childhood is also the time to nurture self-confidence and self-esteem as well as to establish self-motivation and commitment to moving and learning.

Achieving optimum physical development is the prime business of infancy and childhood. Physical development proceeds from the brain downwards and from the centre of the body outwards, such that the muscles of the legs are later to develop than those of the arms, and the hands are later to develop than the shoulders. However, the keys to development are the brain and movement.

In her paper entitled 'The Importance of Movement in Early Development' (in this Bulletin) Goddard-Blythe describes the development of the brain and the development of movement, and states that: 'movement is the most important function of the brain'.

Ratey (2008:p4) confirms this when he states that: 'exercise cues the building blocks of learning in the brain' and: 'exercise is the single most powerful tool to optimise brain function.' He reminds us that 'to keep our brains at peak performance our bodies need to work hard.' Whilst this applies throughout the lifecourse, from infancy through to old age,

consideration here is confined to the provision of sufficient appropriate physical activity, in order that young children can achieve their full potential in physical competence and make optimum progress in their physical literacy journey. Minimising sedentary activity and maximising active play are essential factors in success for children of all ages. In 2011, due to the growing awareness of the benefits of physical activity both for development and for health, the Department of Health, produced a report 'Start Active, Stay Active' containing the following Guidelines for children under the age of 5 years:

1. From birth, until they can walk, infants should participate in floor play and water-based activities
2. Pre-school children who are walking unaided should be physically active for at least 180 minutes, spread throughout the day.
3. All children under the age of five should minimise the amount of extended periods of sedentary time except when sleeping

Minimising sedentary time allows for maximising active play, which as Lee (1984:34) claims: 'is the main business of life'. Saach goes further (1988:27) in stating:

Play is an extremely important human activity; it is a basis for culture. Play is not only a biological function, but the primary function for man. Play is a process by which a child develops mature understanding; it is an exploration of one's self in relation to the world; it is a process of accepting oneself.

Play enables infants and young children to build their movement vocabulary, just as they are also building their verbal vocabulary. Children are endowed with an amazing capacity to explore the world around them, to experiment in movement, to find out what they can do, what they cannot yet do and continually to seek to expand their experience. They have the potential to increase their movement vocabulary exponentially. Through recall, repetition and practice of individual movements, through applying known movements in a variety of situations and by creating patterns and sequences of movement, learners gradually develop their movement memory. Through increasing postural management, balance, coordination, control, strength, stamina, as well as committing to continuous repetition and practice, learners can also enhance and refine the quality of their movement patterns, developing into articulate movers and achieving, as the extended definition of Physical Literacy states:

'the ability to move with poise, economy and confidence in a wide variety of challenging situations' Whitehead (2010) p13

Childhood is the time to introduce infants and children to this wide variety of challenging situations. From their earliest days, infant play is often floor-based, including extensive tummy time, with a range of toys to manipulate, grasp, wave, pat, lick, chew and bang together and against available surfaces. Infancy is also an ideal time for introducing water-based activity. Music, rhythms and dancing add variety to play for all young children as does being played with, in safe rough and tumble play and in calming rocking and soothing activity. In addition to indoor play and water-based play, the outdoor environment also offers a wide range of challenges. Perry (2001) suggests that: 'Outdoor play settings may be the one place where children can independently orchestrate their

own negotiations with the physical and social environment, and gain clarity of selfhood necessary to navigate later in life'. Outdoor play engages children in physical learning through enjoyable, exploratory experiences, using the body meaningfully, purposefully and with imagination. (Maude (2009:46)

Whichever setting constitutes the play arena, it is best provided for when furnished with a range of natural and man-made resources and equipment and the participation of significant others as play partners, playmates and play facilitators. What pleasure can be gained from running through fallen leaves in Autumn and trying to catch some as they fall or jumping to catch bubbles blown by a play partner!

It was sometimes believed that children's time should be spent in 'free' play, without intervention. Whilst this indeed constitutes a valuable play experience, it is not sufficient by itself. Active and varied play is vital for optimal development and therefore it has been proposed by the British Heart Foundation (2012) that there are four types of play, namely:

- i. Unstructured play – free exploratory play without adult support
- ii. Child-initiated play – with appropriate adult-enabling, in the form of scaffolded support which is temporary and offered at the child's moment of readiness
- iii. Focused learning play – adult guided
- iv. Highly structured play – planned and adult directed

The objectives of any intervention given should be to facilitate, develop, enhance, encourage, challenge and add pleasure and satisfaction to the child's play experience.

#### Scenario

'Ben makes a star shape'



Ben loves going to gym sessions with his dad. He is seen here making a big star shape and looking at what he has achieved in the mirrored wall just opposite. He and his dad are talking about whether his elbows and wrists are straight. His dad gives feedback both verbally and by supporting the position of Ben's arm. They are also deciding if his legs are in a star shape and whether his knees and hips are straight.

There are many ways in which children learn, though broadly these can be categorised

under three headings, with the acronym 'V A K', namely: Visual learning, Auditory learning and Kinaesthetic learning. It is thought that most children seem to have a natural preference for one of these. Ben seems to have the potential here to gain from all three. He may be receiving visual feedback on his star shape from the mirrored wall in front of him, auditory feedback from his dad and kinaesthetic feedback both through the internalised 'feel' of his body as well as the 'touch-sense' from his dad's hand contact.

Goddard-Blythe, in her paper in this Bulletin states that

physical literacy begins with mastery of the body in space, the physical sense of self and security in space and the development of a rich vocabulary of non-verbal skills as well as supporting verbal expression.

The above scenario ably demonstrates that Ben has started out well on his physical literacy journey!

As his play partner, Ben's dad has developed both movement observation and feedback skills. He has observed his son's star shape and names the joints, elbows, wrists, knees, hips, to help Ben to focus on the specific parts of his body to be made straight. Focused observation, accompanied by movement knowledge and accurate vocabulary enables observers to provide feedback that is fit for purpose. (Maude 2003).

Turning attention now to other attributes of physical literacy as detailed in the short definition, we further consider the contributions of knowledge, understanding, motivation and confidence. Although physical competence is a key attribute in physical literacy, it is not sufficient without accompanying knowledge and understanding of self and the self as a mover, engaging and exploring in the world through movement. Possessing and maintaining the motivation to continue this exploration and engagement, to increase and memorise movement vocabulary, to enhance movement quality, to be determined to persist, to face and manage failure and to celebrate and be spurred on in movement by success, are enduring and worthwhile life skills.

Nurturing the natural exuberance normally seen in the movement of young children and embedding in them a sense of self-worth in movement is invaluable. This is especially so when, at around the age of seven, they begin to compare their movement skills with those of their peers and realise that they may not, after all, be the best! Recognising and celebrating achievement and progress and maintaining and building up children's confidence in their movement is essential, particularly for children who feel that they are not as good as others. Seefeldt (1993) states that children who have been deprived or frustrated in their early movement experiences often avoid physical activity and thereby develop inadequate movement skills. They may then go on to feel excluded from the play experiences enjoyed by their peers, and may thereby face limitations in their social and emotional development. This may eventually lead to a lifetime of inactivity, poor self-image and confidence.

In the scenario below we see that Emma demonstrates that her physical literacy is progressing well. Although she is naturally shy, she is physically competent, knowledgeable about the task she has chosen to undertake and is both self-motivated and confident in her endeavour.

## Scenario

Emma has recently started attending her local nursery. She has ventured outdoors and is sitting at the edge of the play area looking around at the other children and particularly focusing on several children on balance bikes. She is a shy child who is not naturally adventurous and usually needs encouragement to try new activities. However she has a trike and a scooter at home and enjoys going to the park and pedalling or scooting along the pathways. Her care worker sees Emma eyeing the balance bikes and decides to watch and, if necessary, suggest to her that she might try one. There proves to be no need as Emma goes over to a bike, picks it up, sits on it and then starts to walk along to the end of the path. Carefully she turns the bike around and walks back, easily keeping her balance and control of the bike. Noticing a child who is jogging on his bike she too speeds up as she travels to the end of the play area where she slows down and stops, having ably kept the bike travelling in a straight line. She practices this several times before laying the bike down and going back indoors. At her next outdoor session she sees children who run along on their bikes, then take their feet off the ground for a moment and put them down again to stop. This challenge is soon within Emma's grasp and she confidently lifts her feet momentarily and puts them down again, increasingly gaining confidence in maintaining her balance and enjoying the feel of real cycling.

This is an example of a child who not only demonstrates increasing physical competence, but also is able to transfer knowledge and understanding of a similar activity from her own previous experience into this new situation. She is clearly motivated to meet the challenge of travelling on a two-wheeled bike with no pedals. She shows determination and commitment to persist. She shows great confidence, both to venture into the unfamiliar large outdoor space by herself and to try out and succeed in a new activity.

## Summary

In this paper we have considered some of the conditions and means whereby young children can be enabled to establish a strong foundation in physical literacy. These include provisions for achieving optimum physical competence, through wide-ranging active play, with minimum sedentary activity, abundant enabling environments and appropriate intervention, support and feedback. Further responsibilities to be addressed by parents, teachers and carers are to sustain and enhance children's confidence and motivation as they explore, experiment and discover, and as they build their movement vocabulary, memory and quality towards becoming articulate and knowledgeable movers.

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## Helping young Children in the early Years to foster a lifelong Love of being physically active

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Angela Newport

### Abstract

This paper sets out the importance of promoting physical literacy in young children and then looks at the background for the development of the British Heart Foundation National Centre for Physical Activity & Health resource *Early movers: Helping under 5's live active and healthy lives*. The paper finally reflects on current feedback from centres using the resource.

### Introduction

Developing physical literacy in the early years is the foundation for learning to love being physically active on a regular basis and continuing to be active throughout life.

Physical literacy has recently been described as a disposition in which individuals have...

*'the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the lifecourse.1'*

It is important that early years practitioners, (as well as parents and carers) understand the importance of this physical literacy journey beginning from the day a child is born. They also need to be equipped with the practical skills, knowledge and understanding to nurture movement development and help children make progress on their journey. In addition they need to be able to develop children's confidence to move well by facilitating the learning and practice of new movement patterns and skills and to encourage a love of being physically active in the first years of life.

Practitioners can do this by encouraging a love of movement from day one, by creating positive enabling environments and facilitating a variety of movement opportunities on a daily basis. This will give children rewarding physical activity experiences, stimulating the learning of key movement skills and ensuring the development of children's self-esteem and confidence in their movement abilities. Practitioners will also be helping children to recognise the enjoyment they feel from physical activity and fuelling a desire and motivation to participate in more physical activity as they grow and develop.

There is some evidence to suggest that physical activity patterns established during

early childhood (0-5.9 years) lead to a greater chance of physical activity being maintained between the ages of 6-11 years (Jones, RA et al, 2013) 2. This would suggest that it is important to establish a high level of physical activity at the earliest age in order to encourage activity patterns later in childhood, not only for promoting good health and wellbeing, but also in terms of laying foundations for a desire to want to continue being active throughout life.

In the section that follows the rationale for the development of a British Heart Foundation resource '*Early movers: Helping under 5's live active and healthy lives*' will be outlined. The section will also highlight the key features of the resource, set out its aims, provide information on how it can be accessed and consider how best it might be used to assist early years practitioners lay the foundations for physical literacy for the children in their care.

### **Background to the development of *Early movers***

In 2010, the British Heart Foundation National Centre for Physical Activity & Health (BHFNC)\* was involved in reviewing the latest scientific evidence on physical activity and health in order to update the physical activity guidelines across the four UK home countries. Emerging evidence suggested that physical activity is important for health, physical and psychological development in young children. As a consequence physical activity guidelines for early years (0-5 years) were developed for the first time and published alongside guidelines for other age groups, as part of the four UK Chief Medical Officers report<sup>4</sup>.

In addition, the BHFNC carried out a national audit of physical activity provision in Children's Centres and nurseries in the summer of 2010<sup>5</sup>. This audit (responses - 192 Children's Centres and 60 nurseries), had the following aims:

- to establish a national picture of active play provision in Children's Centres and nurseries across the UK
- to identify any gaps in provision and inform how best the BHFNC could support early years settings in their provision and practice.

Key findings showed that there was a large variation in the amount of outdoor play provision being offered on a daily basis, ranging from continuous free-flow between the indoor and outdoor environments to 2 x 20 minute play sessions outside. In some settings it became apparent that young children had limited opportunities throughout the day for movement and free play. In addition, the audit highlighted an apparent lack of confidence among early years practitioners to set up and facilitate active play sessions especially among those working with the 0-2 age group. Without this confidence themselves, practitioners will find it difficult to support children to develop their confidence to learn new movement patterns and this will also limit their early physical literacy experience.

A full report of the audit finding can be downloaded at: [www.bhfactive.org.uk](http://www.bhfactive.org.uk)

To assist with this confidence, practitioners highlighted in the audit that they would welcome physical activity resources in the form of booklets, posters and leaflets to help them in their daily activities and also to help in engaging with parents to promote active play.

The audit confirmed what the Centre had been hearing anecdotally; that there was currently no national guidance and support to assist practitioners to create positive enabling environments to facilitate children's physical activity and foster a love of movement. This fact together with advice from the BHFNC's National Early Years Advisory Group and the need for some exemplification of the UK Physical Activity Guidelines, all helped inform the development of a new early years physical activity guide, *Early movers: Helping under 5's live active and healthy lives*.

### **Early movers: Helping under 5's live active & healthy lives**

The rationale for developing an early years physical activity guide was to help support early years practitioners:

- to understand the importance of early movement opportunities in helping young children's early physical development
- to highlight the potential of physical activity for impacting on other aspects of learning and development
- to have the ideas and confidence to organise positive enabling environments in which young children can thrive, be appropriately challenged to develop progressive movement patterns and develop a love of being active.

In November 2012 the BHF published an early years physical activity guide entitled *Early movers*<sup>5</sup>. The guide is designed to help early years practitioners plan and organise physically active play environments for children under five which will set them positively on their physical literacy journey. The guide provides information and ideas on planning, use of indoor and outdoor play spaces, as well as practical activities and ideas for getting parents and carers involved. It also considers practitioner interactions to facilitate physical activity and looks at the close relationship between physical activity and other aspects of learning, such as cognitive, language, personal, social and emotional development. It is intended for use by early years settings who provide care to children from birth up to the age of five and can be used by all providers, irrespective of the time children spend in their care. The seven individual booklets are designed to be used as a 'dip-in' resource and reflect the areas from the audit practitioners identified as most needed.

### **What's included in the resource?**

- *Seven booklets titled:*

1. Introduction to this guide – how to use, different elements covered in rest of resource, resource bank and glossary.
  2. Introduction to physical activity in the early years – background information on the evidence for the importance of early movement opportunities, encouraging physical literacy and reducing sedentary behaviour, the UK Physical Activity guidelines, physical development and how the guide supports the various UK early years curriculums.
  3. Planning and organisation for early years managers – specifically written for early years managers to help them reflect on current provision and practices. Includes tools and ideas to help adopt a whole setting approach to promoting more movement opportunities.
  4. Getting the best from your environment – practical ideas for maximising outdoor and indoor play areas and ideas for reducing sedentary behaviour.
  5. Practical ideas for physically active play –the largest section and provides progressive practical activities and movement ideas from birth up to five years of age.
  6. Getting children involved – looks at the role of the practitioner and different types of interactions required to help children to get actively engaged in physical activity and also considers inclusion.
  7. Getting parents and carers involved – practical ideas for settings to engage with parents and carers to encourage more physical activity at home and during times when children are away from the setting.
- *Six early movers posters* – for use within the setting and include key motivational messages around the importance of promoting early movement opportunities.
  - *Booklet of stickers* – for use around the setting and on play equipment
  - *One copy of 'Help your baby move and play every day' and 'Help your child move and play every day'* – leaflets to help practitioners explain to parents them importance of early movement opportunities and provides some simple ideas to try at home.

- *One height chart* – For parents and includes early development milestones.

The leaflets and height chart have been included as tools in this resource to help practitioners engage with parents and carers more easily about the importance of encouraging movement in the early years. It is recognised that parents and carers have the greatest impact on a young child's early life experiences and therefore educating and supporting them with ideas is of paramount importance.

### ***How to access Early movers***

These resources are available to download at: <http://www.bhf.org.uk/childrens-resources/babies-and-nursery.aspx>

### **Impact**

Since its launch in November 2012, formal written and informal verbal feedback from practitioners using the resource has been positive. However, it's important to consider whether a resource alone is enough to really influence practitioner practice. The BHFNC have therefore been involved in a number of on-going evaluation projects which are seeking to assess the impact of early years physical activity training, based around the *Early movers* resource, on increasing practitioner knowledge of early years physical activity and the skills needed to create enabling environments which encourage more movement opportunities.

### **National-based project**

#### ***BHF Olympic Legacy training***

Following the successful 2012 Olympic Games in London, the British Heart Foundation was keen to support a legacy for children and young people which focused on increasing young children's sport and physical activity participation.

Early indications from the evaluation carried out on the training days suggest that the training was successful in familiarising participants with the *Early movers* resource, increasing their understanding of physical activity in the early years and developing their confidence to extend the movement opportunities for the babies and children in their care. This is essential if practitioners are to successfully develop their knowledge and understanding of how to promote physical literacy.

A full independent evaluation of this training programme is currently being undertaken by the Institute of Youth Sport, based at Loughborough University and will provide more detailed findings.

## Locally-based projects

### *Eat better, Move More*

This project is a joint physical activity and nutrition programme with the Children's Food Trust and was commissioned by Shropshire Public Health to improve nutrition and physical activity provision within early years settings throughout the county of Shropshire.

Two successive training days, (one nutrition and the other physical activity) were delivered to early years development workers in November 2012. Following the training participants were expected to cascade the information to at least two settings and assist them in completing baseline and six-month follow up audits, which assessed physical activity provision and practice.

The BHFNC is currently evaluating the impact of the physical activity element of the training on early years provision and practice in the settings. They are also assessing the impact of the Early movers resource, around which the training programme was devised.

### *Leicester City project*

This project was commissioned by the Public Health team at NHS Leicester City and Leicester City Council and its purpose was to provide training and resources to support independent nurseries in their promotion of early movement opportunities specifically to the 0-2 age group.

The BHFNC have been involved in evaluating this project with a primary aim of assessing changes in knowledge and provision of early movement opportunities within the settings involved in the project. In addition, the BHFNC sought to assess the effectiveness of the BHF's *Early movers* resource for addressing training and informational needs.

## Conclusion

It is difficult at this stage to fully assess impact of the training and resources as a number of projects are still on-going. Anecdotal feedback has been very positive and would suggest that there is a niche for this resource as gaps were clearly identified in the national audit of nurseries and Children's Centres. It is true that the *Early movers* resource provides all the necessary information to guide practitioners to change their practice if necessary, but empowering them to make changes may require some additional support such as reflective cluster meetings or mentoring.

Findings from these projects will be useful in helping to make some judgements about the usefulness of early years training on the resource for influencing practitioner knowledge and practices. However, what these evaluations may not be able to do, is to shed light on whether training is necessary for a resource to make an impact on helping

practitioners' understanding of physical literacy and their skills to organise and facilitate enabling environments which promote the development of physical literacy.

*\*The BHFNC is funded by the British Heart Foundation to support the practice of physical activity promotion in the UK by developing the evidence base, translating research and disseminating practice based evidence across the lifecourse. Visit our website for lots of useful resources, conference information and for details of our information service at: [www.bhfactive.org.uk](http://www.bhfactive.org.uk)*

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## Promoting Physical Literacy in the Early Years Through Project SKIP

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Jacqueline D. Goodway , Ali Brian & Seung Ho Chang , Ruri Famelia, Emi Tsuda & Leah E. Robinson

*"Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it."*

Plato

### Developing the Physically Literature Young Child

Physical literacy can be described as the "motivation, confidence, physical competence, understanding & knowledge to maintain physical activity at an individually appropriate level, throughout life" (Whitehead, 2010). Developing movement competence during the early years is paramount and if children have insufficient opportunities to develop their physical literacy during early childhood it can lead to devastating life consequences (Whitehead, 2010). The World Health Organization (2011b), as well as many other agencies world-wide, suggest *"All children and youth should be physically active daily as part of play, games, sports, transportation, recreation, physical education, or planned exercise, in the context of family, school, and community activities."* (page 18). Like the majority of other countries, 60 minutes of moderate-to-vigorous physical activity (MVPA) per day are recommended to help children and youth maintain a healthy cardiorespiratory and metabolic risk profile. (WHO, 2011b, page 19).

The USA is the only place we know where national physical activity guidelines have been developed for children aged 0-5 years. These *"Active Start"* guidelines recommend *"All children birth to age 5 should engage in daily physical activity that promotes movement skillfulness and foundations of health-related fitness"* (NASPE, 2009). The guidelines are split into three age groups: infants (birth to onset of walking), toddlers (1-3 years), and preschoolers (3-5 years). For each age group there are five guidelines tied to promoting 60 minutes of *structured* and 60 minutes and up to several hours of *unstructured* physical activity per day, promoting fundamental motor skill competence, providing safe movement environments, and educating caregivers about the importance of movement (NASPE, 2009).

So how do children learn how to move and develop the *foundations* (0-4 years) and *fundamentals* (early childhood & primary school) of physical literacy? In this paper we will focus on the importance of fundamental motor skill (FMS) competence along with perceptions of motor competence that reflect the motivation and confidence to move. We will share with you our evidenced-based physical literacy program for young children

## Importance of Developing Physical Competence in Fundamental Motor Skills

One of the most critical skill sets children need to begin to acquire in early childhood is competence in FMS (Gallahue, Ozmun & Goodway, 2012). FMS are the building blocks to future physical activities and sport and are the movement equivalent to the ABCs in reading literacy. However it needs to be understood that FMS are not ends in themselves but means to facilitate effective participation in physical activities/sport. FMS consist of two groups of skills including locomotor (e.g. run, skip, jump) and manipulation skills (e.g. throw, catch, kick) and must be developed during early childhood. Without these as a base for physical competence children are unlikely to develop the motivation and confidence that will encourage life long participation in physical activity. A number of prominent models of motor development suggest that FMS are critical and the foundation (Gallahue, et al., 2012; Seefeldt, 1980) or basecamp (Clark & Metcalfe, 2003) to the mountain of motor development and thus the attainment of physical literacy in the early years and across the lifespan. Seefeldt (1980) suggested that if children did not attain FMS competence they would not break through a hypothetical proficiency barrier and thus would be unsuccessful in applying FMS to lifelong participation in sports and other physical activities. Similarly, Clark and Metcalfe (2002) referred to FMS as the “base camp” of the mountain of motor development and provide the basis for later “motor skillfulness” (p. 17). Unlike other models, Clark & Metcalfe recognize that each individual is unique and their journey up the mountain peaks (sports and physical activities) will be different based upon the nature of their experiences and support of their emergent physical literacy.

Recently Stodden, Goodway, and colleagues developed a Synergistic Developmental Trajectory model (Stodden et al., 2008; Stodden & Goodway, 2007) suggesting that the development of motor competence in the early years influences lifelong physical activity behaviors. Children who are more highly skilled and motor competent will self-select higher levels of physical activity. Across time their perceived motor competence will be strong (as they are good at movement and know it) and their fitness levels will also be good. The interaction of all of these factors results in a *positive spiral of engagement* in sport and physical activity across the lifespan. The opposite is true for our less motor competent children who get drawn into a *negative spiral of disengagement* in sport and physical activity. Those children who are in the positive spiral of engagement are will be physically literate, engage regularly in sport/activity, and see themselves as “movers”. Overall, these models highlight the importance of FMS development during the early childhood years and how FMS competence is critical to physical literacy and physical activity.

## Gender and FMS Competence

Gender differences can be found in FMS performance starting as young as the preschool years (Seefeldt & Haubenstricker, 1982; Thomas & French, 1985). Both boys

and girls have similarities in locomotor skills such as running and jumping; however, boys regularly outperform girls in manipulation skills (Seefeldt & Haubenstricker, 1982; Goodway, Robinson, & Crowe, 2010). It is not clear from the developmental literature why this might be but some scholars have pointed to biological factors such as strength or sociocultural factors such as unequal opportunities to be active, modeling, and feedback (Thomas & French, 1985). Williams, Haywood and Painter (1996) suggested that gender differences are present because boys practice these skills more than girls, which leads boys to be more proficient movers. Gender differences in manipulation skills raise concerns that girls will not have the necessary physical competence to engage in youth sports that involve such skills.

Recent data on the FMS of low-income preschool children also found differential gender effects between locomotor and manipulative skills across ethnicity (African American/Hispanic) and region within the USA (Goodway, Robinson, & Crowe, 2010). We have consistently found there were no gender differences in locomotor skills but boys had significantly better manipulation skills than girls (Goodway & Branta, 2003; Goodway, Crowe, & Ward, 2003; Goodway, et al., 2010; Robinson & Goodway, 2009). Locomotor skills are considered to be more phylogenetic (based upon neurological/genetic factors) than manipulative skills. The opportunity to practice locomotor skills requires available space to run, gallop and jump but does not require equipment. Thus, it may be that girls and boys had equal opportunities to engage in locomotor skills within their respective communities. In contrast, potential explanations as to gender differences in manipulation skills may be differential access to equipment, role models, and motivation to engage in manipulation skills. Other alternative explanations for gender differences in manipulation skills may be that girls tend to be driven by more social factors (e.g. pleasing the teacher, receiving verbal encouragement, and smiles) in the learning environment; while boys are more motivated by competition and the product of performance (Garcia, 1994; Garcia & Garcia, 2002).

### **Disadvantaged Preschoolers Demonstrate Developmental Delays in FMS**

Establishing habits that foster proficient levels of FMS and healthy levels of physical fitness are critical events that take place during the early childhood years. However, there are disparities in the opportunity to do this. A growing body of research shows that young children who come from disadvantaged and poor environments show significant developmental delays in their FMS, including locomotor (10th-17th percentile) and manipulation (16th percentile) skills (Goodway & Branta, 2003; Goodway, Crowe, & Ward, 2003; Goodway, et al., 2010; Hamilton, Haubenstricker, & Goodway, 1999; Robinson & Goodway, 2009). This has been found true for African American and Hispanic children, across geographic region, and urban and rural environments (Goodway & Branta, 2003; Goodway et al., 2003; Goodway, et al., 2010; Hamilton et al., 1999; Robinson & Goodway, 2009). Like the findings above, locomotor skills of the girls and boys were equally delayed, but the girls had significantly worse manipulation skills than boys (Goodway, et al., 2010). It is no wonder that by adolescence, girls from these populations have some of the lowest physical activity rates of all children and youth (USDHHS, 1996; 2004). It is clear from the research evidence that motor skill programs

are needed to remediate the developmental delays reported. Little evidence is available to explain why such delays exist in the motor skills of disadvantaged children. However, some qualitative work conducted (Goodway & Smith, 2005) has shown that *“In disadvantaged urban communities fundamental barriers exist which obstruct a child’s ability to engage in physical activity & develop motor competence and physical literacy.”* Factors that have been identified are: lack of safety of the outside environment; promoting sedentary inside behaviors in children; the influence of poverty on opportunities to be active; cultural values & beliefs that do not support girl’s physical activity and; the nature of stressed, single family dynamics.

### **The Influence of Project SKIP on the FMS of Disadvantaged Children**

A growing number of scholars such as our research team have begun to examine the influence of motor skill interventions on the FMS of disadvantaged preschool children. At The Ohio State University we have developed a motor skill intervention called *SKIP*, Successful Kinesthetic Instruction for Preschoolers with over 20 years of research driving the content and pedagogy of the curriculum. The *SKIP* program is a FMS and physical literacy program designed for young children (preschool to 3rd grade). The goals of *SKIP* are to promote FMS competence and physical fitness, improve individual perceptions of motor competence, engage in and increase the amount of structured and unstructured MVPA (moderate to vigorous physical activity), develop an understanding of the body’s response to movement and the importance of physical activity as part of an active and healthy lifestyle. The curriculum is made-up of locomotor and manipulation skills along with non-locomotor skills, movement concepts and health-related fitness. One of the key concepts of *SKIP* is individualized, differentiated instruction where the tasks and feedback are aligned with each child’s unique developmental level. This is critical in promoting motivation and confidence. Child success is promoted by ensuring an array of developmental tasks so that each child can be challenged at an appropriate level of challenge for his/her own development. We focus on a child’s understanding of their own emerging kinesthesia allowing children to focus on the proprioceptive feedback his/her body provides. We call this “muscle munchkins” to our young children and tell the children to listen carefully to their “muscle munchkins” to talk to them about their body (emerging embodiment). Another core concept is a child’s self evaluation of his/her own improvement and that task persistence will lead to movement acquisition and task success.

Overall, studies on motor skill interventions such as *SKIP* show that when motorically delayed preschool children received well designed structured motor skill instruction, significant improvements in their FMS resulted which remediated these delays (Goodway & Branta, 2003; Goodway et al., 2003; Hamilton et al., 1999; Martin, Rudisill, & Hastie, 2009; Robinson & Goodway, 2009). The timeframe of these programs has typically been somewhere between 8 to 12 weeks (16 to 24 lessons) with 30-45 minutes per session. The majority of these programs have focused on manipulation skills although some have also included locomotor skills. A variety of instructional approaches have been utilized to deliver the motor skill programs including: 1) *direct instruction* (Connor-Kuntz & Dummer, 1996; Goodway & Branta, 2003; Goodway, et al., 2003); 2)

*mastery motivational climate* (Martin, et al., 2009; Robinson & Goodway, 2009; Valentini & Rudisill, 2004); and 3) *parents as teachers* (Hamilton, et al., 1999).

“*Direct instruction*” involves a teacher-led approach where the teacher instructs each element of the lesson, clearly describes and demonstrates the task to be performed, and the children respond accordingly. “*Mastery motivational climate*” (MMC) involves a more student-centered approach in which the teacher plans the lesson elements, but the children are allowed to choose the tasks and activities based upon their preferences (Valentini & Rudisill, 2004; Robinson & Goodway, 2009). MMC lessons are planned around manipulating six “TARGET” structures within the lesson where the acronym TARGET stands for: Task, Authority, Reward, Grouping, Evaluation, Time (see Valentini, Rudisill & Goodway, 1999 for a detailed explanation). The rationale behind the MMC approach is that the instructional climate promotes students’ motivation to engage in tasks and regulate their own pace of learning. “*Parents as teachers*” trains parents to instruct their child on FMS while a lead teacher develops the lesson plans and acts as the facilitator during lesson implementation (Hamilton, et al. 1999).

All the motor skill intervention approaches identified above have been successful in significantly impacting the FMS competence of disadvantaged preschoolers. Many of these programs have been provided at the state-funded preschool programs in which the children are enrolled. In all of these interventions high quality instruction was provided along with maximum opportunities for practice. Sufficient equipment was available and tasks were individualized to the child’s own developmental needs. In many cases, the developmental changes were substantial going from the 10th-15th percentile to the 60th-80th (Goodway & Branta, 2003; Goodway, et al., 2003; Goodway, et al., 2010; Hamilton et al., 1999; Robinson & Goodway, 2009).

Some general conclusions may be drawn from the studies identified above: 1) disadvantaged preschool children are delayed in their motor skills and in need of intervention; 2) when provided with structured, developmentally appropriate motor instruction children can make significant and often large gains in their FMS remediating their prior delays, and 3) the children in the control groups who received the typical preschool curricula where physical activity opportunities were often non-facilitated and play-based, resulted in no improvements to FMS development. In other words, current educational practice in these programs is not meeting the needs of these children. In addition the young children who received the SKIP curriculum not only improved their actual motor competence but also improved their perceptions of motor competence whereas the control children stayed the same. This is of major long term concern as the children will not have the requisite skills, nor the motivation and confidence, to be physically active as adolescents and adults, and it is this very demographic (poor, African American and Hispanic) that goes on to demonstrate the lowest levels of physical activity and the highest levels of obesity as adolescents and adults (USDHHS, 1996;2004).

## Implications to Practice

As we reflect on the data above we have considered the implications to the promoting



physical literacy in the early years. The following are a number of implications:

- Develop national physical activity guidelines for preschool - There is a need to develop physical activity guidelines for children in preschools and early elementary schools. For the preschool child we need to recognize the important role of their caregivers and ensuring safe places to be active.
- Prepare physical education teachers to teach children from preschool to secondary school. Across the world there is little attention paid to preparation of physical educators in teaching our preschool and early elementary-aged children. Many of our teacher training programs and elementary physical education curricula focus on team sports and not physical literacy. We need to ensure specialist physical education teachers are provided in all preschools and that we train such specialists to teach FMS competence, promote physical literacy, and differentiate instruction and curricula that are developmentally appropriate for the young child.
- Implementation of evidence-based early years physical literacy curricula. Often the programs that are implemented in schools are not based upon empirical evidence. We need to ensure that evidence-based programs such as SKIP are implemented in our schools so we are guaranteed as to the effectiveness of such programs for young children.
- Develop specific strategies to engage girls. Girls constitute a particularly vulnerable population in achieving physical literacy with girls having worse manipulation skills than boys. We need to develop specific pedagogical practices and programs that engage and motivate girls to achieve motor competence. Often girls get lost in the motor environment and subsequently drop out of activity and sport at higher levels than boys.
- Develop specific strategies to promote perceptions of motor competence. The evidence on the importance of perceived motor competence is overwhelming. If children have low perceptions of motor competence as they shift from childhood to adolescence, they will be more likely to be inactive and disengaged from sport. We need to capitalize on young children's inflated sense of motor competence in the early years using this as a valuable resource to keep children engaged in our motor settings. However, as children get older and more capable of evaluation it will be actual competence that will drive a child's perceived motor competence. As we work with our children we should not compare children's performance against each other, rather get the child to focus on his/her individual journey up the mountain of motor development and nurture their motivation to continue the climb.

In conclusion, the development of FMS competence in the early years is critical if children are to be physically active and physically literate across the lifespan. Yet many of our poorest children start the early childhood years with developmental delays in motor skills. Access to safe places to play, be physically active, and engage in youth sports is a common problem in our cities. It is clear we need to develop policies, programs and environments that promote FMS competence and physical activity for all

children providing children with the foundations and fundamentals of physical literacy for life.

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## Physical Literacy in the foundation Phase in Wales

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*Nalda Wainwright*

### Abstract

The play based Foundation Phase puts the child at the heart of the curriculum. A combination of child –initiated activities and those directed by practitioners enables children to learn about their bodies and movement capabilities developing their movement vocabulary. Pupils have freedom to direct their own learning in both indoor and outdoor spaces, which are exciting, fun, stimulating and safe, developing their curiosity and independence. The holistic nature of this curriculum encourages embodied interaction with the world in all areas of learning laying strong foundations for physical literacy.

### Introduction

This article explores how a play-based curriculum in Wales enables children to learn experientially with practical tasks. Pupils are actively engaged in embodied holistic learning experiences in all aspects of their learning. Case studies are used to illustrate how this playful pedagogy allows autonomy in learning and has high levels of physicality to lay strong foundations in physical literacy. The case studies are drawn from doctoral research into the impact of the Foundation Phase. The schools in the study were selected having been identified as examples of good practice in the implementation of this curriculum. The study used a complimentary mixed method design, using quantitative measures of motor competence and observational tools as well as qualitative observations and field notes (Greene *et al*, 1989). Taught physical development sessions are still part of this curriculum. Children develop fundamental movement concepts in whole class sessions, so teachers are able to ensure pupils progress with their fundamental motor skills. In addition the high levels of physicality in all aspects of the curriculum (as shown in the examples) create embodied holistic learning experiences developing the broader attributes of Physical Literacy as well as just physical competence.

In 2008, the Welsh Assembly Government began the implementation of the New Curriculum in Wales, which replaced Early Years and Key Stage 1 with a holistic play-based learning continuum for children aged 3-7 called the Foundation Phase. Specific

features of the new approach are the requirements to build the curriculum, in part, from the interests of the child (DCELLS 2008: 6) and to use the outside space as a learning environment (DCELLS 2008: 4, Waters and Maynard, 2010). Significantly, the Foundation Phase is for children aged from three to seven years (the English Foundation Stage being for children from birth to five years) ensuring not only that Reception class children are protected from the impact of the more prescriptive approaches associated with Key Stage One (KS1) of the National Curriculum, but also that throughout KS1 children are afforded more informal learning experiences (Maynard 2007). The Foundation Phase advocates an experiential, play-based approach to learning in which practitioner-directed activities are balanced with those initiated by children (Maynard, Waters and Clement 2011).

Increasing evidence linking the development of fundamental motor skills and perceived competence with life long physical activity and health has resulted in growing attention on the need to develop young children's physical competence (Stodden et al 2008; Harter, 1999; Seedfelt, 1980; Goodway & Rudisill, 1997; Goodway and Branta, 2003). Whilst the development of physical competence is clearly important it is the way that this is achieved that may ultimately impact on long term motivation and engagement. It is vital that children experience the embodiment associated with play, where physicality plays a central role enabling children to learn about their bodies and movement abilities (Gallahue & Ozmun 2002). The holistic nature of play enables children to explore the world through movement, which provides the series of adaptive responses needed to make sensory integration happen and by which the brain learns to process information (Ayres, 2005). Through play and constant interaction with the environment each individual constructs their view of the world and themselves, developing an awareness and understanding of their embodied dimension, which is a fundamental aspect of human nature (Whitehead, 2010).

A child's experience of movement and play is pivotal not only in shaping personality and feelings but also achievements such as cognitive abilities that build on the integrity of the relationship between brain and body (Goddard Blythe, 2005). Giving children choice, a level of control and the perception of play whilst learning, results in deeper involvement in an activity where pupils are fully engaged with all of their senses (Leavers, 1993). During such levels of holistic involvement children are gaining deep, motivated, intense and long term learning experiences (Csikszentmihayli, 1979; Leavers, 1993). The development of confidence and self-esteem acquired through such experiences creates motivation to be active and persist with an activity, attributes that are at the heart of physical literacy (Whitehead, 2010).

## Case Study

The following case study uses three examples to illustrate how embodiment (and therefore Physical Literacy) is central to the Foundation Phase, resulting in pupils of all abilities being highly engaged, motivated, and autonomous in their learning. The children

are the equivalent of year 1 (aged 6). All names have been changed to ensure confidentiality.

The structure and organisation of the Foundation Phase environment contributes to the playful nature of the activities. The lack of working at desks and the highly physical nature of tasks reflect children's perceptions of what constitutes play, where cues such as 'fun', 'on the floor' 'physical' are part of ways that children distinguish between play and work (Howard and McInnes, 2010:35). Children are often working on teacher led structured activities such as spelling games or maths activities in pairs or small groups on the floor or outside. They are highly motivated, engaged and enjoy the activities.

Children are given freedom to engage in an activity in the way they choose. This removes stress and confrontation. In a more structured directed and formal learning environment children are expected and often told to sit down and get on with a task. In this play based curriculum children are able to choose to move and express themselves holistically engaging with the task in the way that feels most natural developing embodied interaction with the world, a key aspect of Physical Literacy. The classrooms open onto outdoor areas and children can choose to work inside or outside.

The three examples highlight different aspects of physicality in children's learning and how best teacher practice in Foundation Phase allows children to have more freedom and control in their learning.

1. "Stones"- *A child led session*, linked to a theme of stones.

During an afternoon session children were allowed to choose activities, the only guidance was that it must involve stones. A challenge was also set for those interested to see if they could make a stone float. The whole class went outside and children got straight into a range of activities making 'stone soup', small world play with 'knex' and stones, making the stone float challenge, using 'be bots' and also hopscotch (9 pupils out of 22). The yard was pre marked with a variety of hopscotch areas and many children went in pairs and small groups to play on these. Two of the boys were busy playing hopscotch and it was apparent that they were not very good at sequencing the hop and jump. On noticing this, the teacher moved over to the boys and helped them with the pattern of hop to jump. They practised with her for several attempts until they were able to sequence their jumps. She moved away to another group. The boys continued to play, practising the sequence over and over until one moved to a different shape hopscotch and the other went to do another challenge. Whilst working on their activities children were engaged and busy. They moved around freely getting equipment for their activities, some visibly excited expressing this through shouting out and jumping up and down, especially when some of them managed to make the stone float! At all times the area was busy with children moving and talking and playing. Some running across to play hopscotch in a new area, some running to collect new ingredients for

stone soup, others filling containers with water.

Free play alone is not sufficient for children to realise the full potential of their movement vocabulary (Maude 2010). Children need support to move their physical skills forward and instead of a lesson learning to hop and jump the teacher in this example was able to intervene as and when the children needed the skill, when it was meaningful and relevant. This example clearly shows children moving in different environments with a range of objects and moving in relation to others (Whitehead, 2005). With high numbers of pupils choosing to play hopscotch activities it clearly demonstrates motivation to be physically active as well as improving physical competence, both attributes of Physical Literacy

## 2. Maths trail – *a focused teacher led session* for the whole class developing number.

Children in pairs were given a clipboard. They went outside and were given an answer sheet on their clipboard. Around the grounds were questions relating to the maths work they have been doing. In their pairs they had to find the questions and fill in the answers on their sheets.

The children ran off around the outside area. They were excited and shouting to each other as they found the questions. Question cards were spread out right around the grounds so children had to run up to the far end of a large field and football pitch, back around the 'trim trail', through a large willow tunnel area and over grassy mounds. The children stayed on task in their pairs discussing the answers to complete all the questions. They came together and sat in circle on the grass to review the answers. Once they had finished they were allowed free time to play on the grass and the trim trail where they were swinging, climbing and hanging upside down.

In recent years there has been a growing interest in the outdoor environment as an integral and valued resource for children's learning and development (Maynard and Walters, 2007; Louv, 2005; Waite, 2010). In particular the natural environment, where learning incorporates increased levels of physical activity (Mygind, 2007), as well as improved motor development (Fjortoft, 2004). In this example children were learning in an outdoor natural setting whilst carrying out their maths task, as opposed to sitting at desks. They were also incorporating important forms of movement for sensorimotor development. This is important in modern society where many baby gadgets reduce opportunities for important pre school movement experiences (Palmer, 2006). This has resulted in growing numbers of pupils entering the education system without the necessary foundations of early movement.

Sensory integration illustrates the notion of embodiment. The body and brain work as one and through multi sensory movement experiences the nervous system and brain

learn to process information mature and develop. One of the key aspects of this is the development of the vestibular system. The task of the vestibular system is to facilitate balance, postural behaviour and orientation (Ayres, 2005). Orientation to outside stimuli and kinethesis work with the vestibular system and whilst 'the vestibular system may be the expert *in* movement, it receives its training *through* movement' (Goddard-Blythe, 2005). In particular activities like swinging, climbing and inverting the body help to develop this system. In this example children were doing this during their Maths activity.

### 3. Peg boards. – *child led activity* selected from a menu of choices.

The class was finishing off some tasks, and was told they could select anything from the list on the board. Zack chose the peg board activity, which involved creating a pattern for the jubilee. Zack is a looked after child with many behavioural problems. His foster parents had informed the school that morning that he was very reluctant to leave home causing problems in the taxi on the way in. He seemed on edge and looking for conflict. He was observed as part of an Academic Learning Time observation noting down what he did for 10 seconds in every 30 seconds. The observation lasted 21 minutes (Berliner, 1990). The bullet points record his actions.

- Squat on one knee making model on carpet
- Picks up 'structions' says they are tricky
- Sitting on carpet holds box
- Standing by table getting peg board
- Sitting at table using right hand to put pegs in
- Sitting watching boys making models – leaning over back of chair
- Sitting quietly looking around the class
- Putting pegs in peg board using right hand
- Putting pegs in peg board using right hand, talking to self says colours in the pattern
- Zack stands says needs loads of beads and lifts out handful of pegs
- Looking at photos of other peg pattern
- Looks into space, sounds out word then puts in pegs
- Putting in pegs right and left hands
- Using right hand saying colours in pattern to self
- Using right hand saying colours in pattern to self – sees Kevin drops beads and says so swinging on chair

- Tips out tub of pegs on desk and carries on
- Swinging on chair looking around
- Talks to Teacher and explains his pattern
- Rocking on chair chewing collar and watching Kevin
- Chews collar stands and leans across table to Kevin then puts more pegs in
- Standing reaching pegs from peg tray
- Puts random colour in pattern and talks to self
- Back to red white and blue then flicks pegs across table
- Standing putting boards on the photos to cover the patterns
- Standing watching Tom
- Walked over to Tim to talk about his model
- Sitting back down doing pegs
- Sitting back down doing pegs saying colours to self
- Swinging on chair talking to Tim and watching models
- Swinging on chair talking to Tim and watching models and laughing
- Swinging on chair talking to Tim and watching models
- Back making peg patterns saying colours to self uses right hand
- Sitting making pattern head resting on left hand
- Watching model making smiling as they act out a story
- Watching model making smiling as they act out a story
- Sitting as if in a trance watching the boys with stones and models
- Sitting one leg up on chair watching Owain
- Back doing peg patterns saying colours to self
- Walking with peg pattern to show Teacher
- Standing talking to Teacher
- Standing with Teacher for photo of pattern
- Walking with pattern to put back in box

In this example, Zack was allowed to manage his own learning. He was not always on

task but he was not causing trouble and went off task only out of interest in other children's activities. He moved freely from sitting to standing and walking around. He organised his own resources and was clearly developing fine motor skills and bi-lateral integration during the task.

Bodrova and Leong (2007) suggest that play has an important role in preparing children for the rigours of formal schooling and children tend to put restraints and rules in place when playing. Vygotsky (1978) described the idea of self regulation as an important way that children learn to follow rules and control emotions. Being able to avoid acting on impulse has been recognized as an important skill if children are to master the academic skills required for formal schooling (Martlew et al, 2011). In this example the opportunity Zack was given to learn independently without confrontation from the teacher, meant he was able to complete the task successfully, develop skills of self regulation and feel proud of his work. A considerable achievement considering the start to his day!

Although there is no example here of a taught physical education session many were observed during the research and pupils were always highly motivated and engaged. This would be expected at this age, when the issue of perceived competence does not negatively affect participation. Stodden et al (2008) highlight the link between perceived competence and physical activity, identifying that young children do not yet have the cognitive ability to make accurate judgments about their performance, linking effort to competence. At this age they state, "the inflated perceived motor skill competence might be valuable to drive the acquisition of motor skill competence because children will continue to persist and engage in mastery attempts in activities in which they believe they are skillful" (p9).

During observed movement sessions all the children were confident to perform. No children appeared to be self conscious or embarrassed when asked to demonstrate. The challenge will come as they move into and through Key Stage Two, when "children have shifted to higher levels of cognitive development and have a more sophisticated cognitive capacity to begin to more accurately compare themselves to their peers" (Stodden et al, 2008, p9). As children approach and enter adolescence the influences on self identity and embodiment are increasingly complex (Kirk & Tinning, 1994) and it would seem that if a curriculum such as the Foundation Phase is laying strong foundations for the Physical Literacy journey, then the real challenges lie in maintaining this into Key Stage two.

## Conclusion

This case study shows examples of how the Foundation Phase, with its emphasis on play and use of the outdoors, enables children to develop their motor competence in a very holistic and natural way during play. The teacher must ensure they are challenged appropriately to extend their skills during the structured sessions and through intervening in their play. Beyond this, the Foundation Phase allows an embodiment and freedom in



learning that is increasingly recognized to be missing for many children in modern educational practice. The children at this age are clearly motivated and engaged in physical activity, the challenge lies with Key Stage Two and Secondary schools to maintain this motivation and engagement so that these children can continue on their Physical Literacy journey in a meaningful and positive way 'as appropriate to each individual's endowment' (Whitehead, 2010 p.5).

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## The Effects of a collaborative mastery Intervention Programme on Physical Literacy in Primary PE

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### Abstract

An individual's Physical Literacy journey should be judged against previous best achievements, rather than comparative standards (Almond & Whitehead, 2012a). This concept is consistent with a mastery motivational climate (Ames, 1992). The purpose of this study was to investigate the effects of a mastery motivational climate, on the development of physical literacy in Primary PE. A collaborative mastery intervention programme was adopted with one teacher and one class (aged 10-11 year olds), pupils' levels of physical literacy were measured pre- and post-programme. Results revealed that a mastery motivational climate can enhance the physical literacy journey of primary pupils.

**Key-words:** Physical literacy, motivational climate, mastery, primary PE

### Introduction

Physical literacy is defined as: "a disposition acquired by human individuals encompassing the motivation, confidence, physical competence, knowledge and understanding that establishes purposeful physical pursuits as an integral part of their lifestyle." (Almond and Whitehead, 2012a, p. 68). According to Whitehead (2010), it has the potential to make a significant contribution to the quality of life as a physically literate individual moves with poise economy and confidence in a wide variety of physically challenging situations and has a well established sense of self esteem and self confidence. In addition, physically literate individuals have an understanding of the principles of embodied health, with respect to exercise, sleep and nutrition (Whitehead, 2010). Moreover, a recent report in Wales by the 'Schools and Physical Activity, Task and Finish Group' (2013) titled 'Physical literacy - an all-Wales approach to increasing levels of physical activity in children and young people' recommended that the Government adopts a National physical literacy framework and physical education (PE) becomes a core subject.

In the PE context, physical literacy is highly dependent on the nature of the interaction between the teacher and the pupil (Almond and Whitehead, 2012b), therefore, PE

teachers are considered key to developing physically literate individuals (Whitehead & Murdoch, 2006). Indeed, as ‘significant others’, PE teachers need to make sure that their teaching behaviours and interactions with students have motivation at the centre if physical literacy is to be successfully developed (Haydn-Davies, 2010). Motivation, therefore, is the key to developing physical literacy and when it is threatened, other attributes such as self-confidence, self-esteem and self-respect will decrease and physical literacy will, consequently, not be enhanced (Haydn-Davies, 2010). Given that motivation is considered to be at the heart of physical literacy, it is not surprising that Murdoch and Whitehead (2010) suggest a greater emphasis should be placed on developing ways of enhancing it.

From a motivational perspective, a key concept is that everyone’s physical literacy journey is unique and the charting of progress of an individual’s personal journey must be judged against previous best achievements, rather than normative comparative standards (Almond & Whitehead, 2012a). Such a concept is entirely consistent with a mastery motivational climate which is focused on self-referenced improvement and effort in achievement situations such as PE lessons (Ames, 1992).

Motivatonal climate is a psychological environment that influences cogntive, affective and behavioural responses (Ames, 1992). In accordance with achievement goal theory (Nicholls, 1989), two perceived climates predominate in acheivement situations such as PE lessons; mastery and ego. An ego climate is associated with normative standards and judging performance in comparison to others in the class. Such a perceived climate has been associated with more maladaptive motivational responses in PE lessons such as boredom and low effort and the belief that success is dependent on natural ability (Carpenter & Morgan, 1999; Papaioannou, 1995; Solmon, 1996; Treasure 1993). On the other hand, perceptions of a mastery climate, which is focused on self referenced standards and personal progress, have been associated with beliefs that success is due to effort and persistence, enjoyment of the tasks, low boredom, and the choice of challenging tasks (Carpenter and Morgan, 1999; Christodoulidis, Papaionnou & Digeldis, 2001; Escartí & Gutiérrez, 2001; Goudas, Biddle, fox & Underwood, 1995; Papaioannou, 1995, 1997; Parish & Treasure, 2003; Treasure & Roberts, 1995). Fostering a self-referenced mastery motivational climate would, therefore, seem to be entirely consistent with the development of Physical Literacy.

Drawing on the research of Epstein (1989) and Ames (1992), a mastery motivational climate can be fostered by manipulating the task, authority, recognition, grouping, evaluation and time (TARGET) structures of lessons (see Table 1.). More specifically, in order to create a mastery climate teachers should manipulate the TARGET (Epstein, 1989) structures in PE lessons to focus on self-referenced, differentiated and varied tasks, pupil autonomy, the private recognition of effort and improvement against previous best performances, cooperative mixed ability grouping arrangements, self and peer evaluations and flexible time on tasks.

**Table 1. Ames’ (1992) TARGET Structures**

<b>Movement Form</b>	<b>Examples of physical activities/pursuits (UK)</b>
Adventure	Climbing; abseiling; orienteering; skiing; skating; surfing;
Aesthetic and Expressive	Dance: modern, contemporary, jazz, ballet, tap; rhythmic gymnastics; synchronised swimming
Athletic	Gymnastics; track and field: javelin, discuss, pentathlon, relay, high jump, long jump, triple jump, hurdling; swimming strokes
Competitive	Football; cricket; netball; bowling; volleyball; rugby, basketball
Fitness and Health	Aerobics; pilates; circuits; yoga; resistance work in the gymnasium; weights
Interactive/Relational	Group activities; dance: country, line, folk, social; camping; walking/rambling

Table 1 Examples of physical pursuits/activities that exemplify the characteristics in each Movement Form.

Previous research (e.g. Barkoukis, Tsorbatzodis & Grouios, 2008; Griffin, Meaney & Hart, 2013; Morgan & Carpenter, 2002; Weigand & Burton, 2002) has demonstrated that manipulating the TARGET structures in secondary PE lessons to foster such a mastery motivational climate can enhance motivation, commitment, enjoyment, effort, perceived competence and learning. Such adaptive motivational responses are congruent with the aims and values of physical literacy. As such, students' perceptions of the TARGET structures that prevail in their PE lessons would seem to be directly relevant to their development of physical literacy.

To date, the majority of TARGET intervention studies have been conducted in secondary schools and none have been specifically linked to the development of physical literacy. Although Almond and Whitehead (2012a) contend that physical literacy is applicable to all (the young, the mature and the older adult) they also acknowledge that early childhood in the Foundation and Primary school period is a critical period in the development of the fundamentals of the disposition (Whitehead, 2010), arguably which lies significantly in the hands of the teachers.

Morgan, Sproule, Weigand and Carpenter (2005a) developed a computer based observational measure of the TARGET teaching behaviours. This measure allows researchers to film PE lessons and code the teaching behaviours as 'mastery' or 'ego' involving. Furthermore, the computer software allows practitioners to view their own teaching behaviours from video footage and to evaluate themselves against Ames' (1992) guidelines for fostering a mastery climate, thus encouraging reflective practice and self regulation of behaviours. In Morgan and Kingston's (2008), study a researcher and four secondary PE teachers used this observational measure as part of a collaborative intervention. The findings revealed that the mastery intervention programme was successful in fostering more mastery involving teaching behaviours and resulted in significantly higher levels of satisfaction and lower levels of boredom for the more disaffected pupils in the class.

Recent research (Keay & Spence, 2012) has identified the lack of training and confidence of primary teachers to teach PE. Furthermore, it is strongly suggested that improving the quality of PE and development of physical literacy depends on the knowledge, experience, confidence, enthusiasm and pedagogical skills of the teacher



(Almond & Whitehead, 2012b; Keay & Spence, 2012).

The primary purpose of this research, therefore, was to investigate the effects of a collaborative mastery intervention programme, on the development of physical literacy in primary PE lessons. One of the current challenges associated with the concept of physical literacy is how to measure it in order to demonstrate progress and improvement in an individual's personal journey. Therefore, in order to achieve the primary purpose of this research, a further aim was to pilot the development of a measure of physical literacy, in accordance with Almond and Whitehead, (2012a, p. 68) definition to include the "motivation, confidence, physical competence, knowledge and understanding to pursue purposeful physical pursuits."

## Method

A collaborative mastery intervention programme was adopted in one primary school based in South Wales from May to July 2012. The rationale for using this approach was to work with a primary school teacher to help make fundamental changes in an individual's practice (Oja & Smulyan 1989), ultimately, aiming to improve the pupils on their physical literacy journey. Following approval from the University's Research Ethics Committee, informed consent was sought from, the school, teacher, parent(s) or guardian(s) for pupils participating in the study, and assent was given by the pupils themselves (British Educational Research Association, 2004).

Based on the Lead researchers knowledge of schools in the area, a purposive sampling technique (Patton, 2002) was used to select one female primary school teacher who was a specialist and experienced physical educator. The teacher selected one year 6 class to participate in the study ( $n = 25$  mean age = 10 years 4 months,  $SD = 5$  months). To participate in the questionnaires and follow up interviews the teacher selected a purposive sample of six pupils (3 boys, 3 girls) who she perceived to be at different stages of their physical literacy journeys (Whitehead, 2010).

The TARGET behaviours (Ames, 1992) were introduced to the primary teacher in an initial training day, along with the proposed teaching programme based on 'Athletics Challenges' (Morgan, 2012). Athletics Challenges is a PE teaching resources for track and field athletics, based on a mastery teaching approach and consistent with the TARGET structures (Morgan, 2012). To date, the athletics challenges has not been extended to the concept of physical literacy or to Primary PE (Morgan and Carpenter, 2002). The training day also included practical examples of the 'Athletics Challenges' and support for the teacher to plan the PE lessons.

The original plan was for the intervention to run over a half term period (a six week cycle including six PE lessons), however, due to logistical reasons (e.g. school trip, transition day to secondary school) only three PE lessons were available for inclusion in the project. Throughout the teaching programme, one member of the research team was present for all lessons that were filmed by an IT assistant whilst a research assistant provided practical support for the sessions. The research team acted as 'critical friends' to the teacher after each lesson assisting her to reflect on her TARGET behaviours and to plan for more mastery involving behaviours in subsequent lessons. This was achieved

through the use of the Behavioural Evaluation Strategies and Taxonomies (BEST) (Sharpe and Koperwas, 1999) observational measure of mastery behaviours in PE (Morgan, et al., 2005a).

In order to measure the different aspects of physical literacy (Whitehead, 2010), physical competence, self rated effort and improvement of the pupils was assessed using performance diaries (e.g. recording of performances and self rating of effort and improvement). Further, pupils' enjoyment, perceived competence, and effort were measured using the appropriate sub-scales of the Intrinsic Motivation Inventory (IMI) (Deci & Ryan, 1985) in a controlled classroom environment by a member of the research team both pre- and post-programme. The IMI has been found to be a valid and reliable measure of intrinsic motivation and self-regulation (McAuley, Duncan & Tammen, 1987).

Semi-structured interviews were also conducted with the six pupils and the teacher to understand the pupils' and teacher's perspective and experience of the project (Kvale, 1996; Patton, 2002). Semi-structured interview guides were used to help make the most of the limited time available (30 - 60 minutes). The interviews were transcribed and a direct content analysis was completed on the transcripts and reflections, using a combined inductive and deductive approach (Hsieh & Shannon, 2005). For the questionnaire data, Cronbach Alpha (Cronbach, 1951) tests were used to assess the internal consistency of the questionnaire sub-scales and paired samples t-tests were conducted to identify any pre-post differences in enjoyment, perceived competence, effort and self confidence. All assumptions for the use of paired sampled t-tests were met.

## **Results**

### **Behavioural analysis**

Results revealed that the teacher adopted highly mastery focused TARGET behaviours for all three lessons thus illustrating a successful implementation of the mastery teaching programme (see table 2)



TARGET Structures	Teacher Behaviours	Lesson 1 % scores	Lesson 2 % scores	Lesson 3 % scores
<b>Task</b> (Frequency)	Self referenced Goals	100	100	100
	Comparative Goals (Ego)	0	0	0
	Differentiated (Mastery)	75	80	100
	Undifferentiated (Ego)	25	20	0
	Multi-dimensional (Mastery)	75	80	100
	Uni-dimensional (Ego)	25	20	0
<b>Authority</b>	Pupils authority (Mastery)	80	90	88
	Teacher authority (Ego)	20	10	12
<b>Recognition &amp; Evaluation</b>	Individual effort/improvement (Mastery)	100	100	100
	Comparative (Ego)	0	0	0
<b>Grouping</b> (Duration)	Mixed ability, cooperative (Mastery)	100	100	100
	Ability (Ego)	0	0	0
<b>Time</b> (Duration)	Flexible (Mastery)	87	97	100
	Inflexible (Ego)	13	3	0

### Questionnaire data

Reliable sub-scales were found for all the measures with the exception of pre- and post-intervention perceived confidence, which was dropped from all subsequent analysis. Results (see Table 3) for the paired sample t-tests revealed a significant increase in enjoyment and self-confidence from pre-to post-programme and a non-significant increase in effort (level of significance set at 0.017 using the Bonferroni method for multiple t-tests).

**Table 3. Paired sample t-test**

<b>Movement Form</b>	<b>Examples of physical activities/pursuits (UK)</b>
Adventure	Climbing; abseiling; orienteering; skiing; skating; surfing;
Aesthetic and Expressive	Dance: modern, contemporary, jazz, ballet, tap; rhythmic gymnastics; synchronised swimming
Athletic	Gymnastics; track and field: javelin, discuss, <u>pentathlon</u> , relay, high jump, long jump, triple jump, hurdling; swimming strokes
Competitive	Football; cricket; netball; bowling; volleyball; rugby, basketball
Fitness and Health	Aerobics; <u>pilates</u> ; circuits; yoga; resistance work in the gymnasium; weights
Interactive/Relational	Group activities; dance: country, line, folk, social; camping; walking/rambling

Table 1 Examples of physical pursuits/activities that exemplify the characteristics in each Movement Form.

\* Significance at the 0.017 level (adjusted from 0.05 level using the Bonferroni method for multiple t-tests)

### Interview data

The key themes from the pupils' and teacher's interviews are presented in selected quotations in Table 4 under the main headings associated with physical literacy and links to TARGET structures. Table 4. Teacher & Pupil Interviews

<b>Physical Literacy Themes</b>	<b>Selected Teacher Quotations</b>	<b>Link to TARGET Structures</b>
<b>Confidence, Perceived competence, Effort</b>	Every one of them felt they had succeeded because they were trying to beat their own score, and I was really pleased to see the way they got that.	<b>Task &amp; Evaluation</b>
<b>Effort</b>	Because they were so independent and they were getting on with it, I could just float in and out of groups and try to encourage a mastery climate.	<b>Authority &amp; Recognition</b>
<b>Confidence, Motivation, Perceived competence</b>	I think it was the situation that allowed the pupils to feel confident and motivated because they felt safe and were not being judged by anybody else.	<b>Task, Recognition &amp; Evaluation</b>
<b>Confidence, enjoyment, Effort</b>	Their self-confidence was at the highest I've ever seen it and they were really enjoying what they were doing. When I was rotating and speaking to them, I could see that they were thoroughly engaged and excited.	<b>Task, Authority &amp; Recognition</b>
<b>Enjoyment</b>	They had autonomy to think and decide when they were ready to move on...I think that was great, for keeping it fresh and [they] didn't get bogged down or bored.	<b>Authority</b>

Table 4. Teacher & Pupil Interviews

### Selected Pupil Quotations

<b>Confidence</b>	The teacher made me feel more confident from the feedback she gave me. (Pupil 5)	<b>Recognition</b>
<b>Motivation Effort</b>	The teacher's comments made me feel happy and more motivated to try harder. (Pupil 3)	<b>Task &amp; Evaluation</b>
<b>Enjoyment, Effort</b>	The targets made me try harder. I wanted to keep doing it to try and beat it (personal best scores). (Pupil 4)	<b>Task &amp; Evaluation</b>
<b>Confidence, Motivation, Enjoyment</b>	I felt I improved my motivation and confidence. I felt happy because my partner always gave me feedback after I did something so I could improve. (Pupil 1)	<b>Grouping, Recognition</b>  <b>Evaluation</b>
<b>Perceived competence, Effort</b>	It was quite fun to write down our scores and see how much we were improving. (Pupil 3)	<b>Recognition &amp; Evaluation</b>
<b>Knowledge and understanding</b>	I helped one of my friends with a 'scissors' jump, because he was trying to jump over the bar but kept hitting it, so I said 'try doing whichever side you're comfortable with' and eventually he did it. (Pupil 4)	<b>Evaluation</b>
<b>Enjoyment</b>	I liked this because normally we have a set amount of time and you either finish really early and then you just have to do stuff again, or you haven't finished it, but here you can stay on for the next couple of minutes. (Pupil 3)	<b>Task &amp; Time</b>

Due to inconsistency in the diary recordings made by the pupils, it was not possible to objectively analyse the pupil diary data. Despite this, the diaries were perceived as an enjoyable process and an important part of the lessons the pupils as they highlighted personal improvement (see Table 4).

## Discussion

The analysis of the teacher behaviours revealed a strong mastery focus in all observed lessons (see Table 2) thus suggesting a successful implementation of the mastery teaching programme and the TARGET structures. The preliminary discussion with the experienced physical educator teacher revealed a style of delivery that was generally mastery involving before the TARGET implementation of the programme. However, as the results indicate, more subtle changes in behaviour did occur as a result of the intervention including increased differentiation of the tasks and more variety of activities taking place simultaneously. According to Ames (1992), this is likely to result in



participants being less aware of others in the class and thus less 'ego involved' in comparing themselves against others.

There was also a shift towards more pupil authority and more flexible time provided as the intervention progressed thus encouraging pupils to self regulate their own learning. Self-regulated learning has become an important topic within education as it is process that is not only vital during school learning but is also a lifelong skills that learners can sustain for self-education later in life (Boekaerts, 1997; Kaplan, 2008), such as lifelong participation in physical activity. Empirical studies have shown the prevalence of poor self-regulation in pupils today and its detrimental impact on academic achievement (Matthews, Ponitz & Morrison, 2009). The implementation of TARGET, therefore, has significant implications for education in general.

The questionnaire data showed significant increases in pupils' enjoyment and self-confidence from pre- to post-programme. Furthermore, there was also a marked increase in effort which was close to significance. Given that this was a small sample of pupils (n= 6) and that their pre-programme scores were already quite high (see Table 3), these significant changes are considered an important finding. Pupils' interest, confidence and enjoyment (intrinsic motivation) to participate in physical activities (PA) is a key determinant of PA behaviour (Sallis, Prochaska & Taylor, 2000). Enjoyment has also been found to be associated with perceived competence, a correlate of PA (Boyd & Yin, 1996) and an important dimension of Physical Literacy (Whitehead, 2010). Therefore, providing an enjoyable safe and supportive environment for pupils to build confidence (Cale & Harris, 2005) would, therefore, seem to be a crucial element in encouraging long term PA behaviours.

Both teacher and pupil interviews also suggested that the programme had been successful in improving pupils' enjoyment, effort, confidence and perceived competence and that the TARGET structures (Ames, 1992) played a key role in this process. In relation to the task structure, the progressive and self-referenced nature of the tasks was an important factor, as well as the enjoyable and varied nature of the practical activities. Furthermore, the multi-dimensional design of the lessons allowed pupils to focus on their own performance and to feel safe and relaxed, rather than feeling that their class mates were judging them. Finally, the self-referenced nature of the recognition and evaluation structures meant that all pupils could perceive themselves as being successful, as success was defined as improvement and effort.

In summary, this small scale pilot study revealed that a mastery involving motivational climate, based on the TARGET structures (Ames, 1992) can enhance the physical literacy journey of pupils in primary PE. Furthermore, this study has made a worthy first attempt at trying to measure the various aspects of physical literacy, as identified by Whitehead (2010), namely the motivation, confidence, physical competence, knowledge and understanding. Further research is required to develop the measurement of physical literacy in order to evaluate the effectiveness of interventions designed to enhance it. However, as a group of researchers, we would not want to see the focus of physical literacy research being channelled into the development of normatively based measures of physical competence, or fundamental movement skills. Although we acknowledge that physical competence is an important aspect of physical literacy, we believe that

ultimately, an individual's motivation and confidence in the area of physical activity are highly significant in enabling all to make progress on their physical literacy journey. This positive attitude, if nurtured throughout the years of schooling, is an important factor in determining lifelong physical activity.

The success of the programme is considered to be dependent on the collaboration between the teacher and the research team, resulting in the development and acceleration of mutual understanding in relation to developing practice (Oja & Smulyan, 1989). The limitations of this small scale study in relation to the duration of the intervention are acknowledged and future research should be conducted over a longer period of time. Future research that combines the TARGET structures with the pedagogical skills of reaching out to learners, connecting, engaging, drawing out and stretching learners, as suggested by Almond and Whitehead (2012b) would be a particularly rich area of future investigation that would place a greater emphasis on the skills, experience and philosophy of the teacher in developing physical literacy.

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## Physical Education Teachers inspiring young People towards a physically active Lifestyle?!: Motivational Dynamics in Physical Education

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### Abstract

The present manuscript provides an overview of the research conducted by the sport pedagogy research group at the Department of Movement and Sports Sciences (Ghent University) on the topic of health based physical education. It aims to stimulate evidence-based reflective thinking on how physical education teachers can stimulate lifelong engagement in physical activity. Concepts such as 'motivation' and 'valuing a physically active life' are situated within theoretical and conceptual frameworks such as Self-Determination Theory and Physical Literacy. Recent evidence is presented to understand why motivation is crucially important to consider in the relationship between physical education and physical activity.

### Overall Introduction

*Personal note.* In June 2013 I was invited as a keynote speaker at the Physical Literacy Conference organized by Margaret Whitehead and David Kirk at the University of Bedfordshire. At the time, I had not read much about the concept of Physical Literacy; a really well documented and investigated concept in the Anglophone literature as became clear throughout my readings. To my knowledge, far less attention has been paid to the concept of Physical Literacy in the Flemish literature, although there might be related articles that use different terminology or descriptions, as 'Physical Literacy' is not easily translated into a clear-cut Dutch term. Throughout the readings on Physical Literacy I was surprised to notice very soon that, although our program of research starts from different theoretical and conceptual backgrounds, there is so much common ground with Physical Literacy.

*Physical literacy is defined as the motivation, confidence, physical competence, knowledge and understanding needed to value and take responsibility for maintaining purposeful physical pursuits throughout the life course (Whitehead, 2010).*

Many of the concepts that are part of this definition, and mainly those that are

underlined, are also central to Self-Determination Theory (Deci & Ryan, 2000), the theoretical framework that guides our research program on health based physical education (HBPE). The current paper summarizes the main ideas presented during the keynote delivered at the Physical Literacy Conference (June 2013, Bedford), including the findings of recently conducted studies and illustrating how the ideas and findings tie into the concept of Physical Literacy.

### **Teaching for health based physical education: what does it mean?**

One of the aims of all compulsory physical education (PE) programmes around the world is to educate for lifelong engagement in physical activity (PA) for health (Pühse & Gerber, 2005). Yet, researchers are increasingly arguing that, with so many children from all social backgrounds experiencing PE for several school years, PE remains 'the pill not taken' (McKenzie & Lounsbery, 2009). Furthermore, there is currently an astonishing lack of evidence on effective content and pedagogies for HBPE (Haerens, Kirk, Cardon, & De Bourdeaudhuij, 2011). Hence, the main aim of our on-going program of research is to investigate what is needed for PE to promote and realise lifelong engagement in PA.

In the present paper we will try to stimulate the readers' evidence-based thinking on the most appropriate pedagogy for HBPE through six consecutive reflective questions. We also provide a theoretical summary of Self-Determination Theory (SDT) in relation to HBPE and Physical Literacy.

### **Question 1: Is Increasing moderate to vigorous physical activity (MVPA) during PE THE RIGHT WAY to promote lifelong engagement in physical activity?!**

As children's and adolescents' physical activity levels have been decreasing, the total amount of youth not meeting the health-related recommendations of sixty minutes or more moderate to vigorous physical activity (MVPA) per day continues to rise (Brettschneider & Naul, 2007; Currie et al., 2008). Hence, from a momentarily public health perspective, many researchers would argue that HBPE-lessons should aim at increasing students' time spent in MVPA. However, there are at least three important evidence and practice-based arguments against this view. First, in most countries curriculum time for PE is limited and recently conducted studies in Flemish elementary (Cardon, Verstraete, De Clercq, & De Bourdeaudhuij, 2004) and secondary schools (Aelterman et al., 2012) using objective measures (observations and accelerometers) revealed that the average accumulated time spent in MVPA is generally low during PE with decreases from elementary to secondary schools. In elementary school PE 40% of the effective lesson time was spent in MVPA (corresponding to 14 minutes), whereas in secondary schools this was even lower with 25% of the effective lesson time spent in MVPA (9 minutes on average). Further, other international research (see Fairclough & Stratton, 2005, for an overview) has pointed out that adolescents engage in MVPA between 27% and 47% of the effective PE class time. These percentages are far short of the health-related recommendations of performing MVPA during at least 50% of effective

PE class time (U.S. Department of Health and Human Services, 2000). Unless more hours of PE are included in the curriculum or without combining different promotion strategies in different contexts (e.g. recess and after school hours), increasing MVPA during PE will always be insufficient for health (e.g. Aelterman et al., 2012; Cardon et al., 2004; Harris, 2000).

A second and maybe even stronger argument revealing that a strong focus on MVPA might also have negative side effects is related to the type of experience young people have during PE. Through HBPE, young people preferably catch those key experiences that stimulate them to be(come) active in other contexts such as during extracurricular activities at school (e.g. on the playground) and in leisure time (e.g. sports club membership). There is no doubt that many teachers are capable of increasing students' MVPA during PE, but there is no evidence that by increasing MVPA during PE teachers will create the types of experiences that motivate young people to remain active outside PE when at secondary school or in later life (also see Haerens, Kirk, Cardon, & De Bourdeaudhuij, 2010).

Third, increasing MVPA will never become the only goal of PE. According to governmentally determined standards in Flanders, the main official task of the PE teacher is to improve students' motor competence, to contribute to students' personal, social and emotional development, and to promote a physically active and healthy lifestyle that may persist into adulthood. All of these goals are crucially important and are not necessarily attained through increasing MVPA during PE.

## **Question 2: Okay, HBPE is not solely about increasing MVPA, but is there an alternative?**

In one of our recently published manuscripts (Haerens et al., 2011) we made a case for the development of a pedagogical model for HBPE drawing on Jewett, Bain and Ennis's (1995) and Metzler's (2005) ground-breaking work on models-based practice in PE. A pedagogical model is a general pattern for creating or shaping PE lessons, that is based on strong theoretical and conceptual foundations, has a central theme and incorporates directions for learning goals and corresponding teaching and learning features.

Based on a selective review of the literature, the central theme for the HBPE model was defined as 'students valuing a physically active life, so that they learn to value and practice appropriate physical activities that enhance health and well-being for the rest of their lives' (Haerens et al., 2011). Based on the research we have conducted since then, we slightly changed the previously formulated central theme, as we would argue that for PE to promote lifelong engagement in PA it is important to get youngsters to value OR enjoy PA for health. This is because when youngsters value or enjoy PA for health they are called to be autonomously motivated to engage in such activities. Interestingly, when Whitehead and Almond (Whitehead with Almond, 2013) talk about creating physical activities that foster Physical Literacy they similarly talk about activities that are rewarding and enjoyable, thus enhancing motivation, and emphasize the importance of students appreciating the value of PA for lifelong health and well-being. Both perspectives (Haerens et al., 2011; Whitehead with Almond, 2013) suggest that

students' quality of motivation is central to learning in HBPE lessons.

### Question 3: High quality motivation, what is it?

In our program of research we start from SDT (SDT, Deci & Ryan, 2000), a well documented and investigated macro-theory on human motivation, emotion and personality, to conceptualize what it means to be 'optimally motivated' to engage in PE and to be(come) or remain physically active in leisure time. One concept that is central to SDT is the concept of autonomy. When students 'autonomously' participate in PE they have the feeling they engage in the activities volitionally and with a sense of freedom. In line with this conceptualization of autonomy, SDT refers to autonomous forms of motivation as more optimal or self-determined types of motivation. Two forms of autonomous motivation are distinguished. Intrinsic motivation is considered the most 'optimal' or autonomous form of motivation. When intrinsically motivated, students participate in PE because they find the activities inherently interesting or enjoyable. Identified motivation, the second type of autonomous motivation, refers to students understanding the personal value and relevance of the activities offered, for example, if activities correspond to a personally endorsed goal (e.g. I put effort into PE because I feel more energetic afterwards).

Autonomous motivation is furthermore contrasted with controlled motivation, which refers to feelings of pressure to engage in the activities. Students can either feel externally (i.e. external regulation; e.g. I put effort into this lesson because the teacher will punish me otherwise) or internally pressured (i.e. introjected regulation; e.g. I put effort into this lesson because I want to prove to myself and others that I am good in athletics). Although controlled motivation brings feelings of pressure and tension and represents a less than optimal type of motivational regulation, it does involve a certain goal-directedness and intentionality. This is not the case with amotivation, an orientation referring to students not seeing any reason to engage in PE, for instance because they feel incompetent to attain the learning goals (Deci & Ryan, 2000). Figure 1 presents an overview of the motivational regulations distinguished within SDT.

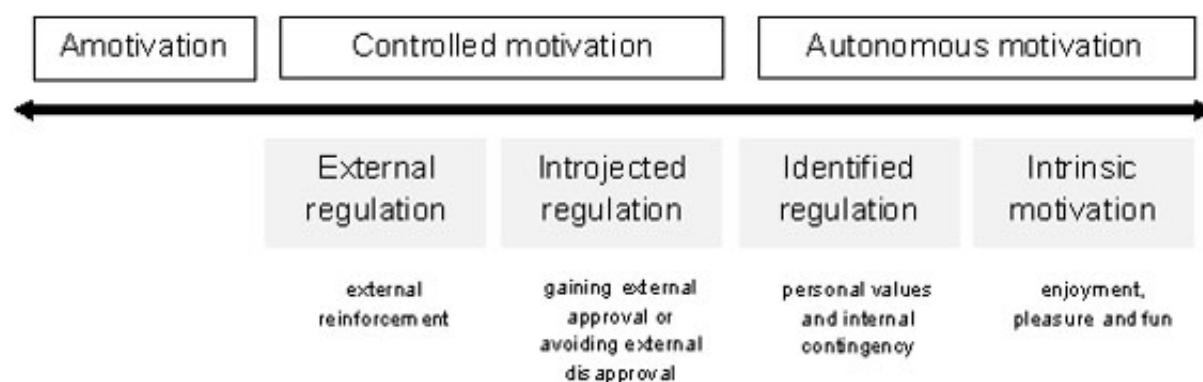


Figure 1. Motivational continuum of SDT<sup>1</sup> (Deci & Ryan, 2000, 2002).

SDT is the theory that guided the revision of the central theme of HBPE pedagogical model towards getting youngsters to value and enjoy PA for life so that they are (more) autonomously motivated to be(come) or remain active outside PE. Similarly, when Whitehead (2010) defines Physical Literacy as the motivation, confidence, physical competence knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits throughout the life course, common grounds with the well-researched concept of autonomous motivation can easily be identified.

#### **Question 4: Is motivation for PE really an important concept to consider in the relationship between experiences during PE and lifelong engagement in PA? What's the evidence?**

In our own research group, two studies were set up to investigate if autonomous motivation for PE is really an important concept to consider when investigating relationships between PE and lifelong engagement in PA. Both studies provided cross-sectional evidence to show that autonomous motivation for PE relates to youngsters' activity levels during PE (Aelterman et al., 2012) and beyond (Haerens, Kirk, Cardon, De Bourdeaudhuij, & Vansteenkiste, 2010). These findings are in line with previous research pointing to positive associations between autonomous motivation for PE and a variety of desirable cognitive, affective and behavioural outcomes (see Van den Berghe, Vansteenkiste, Cardon, Kirk, & Haerens, in press, for an overview), such as concentration, positive affect (Ntoumanis, 2005), effort and persistence (Standage, Duda, & Ntoumanis, 2006), rated engagement (Aelterman et al., 2012), and increased PA levels both in- and outside PE (Lonsdale, Sabiston, Raedeke, Ha, & Sum, 2009; Taylor, Ntoumanis, Standage, & Spray, 2010) and further indicate the need to investigate how teachers can create learning environments in which optimal forms of motivation (autonomous versus controlled) for PE are more likely to be encouraged.

#### **Question 5: How do we teach for optimal motivation?**

In SDT, the needs for autonomy, competence, and relatedness are identified as fundamental psychological nutrients for individuals' autonomous motivation. Parallel to these three needs, SDT specifies autonomy supportive, well-structured and warm learning environments as fostering autonomy, competence and relatedness and thus also autonomous motivation (see Haerens et al., 2013, for a more full introduction on need supportive learning environments). Interestingly, many of the recommendations made by Whitehead with Almond (2013) on creating PA experiences that foster Physical Literacy directly relate to one of these three dimensions of need supportive teaching environments as will be illustrated in the following paragraphs.

In short, in an autonomy supportive teaching environment teachers identify, nurture, and develop students' interests, preferences, and personal goals (Reeve, 2009). They use non-controlling or inviting language (e.g. Simons, Dewitte, & Lens, 2003; Vansteenkiste, Simons, Soenens, & Lens, 2004) and explain the personal relevance or potential interest and importance of the learning goals and activities (Deci, Egharri, Patrick, & Leone,



1994; Reeve, 2009; Reeve, Jang, Hardre, & Omura, 2002; Reeve & Jang, 2006). In terms of autonomy support, Whitehead with Almond (2013) similarly recommend to empower children to make decisions, to encourage children to ask questions, to listen to children's views, to allow children to choose their own tasks and challenges and to respect their views, to name just a few.

In a well-structured learning environment opportunities are created for students to feel competent, for instance when students know how to effectively achieve desired outcomes (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009; Skinner & Belmont, 1993). Structure also gets manifested when teachers provide positive feedback (Koka & Hein, 2005; Mouratidis, Vansteenkiste, Lens, & Sideridis, 2008; Sierens et al., 2009), provide adequate help and support (Jang, Reeve, & Deci, 2010), and optimally challenging tasks (Sierens et al., 2009). Illustrative recommendations made by Whitehead with Almond (2013) are to ensure that tasks are within the reach of the child, to use praise, to guarantee that all children are able to experience success and to recognize and reward effort.

Finally, in a relatedness-supportive environment children feel safe, independent of whether they are good at PE or not, and the teacher is empathic and cares sincerely about the individual child. References demonstrative of relatedness support (Whitehead with Almond, 2013) are knowing students names, adopting a caring and empathic approach, and ensuring that all children feel valued.

#### **Question 6: Does teachers' need support really lead to more autonomous motivation and higher PA levels during and outside PE? Creating the evidence.**

Building on the findings of the studies investigating relationships between autonomous motivation for PE and important outcomes (Aelterman et al., 2012), we investigated in a next phase whether need supportive teaching behaviours indeed relate to students' motivation. For these studies, we externally observed teaching behaviours based on videotapes of the PE lessons but also measured them indirectly through students' reported perception of these behaviours (Haerens et al., 2013). Seventy four different PE lessons were coded every five minutes to assess how often each of 21 hypothesized need supportive behaviours occurred during the course of a regular PE lesson (Haerens et al., 2013). The 21 coded behaviours reflected four need supportive teaching dimensions: autonomy support (e.g. "The teacher asks the students questions about interests, problems, values or wishes."), structure before the learning process (e.g. "The teacher gives an overview of the content and structure of the lesson."), structure during the learning process (e.g. "The teacher offers the students a rationale for tasks and exercises."), and relatedness support (e.g. "The teacher takes the perspective of students into account, is empathic."). Reasonable evidence was obtained for the idea that observed need supportive teaching behaviours are perceived as such by the students. Specifically, both rated autonomy support and relatedness support related to the corresponding students' reported perceptions of these dimensions. Yet, no significant relations between observed and perceived structure were found, whereas an unanticipated yet interesting relation between observed relatedness support and

perceived structure was obtained (Haerens et al., 2013).

As external ratings of teachers' behaviours related to students' perceptions of these behaviours, the question arose whether students' perceived need support actually related to positive outcomes such as autonomous motivation and activity levels during PE. By means of structural equation modelling, we were able to show that students' perceived need support directly positively related to students' levels of objectively measured MVPA during PE. This relationship was furthermore fully mediated by students' perceived need satisfaction and autonomous motivation for PE (Haerens et al., unpublished data presented at the conference). As perceptions of need support have been found to relate to optimal motivation and positive behavioural and affective outcomes in other studies too (Black & Deci, 2000; Jang, Reeve, Ryan, & Kim, 2009; Standage et al., 2006) these findings imply that a more frequent implementation of the observed strategies may lead to better educational outcomes. Future intervention studies can confirm this hypothesis.

### **Question 7: What about the Dark side of Self-determination Theory?**

Similar to the positive side of the story, SDT also conceptualizes how the social context can actively thwart students' psychological needs so that feelings of need frustration and maladaptive outcomes are more likely to emerge (Deci & Ryan, 1985; 2000). Next to coding need supportive behaviours, we also started to code teachers' need thwarting behaviours, in order to investigate how these relate to students' functioning (see Van den Berghe et al., 2013). More specifically, in a recently conducted study (De Meyer et al., in press), we were able to show that teachers' engagement in controlling behaviours such as commanding, losing patience, getting irritated, yelling and using destructive criticism, were indeed notified by the students, and were positively related to students' controlled motivation and amotivation. These associations were obtained in spite of the low incidence of controlling teaching behaviours, suggesting that students easily pick up controlling teaching behaviours. Specifically, when PE teachers frequently used controlling teaching behaviours, students reported that they experienced their teachers as more controlling and that they felt more pressured to engage in the lesson (controlled motivation).

### **Conclusion**

In the present paper we argue that health based PE is all about "teaching for youngsters to be more likely to value and enjoy PA so that they are autonomously motivated to be(come) or remain active outside PE". The theoretical (see SDT, Deci & Ryan, 2000) and empirical arguments presented support recommendations for teachers to teach in a more need supportive and less controlling way. Hence, the logical next steps are to investigate how effective continuous professional development for teachers on these topics can be organized (see Aelterman et al., 2013, for a recent example on this topic) and what causes teachers to teach in a certain way (e.g. Taylor & Ntoumanis, 2006; Taylor, Ntoumanis, & Smith, 2009; Van den Berghe et al., 2013).



1 Integrated regulation a third type of autonomous motivation involves engagement in a behavior because the behavior aligns with students' values, aspirations and ideals more generally in life, is not presented in Figure 1.

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## Engaging adolescent Girls in Physical Education— Supporting Girls in the Process of becoming physically literate

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*Kimberly L. Oliver*

Adapted from a Keynote Lecture at the International Physical Literacy Conference—  
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### Abstract

In this paper I will discuss four critical elements necessary for engaging adolescent girls in physical education in ways that support them in the process of becoming physically literate. These critical elements include: 1) the need for teachers to be student-centered in their pedagogical practices; 2) the need for teachers to create spaces in their curriculum for girls to critically study their embodiment; 3) the need for physical education to become inquiry-based and centered in action; and 4) the need for teachers and researchers to listen and respond to girls over time.

### Introduction

In this paper I discuss four critical elements that activist scholars have reported as pivotal to working with adolescent girls in order to move beyond what our literature continues to promote as a ‘crisis in girls activity participation.’ We have an abundance of research that identifies that girls drop out of physical activity and disengage in physical education...we have known this for years. In much of this research girls are constructed as “the problem.” Girls don’t like to sweat. Girls don’t want to mess up their clothes. Girls don’t like sports. Girls aren’t any good. Girls. Girls Girls—there is always something wrong with the girls.<sup>1</sup>

Over time the feminist scholars have moved this critique from the girls being the problem to focus on the structural and cultural inequities that girls must negotiate if they are to have the opportunity to play in ways that are meaningful to them. In essence our scholarship has chronicled our shift in blame...from the girls as the problem to the forms of inequities that prevent girls from being and/or enjoying physical activity as the problem. And while this research has offered the field of physical education some important insights into girls’ worlds, it is no longer sufficient in and of itself. We have an increasingly growing body of activist research with girls that centers on understanding

the possibilities of how teachers can facilitate girls' engagement and enjoyment in physical education in relevant and meaningful ways and thus foster their physical literacy. The four critical elements that I will discuss are derived from the collective knowledge of activist research with girls. And while I will discuss each one at a time what I hope becomes increasingly clear is just how intimately connected these four elements are. While I am going to draw on my own research for this particular paper, these four critical elements are reflected in all of the activist research centered on facilitating girls' engagement in physical education. I use the term engagement as a way to describe girls fully participating in physical education and doing so in ways that not only show their enjoyment but also their desire to learn something they find meaningful. The 4 critical elements I will discuss include: 1) the need for teachers to be student-centered in their pedagogical practices; 2) the need for teachers to create spaces in their curriculum for girls to critically study their embodiment; 3) the need for physical education to become inquiry-based and centered in action; and 4) the need for teachers and researchers to listen and respond to girls over time.

### ***Student-Centered Pedagogy as a means of Engaging Adolescent Girls***

The first critical element of engaging girls in physical education is that teachers are student-centered in their pedagogical practices. I agree with Cook-Sather (2002) who claims that students have unique perspectives about what goes on in their worlds. So as long as teachers exclude girls' perspectives from conversations about how to best engage them in physical education, decisions will be based on an incomplete picture. We have strong consistent evidence that suggests that when teachers are student-centered in their pedagogical practices it facilitates girls' active engagement in physical education. To illustrate the power of student-centered pedagogy on girls' engagement I'd like to share part of a research project that we did with 5th grade girls.

Back in 2005 I spent one day a week for the entire academic school year working with 10 and 11-year-old girls in a US border community to Mexico. In this study I worked with girls who were identified by their physical education teachers as either not liking physical education or not liking physical activity in general. The goal was to work with girls to help them identify barriers to their physical activity enjoyment and participation and assist them in negotiating the barriers as to increase their opportunities for engaging in physical activity.

Early in the project I had given the girls cameras and asked them to photograph things that helped them be physically active and things that either prevented them from being active or prevented them from enjoying physical activity. Through this process the girls explained that being 'girly girl' often prevented them from being physically active because girly girls 'don't want to sweat,' 'mess up their hair and nails,' they didn't want to 'mess up their nice clothes' and sometimes they liked to wear 'flip flops.'

What I learned was that these girls were using the idea of 'being girly girl' as an excuse for not engaging in physical education. Over time they started to talk about how, when the teacher was having them play something they didn't like such as football, soccer, basketball and Frisbee that they used excuses such as "we don't want to sweat" or "we

don't want to mess up our clothes" as a way of getting out of the activity that wasn't meeting their particular needs. In this next conversation the girls were explaining about why they didn't like these sports:

Maltilde says, "because the boys kick your feet," "trip you on purpose," "push you down," "they won't give you the ball," and "grab your hair." So I asked them whether it was the sport they didn't like or the way that sport was being played. I said, "So if the boys are kicking you or tripping you or pulling your hair or not giving you the ball those kinds of things..." Sunshine cut me off and says, "You feel left out and hurt." I continued, "I'm trying to figure out, if there are a lot of girls that are girly girls or identify as girly girls, they should be able to be active in ways that are..." Sunshine cuts me off again and says, "Suitable for them." I continue, "Yes, that are suitable, wouldn't you think? Sunshine goes on to explain that if girls "felt comfortable with themselves they would be able to do physical activity."

What I came to better understand from these girls was that not only did they not like the content in physical education—the traditional team sports, but they also did not like how the activities were played when boys were involved, did not like getting hurt or being left out, and wanted to be able to play and "feel comfortable with themselves." So, rather than play in situations they identified as unsuitable or dangerous, they chose not to participate, and hence in part why there were working with me every week. What is so concerning here is that because their excuses "not wanting to sweat or mess up their clothes" are SUCH normalized discourses around girls disengagement in physical education, no one questioned whether there might be some other reason they didn't want to play.

Rather than try to get the girls to critique how the notion of girly girl was contributing to their disengagement I suggested that we work collaboratively to negotiate their barriers by making up games girls could play while simultaneously being "girly girl." So what we did was to create a book for games for days the girls "didn't want to sweat" or "didn't want to mess up their clothes," "break a nail," "didn't want to mess up their hair" and days that they girls wore flip flops.

What was most pivotal in this study was that as soon as I acknowledged the girls desires to be girly girl and worked *with* them to co-create games *for* them; the content of the games they created actually contradicted many of their self-identified girly girl barriers. That is, while they may have been making up games for days where they did not want to sweat or mess up their nice clothes, many of the actual games involved running, jumping, chasing, and fleeing—in the dirt mind you—in other words, the possibility of sweating or getting their clothes dirty.

And so what I learned that I think is so very important is that as adults and as teachers and as researchers we need to learn to work *WITH* girls' femininities instead of critically against them. Earlier in my career I would have been tempted to have the girls critique the idea of girly girl rather than to work with the girls and help them find ways where they can be girly girl *AND* physically active. It was through this project that I was reminded yet again of the importance of starting from where girls are and the importance of assisting them in finding activities that *THEY* find valuable and relevant and enjoyable, regardless of what we think.



It is also within this example that the need for spending prolonged time in the field with girls became so evident. Had I merely stopped at their self-proclaimed 'girly girl' barriers I would have missed what really prevented them from engaging in physical education and as such my research would have added to the perpetuation of how we discriminate against girls in physical activity environments. This example also highlights just how central girls' embodiment is to their physical activity participation and that we cannot trivialize or dismiss this centrality if we hope to assist girls in becoming physically literate.

### **Exploring Issues of Embodiment as a way of Engaging Adolescent Girls**

The second critical element for engaging adolescent girls in physical education in ways that are meaningful and relevant involves teachers creating spaces in their curriculum for girls to critically study issues that influence their embodiment. That is, girls need opportunities to name, critique, and where possible transform aspects of physical culture that impact how they are learning to think and feel about their bodies and how this influences their lives. If we are going to actively engage girls, it is no longer sufficient to say physical education should focus exclusively on physical activity. Offering girls the opportunities to explore their embodiment and how this relates to their physical activity participation, according to activist research, is central to making physical education relevant to girls. To illustrate this critical element I will share some of what we learned from a year-long study with 90 7th – 10th grade (12-15 year old) African American and White girls from rural town in the Southeast part of the US.

The purpose of this study was to examine what happened during our efforts to develop and implement a curriculum strand in girls' physical education classes as a way of making physical education more meaningful and relevant. This curriculum strand was implemented across the school year and focused on girls' bodies and physical activity. We incorporated critical literacy processes such as reflection, inquiry, and artistic representation into these plans in order to assist girls in naming the discourses that shape their lives and regulate their bodies.

The piece I will share with you today was how we worked to make the curriculum meaningful, interesting, and significant to girls' lives. The first semester of the study we engaged the girls in a variety of tasks designed to help them identify areas that influenced how they were thinking about feeling about their bodies. We used magazine explorations and critiques whereby we asked girls to bring magazines that they enjoyed reading and select pictures from magazines that captured their interest and attention. We then had them work together to categorize their images and select images that they believed sent messages to girls about their bodies. Next we had them identify what messages they believed these images sent to girls about their bodies and who benefited from these types of messages and whom these messages might harm.

Moving from critiquing aspects of popular culture we shifted focus to the girls' school environment. Here we had them take photos around their school of the places that sent messages to girls about their bodies. They used their photos as a way of identifying where girls felt safe at school and where girls felt unsafe with respect to the types of messages they were receiving about their bodies at school. They created maps to

illustrate the places girls received positive messages about their bodies and places where they received negative and hurtful messages about their bodies. The girls also used journals to document the times they noticed their bodies and the types of messages they received about their bodies in their communities.

At the beginning of the second semester we had the girls create a calendar of school events that were interesting to teens and to discuss how these events related to girls bodies. From here we engaged the girls in a student-centered inquiry project whereby they would work with a group to study a particular event that they found interesting and that they believed related to girls bodies in some important way. As part of the inquiry girls created surveys to learn more about what other people thought about their topic and to learn how their topic related to girls' bodies. They studied topics such as "Cheerleading and its effects on girls bodies"; "Why girls play softball", "Why girls play basketball" "Girls experiences at the mall", and "The Beauty Walk." They surveyed their peers, teachers, family members about their topic, they analyzed their data, they photographed their event or topic and the created a representation of their learning.

Through their inquiries the girls began naming how these experiences that were so central to their lives influenced their understandings of physical activity, social norms, teen pregnancy, anorexia and bulimia, and gender and race discrimination. They also named the aspects of these experiences that brought them joy, friendship, opportunities to engage in physical activity in meaningful and fun ways as well as what girls are capable of achieving.

It was through this project we learned the value of offering girls opportunities within physical education classes to explore and study areas that made a difference to how they viewed themselves as girls, as friends, and as competent movers in their worlds. These opportunities assisted many of the girls in coming to realize that they did not need to rely on other people's perceptions of how and why girls should be active, but rather helped them to identify what THEY themselves valued and found meaningful about physical activity. It also helped us better see the value of connecting issues that are central to girls embodiment within physical education as a means of making physical education more relevant.

### **Inquiry-Based Education Centered-in-Action as a way of Engaging Adolescent Girls**

The third critical element that I will discuss is the value inquiry-based education that is centered-in-action has as a way to engage girls in physical education in meaningful and relevant ways. Inquiry based physical education involves teachers engaging girls in inquiry in order to help them a) better understand what facilitates and hinders their active engagement in school physical education or physical activity outside of school; and b) this will involve teachers working with girls toward challenging and transforming the barriers they identify in order to assist them in finding ways to increase their physical activity participation in ways that are meaningful to them.

However, inquiry is not only what teachers have students do, but it also means that teachers will use inquiry as a way of guiding their curricular and pedagogical decisions.

That is, within their curriculum design teachers embed ways of continually inquiring into what facilitates and hinders girls' engagement, enjoyment, and learning in physical education and they will utilize this information in their planning and teaching.

To illustrate what is possible when teachers work in these ways I will share an example from a study I have been conducting with pre-service teachers. The project was designed to better understand how as teacher educators we could prepare pre-service teachers to be student-centered in their curricular and pedagogical practices. Combining student-centered pedagogy with inquiry based learning centered-in-action, we developed a model for how to work with pre-service teachers as they worked with youth. Embedded in the model are places for both the teacher and the students to inquire into what facilitates and hinders youths' physical education, their enjoyment, engagement and possibility to develop their physical literacy.

The example I will offer is from one high school Freshman (ages 14-15) level class physical education class that my Secondary Methods Class and I worked with twice a week for 90 minutes each day for the 16-week semester. We started the semester inquiring into students' perceptions of physical education and physical activity. This was designed for us to have a better understanding of what influenced these students willingness to engage in physical education and what prevented them from engaging in or enjoying physical education. We next inquired into the type of class environment these students needed in order to feel safe and thus be willing to engage in the class. Finally drawing on the New Mexico State Physical Education standards we sought input from the youth as to what they thought would be most meaningful to learn within the constructs of what was expected learning across their high school years.

This group was most interested in learning ways to increase their moderate to vigorous physical activity in fun and enjoyable ways that allowed them to socialize with their friends (this goal cut across 4 of the 6 standards). They were also interested in exploring variety as a means of learning new and different content, as much of their physical education experience had been exclusively team sports such as basketball and soccer or running the track as the only fitness option.

As such, my pre-service teachers and I created a thematic unit with the input of the youth around exploring the differences between moderate and vigorous physical activity. As part of this unit we developed and taught several sampler type lessons using a variety of content as well as different teaching styles. The intent was to broaden the youths understanding of what was possible with respect to curriculum and pedagogy. Every two weeks we debriefed with the youth regarding what was facilitating and/or hindering their interest, motivation and learning with respect to what we were doing. After the sampler lessons, the youth decided that they wanted to focus their content in two ways. First they thought it would be fun to create a dance music video and they also thought it would be fun to create a book with a variety of games that were interesting to kids their age and could assist them in understanding what needed to happen if they were to achieve moderate to vigorous physical activity in physical education.

In their book they included the following information that was derived through inquiry processes. They had:

- A written description of why we created this product
- A written description of what facilitates students' interests, motivation, and learning in physical education
- A written description of the standards the high school students wanted to focus their learning
- Two DVD's dance productions
- Physical activity games created by students
- A written description of the social benefits identified by the students in creating this product
- A written description of the difficulties identified by the students and the teachers in creating this product

[http://www.pecentral.org/mediacenter/video\\_mayfieldhighthriller.html](http://www.pecentral.org/mediacenter/video_mayfieldhighthriller.html)

What we learned through this process was that when teachers incorporated student voice into their planning and instruction youth were not only more willing and interested in engaging in physical education, but they also were more willing and interested in taking responsibility for theirs and others learning. Further, they actively participated in the creation of what we did in class because it ultimately originated from their collective interests and needs. Through this process we more clearly recognized the importance of teaching within a localized context and came to better understand that while we might have overall learning state or national objectives, we must mould those to the individuals that we teach. There is no one size fits all when it comes to engaging youth in physical education, but through an inquiry based approach to teaching that is centered in student-voice and action, we can be responsive to the needs of youth in different contexts.

### **Listening and Responding Over Time as a way of Engaging Adolescent Girls**

The final critical element necessary for engaging adolescent girls in physical education involves prolonged emersion in the field and a willingness to listen and respond to over time. This has implications for both researchers and teachers alike. For researchers it means that IF we want to find ways of engaging girls in physical education than we will need to actually work WITH girls, actively listening and then responding to what we are hearing. Any attempt at understanding what facilitates and hinders girls' engagement and any attempt at developing programs specific to girls must include girls as the primary knowledge holders.

It also means that researchers cannot do short studies with a few observations and a couple of interviews if they think they are going to understand how to motivate girls to become physically active. We have ample surface level research on girls; we really don't need any more, for that type of research merely aids in the perpetuation of either the girl as the problem or the cultural and structural inequities as the problem to girls'

disengagement. Girls will tell you what they think you want to hear or they will use very normalized gendered storylines because they have learned people won't question them. This is consistent in all the activist research that centers on working **with** girls to help facilitate their physical activity participation. That is, what girls will share early on is not always what they think or what they feel or what they actually do. It takes time and the development of relationships before girls will feel comfortable working with adults, in part because they need to know they can trust us.

Researchers aren't the only ones that need to listen and respond to girls across time however. Teachers also need to do this. It doesn't do any good for teachers to ask girls what they need in class in order to feel comfortable and interested in engaging at the beginning of a year and never come back to the issues again. As teachers we need to embed in our practice places to regularly inquire into girls' experiences so that we can better assist girls in learning to identify what THEY need to inspire them to engage in physical education and participate in physical activity. This takes time because there are no quick fixes to girls' disengagement and no quick ways to understand what motivates girls to go out and play.

We have such power as researchers and teachers to influence the lives of adolescent girls in ways that will assist them in the process of becoming physically literate—something each of us in this room obviously values a great deal in our own lives. But to do what is possible requires 1) student-centered pedagogy; 2) opportunities for girls to critically explore their embodiment; 3) inquiry based education centered-in-action; and 4) a willingness to listen AND respond over time.

I will leave you with the words of Maggie Mae, a 10 year old African American girl—whose words came only 8 weeks into a 32 week study.

“The boys told me I couldn't play with them **because I was a girl and I was Black...**Some boys don't want the girls to play because they are girls and I think that's a real problem because we should all be able to do what we want to do. We should all be able to play.”

Maggie Mae's words inspired us to facilitate creating an opportunity to assist a group of girls in changing their school environment so more girls could participate in physical activity. But girls can't do transformational work without spaces in school and adult support. That is what WE must do if we hope for girls to be physically literate. And when you listen to girls, you will hear this type of desire as you did in Maggie Mae. The question becomes...how will you respond?

<sup>1</sup> This paper is a portion of a keynote lecture given at the International Physical Literacy Conference in Bedford England, June 2013. It was written as a talk, not a traditional paper, thus the style and lack of reference in the text.

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## Promoting Physical Activity Participation via More Empowering Sport Experiences: The PAPA Project

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*Quested, E. , Duda, J.L. & Balaguer, I.*

### Abstract

The motivational climate created by teachers and coaches is recognized to be an important determinant of the motivational processes and quality of engagement experienced by children and adolescents in sport, PE and other physical activity contexts. However, there is variability in the quality of the climate coaches create, and as a consequence, many young people do not capitalize on the potential of youth sport as a setting in which to develop physical literacy. The European-wide PAPA (Promoting Adolescent Physical Activity) Project strove to implement and rigorously evaluate the impact of a coach education programme (Empowering Coaching™). This programme was specifically designed to help coaches optimize the motivation, and in turn, well-being and physical activity behaviours of young sport participants. This article highlights the key features of PAPA and points to the potential and important role of Empowering Coaching™ as a means to help to empower more young people via sport participation.

### Introduction

Physical literacy has been defined as, “the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the life course” (Whitehead, 2013). Central to this definition is the concept of motivation and related constructs such as confidence and competence. Despite the recognition that motivational processes are important facets in the development of physical literacy (and related behavioural consequences such as regularly engaging in physically activities), attempts to promote correlates of this important construct have tended to lack a theoretical and/or evidence-derived basis.

### The current situation

Organised youth sport is an obvious setting within which there is the potential for young people to develop physical literacy. For the last three decades numerous theory-based academic articles have highlighted what might be the relevant social-psychological processes to foster, rather than diminish young peoples' autonomous motivation in sport and Physical Education (PE). The participation in sport, PE and other physical pursuits



for intrinsic reasons (i.e., autonomous motivation), is reflected when young people participate for reasons such as enjoyment, accomplishment and satisfaction (Deci & Ryan, 2000). Numerous benefits to well-being and sustained physical activity engagement have been associated with autonomous reasons to participate in sport (Ryan & Deci, 2007). However, in “the real world” a growing number of young people choose to disengage from participating in sport during the mid-teens (Sarrazin et al., 2007). The consequences of this are far reaching and for some, fatal; low or insufficient physical activity is well recognized to predict overweight and obesity, and these conditions are, in turn, known to severely impact upon longevity and quality of life (Schwimmer, Burwinkle, & Varni, 2003). Thus, in a world facing a global obesity crisis, the importance of developing and developing physical literacy and sustaining physical activity among European youth has never been more prominent.

Research has indicated that, despite the potential allure of sedentariness, there remains one malleable factor that, if optimized, could lead more and more people to develop and sustain more autonomous motivation to participate in sport and exercise. That factor is the social environment created by the significant other who is present when young people experience and engage in sport and PE. This might be the community sport coach and/or PE teacher. More specifically, research grounded in achievement goal and self-determination theories (Ames, 1992; Nicholls, 1989; Deci & Ryan, 2000) has highlighted that when coaches/teachers create an “empowering” climate (Duda, in press) young people are more likely to develop and sustain more autonomous motivation for sport.

An empowering sport climate is one that supports young people’s feelings of autonomy, belonging, and task-focused (i.e., self-referenced) sense of competence (Duda, in press). When these basic needs are supported, sport participants are understood to adopt more autonomous reasons to engage in the activity (Deci & Ryan, 2000) and be less likely to drop out of sport (Quested et al., in press). This reduces the risk of the adoption of inactive lifestyles. These premises closely align with constructs embedded in definitions of physical literacy and thus, it makes sense that those working with young people should be optimally equipped to support these basic psychological needs. Unfortunately, coach and teacher education programmes typically do not draw from theory to systematically and deliberately target how young people’s sport and PE motivation can be effectively developed and maintained.

### **The Promoting Adolescent Physical Activity Project**

The European-wide PAPA (Promoting Adolescent Physical Activity; [www.projectpapa.org](http://www.projectpapa.org)) project (Duda, et al., in press) was specifically designed to identify whether it is possible to diffuse the motivation-related knowledge base gained from theory and research to empower coaches working with young people to create environments supportive of autonomy, belonging and task-focused competence. As such, PAPA aimed to address an important void in coach education and in turn, tackle

the global obesity problem by empowering more young people to be active and engaged in sport within and beyond the teenage years. More specifically, the PAPA Project further developed and rigorously evaluated the impact of a theory-grounded and evidence-based coach education programme (Empowering Coaching™; Duda, in press) upon young people's motivation to take part in sport and ensuing well-being and a desire to stay active.

Funded by the European Commission (Framework 7 Health), PAPA has provided a unique opportunity for a large-scale investigation into the social-environmental and motivational processes at play in the community-based youth sport context, across Europe. The PAPA project was conducted in England, France, Greece, Norway, and Spain. According to self-determination theory (SDT; Deci & Ryan, 2000) when coaches support young athletes by being autonomy supportive (i.e., providing opportunities for choice, decision-making, providing rationale and taking perspective), being socially supportive (i.e., show care, concern and respect, unconditionally) supporting their competence (i.e., provide structure within which to tackle challenging but realizable goals), young people will in turn, experience higher autonomy, competence and relatedness satisfaction and will be more intrinsically motivated to stay involved in sport. Achievement goal theory points to the importance of perceptions of competence being self-referenced (Nicholls, 1989) and grounded in the experience of self-improvement, exertion of effort and task mastery. Accordingly, Duda's conceptualization of an empowering climate integrates the construct of basic psychological need satisfaction from SDT with an appreciation of the importance of developing a strong task orientation in young athletes via fostering not just competence per se, but a task-involved sense of competence (Duda, in press).

The PAPA project has created the opportunity and resource for the further development of the Empowering Coaching™ programme into a 6-hour workshop (with associated learning materials) and an e-learning course, all specifically customized for grassroots football (soccer). With a view towards potential long-term transferability and sustainability, an important consideration within PAPA was that non-academics could be trained to deliver the Empowering Coaching™ workshops. This marked the first major success of the project; that is, PAPA demonstrated that it was possible to train experts in coach education with no previous knowledge in or experience of motivation psychology, to understand, and subsequently deliver the coach education programme. To this end, there exists a circa 20 hour tutor training programme developed within PAPA that ensures tutors can be trained to deliver the workshop programme with a high level of fidelity coupled with their own tacit knowledge of the context at hand.

Following a two-year phase of intervention development, piloting and targeted questionnaire development, the PAPA project team embarked upon a main trial, in which we tested the effects of the Empowering Coaching™ intervention upon variables central to the design and theoretical premises of the intervention itself. These included the

young players' perceptions of the social environment created by the coach, the players' basic psychological need satisfaction and motivation regulations for playing football, and various indices associated with physical and psychological health and functioning. Nearly 10,000 young footballers aged 9-15 participated in the project. The young players (and their coaches) completed questionnaires at the beginning and end of the soccer season. A sub-sample of coaches were also filmed and their behaviours were rated (according to a theory-based rating scheme; Smith, et al., 2013) in terms of the degree to which they were empowering and disempowering. A further sub-sample of players also wore accelerometers enabling their activity levels during and outside of the football setting to be objectively recorded.

The football coaches were also actively involved in the research, not only as attendees at the workshop (in the case of the intervention arm) but they also completed questionnaires concerning their perceptions of the motivational climate they create. A sub-sample of coaches in England and Spain also took part in focus group interviews, which explored the degree to which the central tenets of Empowering Coaching™ had been understood and effectively integrated into their coaching practice (Quested, Duda & Appleton, 2011).

Preliminary findings emanating from the PAPA project research activities have added support to the postulation that coach behaviours are relevant to adolescents' enjoyment and intentions to sustain or drop out of sport (Quested et al., in press). More specifically, in their study of 7769 players who completed time one (baseline) questionnaires in the project, Quested and colleagues were able to find support for the SDT-based hypothesis that players' perceptions of autonomy supportive climates (an important dimension of empowering climates (Duda, in press) significantly predicted the players' feelings of autonomy, competence and relatedness. As the theory would predict, this basic psychological need satisfaction positively predicted football enjoyment that, in turn negatively predicted intentions to drop out of football. SDT theorizes that these associations should be consistent regardless of culture and context and this study was able to support the invariance of the hypothesized model among samples of children from England, France, Greece, Norway and Spain.

At the time of this article going to press, the PAPA project is still underway and analyses of main trial data are ongoing. However, as the PAPA project per se winds down, the stage is now set for the further development and establishment of the Empowering Coaching™ social enterprise. This not-for-profit research and development organization, based at the University of Birmingham (UK) will be a hub for the further development and delivery of education programmes (for coaches, teachers, parents, and young people themselves) that are founded in the principles of Empowering Coaching™.

## Conclusion

In conclusion, the work undertaken as part of the PAPA project makes an important contribution towards our understanding of the social-environmental and motivational processes that might be important to developing young people's sense of physical literacy. Specifically, as a project embedded in theory, PAPA has illustrated *why* a more empowering coaching climate may be an important contributor towards young people's quality of sport experience and the psychological, physical and social gains accrued. Moreover, the development and successful implementation of a training programme that enables the widespread dissemination of Empowering Coaching™ workshops delivered to coaches by non-academics illustrates *how* theory-based interventions can translate into reality in the sports field. However, community sport is just one arena in which young people experience and develop their competencies and feelings towards sport. Physical illiteracy remains an ongoing threat when young people are at risk of entering other environments (e.g., the PE class, the home) where their sense of competence and motivation towards physical activity may be deflated or actively thwarted. Thus, the further development and testing of training programmes that target and empower the different environments where young people are physically active will be the important next step for the Empowering Coaching™ enterprise.

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## Motivation and Physical Literacy: How can Motivation levels of female Pupils be improved within KS3 Basketball Physical Education Lessons?

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*Elizabeth Myers*

### Abstract

The purpose of this action research case study was to investigate the impact of selected psychological factors affecting pupil motivation within a specific Physical Education class. This is pertinent to the promotion of physical literacy within which motivation is a key element. The teaching strategies selected for use included co-construction, collaborative learning, scaffolding and pupil groupings. These were chosen to encourage and facilitate personalised learning and active engagement, whilst promoting changes in behaviour by identifying and overcoming barriers to learning.

The results of the study found that the combination of co-construction, collaborative learning and scaffolding, along with optimal groupings, developed and improved motivation, effort and engagement levels within this particular class. This study was successful as it placed the learner at the centre of focus. This facilitated opportunities for personalized learning and active engagement, which supported changes in behaviours by overcoming barriers to learning. By structuring learning tasks as a collaborative mastery endeavor it enabled the redefinition of gender and social stereotypes within the class, allowing the students' sense of self to be preserved and protected from negative comparisons and comments by peers, allowing them to enjoy and reconnect with their own learning.

### Introduction

The selected school for the setting of this case study identified during its 2010 annual strategic plan that low-level disruption was a significant problem within the school. Low-level disruption was used as a general term to describe any of the following pupil behaviour:

- Whistling
- Drumming on desk/clicking pens
- Throwing small objects around class

- Shouting out
- Persistent talking and turning around
- Eating/drinking in class without permission
- Listening to music/mobile phones
- Answering back
- Asking irrelevant questions
- Encouraging other pupils' bad behaviour

Low-level disruption characteristics specific to physical education included the following pupil behaviour:

- Fiddling with, or using, equipment in a way other than what it was designed for e.g. bouncing a basketball while the teacher is speaking, putting bibs on incorrectly, or kicking basketballs or netballs.
- Deviating from the task or not participating with adequate effort e.g. not completing a drill correctly through choice (not misunderstanding), or not being engaged within a game situation (by being a social loafer or competent bystander) such as standing by, or talking to the goalkeeper in hockey or football when the ball is in the attacking half.
- Apathy or an apparent lack of motivation, e.g. not answering questions although the answer is known, or not contributing to class and group discussions.

The above characteristics are not an exhaustive list but instead low-level disruption was considered to be any type of behaviour that disrupted or delayed the learning or teaching process.

In the case study schools' annual strategic review it was suggested that low-level disruption had directly affected the GCSE results in 2010 and was also highlighted as a whole school problem affecting attainment and achievement across all years and subject areas. The amount of low-level disruption and pupil disengagement was highlighted as an issue causing concern in that there was a clear relationship between pupils who regularly demonstrated low-level disruption and underachievement (gaining results below their median) at GCSE level. This was a commonality across all subject areas including PE.

This case study was in response to the comments made within the 2010 annual strategic plan. This study aimed to investigate what teaching strategies could be implemented in order to combat the amount of low-level disruption and pupil disengagement within key

stage three (KS3) basketball PE lessons. This focus group was chosen as it was recognised that the heart of the problem could be found in KS3 where poor educational behaviours and attitudes to learning were being allowed to develop and then this behaviour was carried over into KS4, which then impacted the GCSE results. This case study aimed to identify teaching strategies that can be used as tools for tackling low-level disruption and creating a conducive learning environment to support students throughout their educational career.

The pupils at the focus of this investigation were a year eight, single sexed class, consisting of twenty-nine female students of mixed ability. There are no English as an Additional Language (EAL) or Special Educational Needs (SEN) requirements within the class. The area of activity they were taking part in was Basketball. Prior to the study, low-level disruption, apathy and disengagement were regular behaviours demonstrated within PE lessons by the majority of the class.

This particular class was chosen for a number of reasons. Firstly, the class had historically demonstrated low-level disruption and low motivation levels regardless of activity area. The sport of Basketball was not a deliberate choice of activity area. The year 8 scheme of work scheduled Basketball as the activity area when the investigation took place, and this was the reasoning behind the choice of sport.

## **Review of Literature**

The full review of literature can be found in the full case study. A number of books, journals and articles informed this study, in order to establish the key social and psychological factors that could affect motivation including gender, age, social identity, motivational source, ability and subject delivery.



## Results

Figure 1: Average Motivation, Effort and Achievement Levels



Figure 1 illustrates an improvement in motivation, effort and achievement (MEA) levels over the course of the action research study.

As the weeks progressed the average MEA levels improved, with the exception of week 3 when MEA levels decreased due to the group dynamics. This would suggest that the participants social and gender identity were challenged during this lesson, causing the group dynamics to break down allowing participants to revert back to dominant behaviours and characteristics of social comparison and therefore an over cautious awareness of self, which had a direct negative impact on their MEA levels. This was compounded by the increased difficulty of skill level (moving from shooting statically to shooting on the move (lay-up)) and with this increase in difficulty ego orientated comparisons were made, as the divide between who could and could not perform the lay-up was apparent.

The results from this graph would suggest that the teaching strategies of scaffolding, co-construction, collaborative learning and group dynamics had a positive effect on pupil MEA levels over the seven-week study.

Figure 2: Motivation, Effort and Achievement Levels



Motivation saw the biggest improvement over the seven-week study improving by a value of 26, effort was improved by 18, and achievement was improved by 15 over the course of the study.

This graph suggests that although motivation may increase rapidly, effort and achievement are not as easy to drastically improve. This would suggest that although pupils may be more motivated towards the subject they may not achieve greater results or put in more effort as a direct correlation, the results should improve but it may not be in proportion to the increase in motivation. This would take into account your competent bystander and pupils who are highly motivated and put in lots of effort but are unable to achieve results. These are areas that could be examined further in order to maximise motivation, effort and achievement of all groups. This may also be a direct result of psychologically wanting to be more motivated towards physical activity and this having a relatively instant change in behaviour or drive, whilst still exhibiting previous habits and dominant behaviours such as monitoring appearance and therefore not maximising effort, or not wanting to be seen to be 'good' at sport which may challenge femininity and therefore reduce achievement. From these results it would appear that there is a positive impact on motivating disengaged pupils when using co-construction, collaborative learning and scaffolding as teaching strategies.

## Conclusion

In order to improve this study further the MEA levels of specific individuals could have been tracked from a range of ability groups in order to establish where the most improvement was achieved. This may have highlighted specific groups that responded particularly well to the teaching strategies implemented and other groups that may not have had the same response.

If this study was to be repeated, it would benefit from taking place over a longer time frame, to establish what impact the teaching strategies have over a longer period of time, and whether there is an optimum amount of time that the teaching strategies have the

most impact, or does this impact reduce over time.

It would also be interesting to conduct this study with a mixed class to further understand the difficulties of implementing these particular teaching strategies with a mixed gendered class. This may alter the group dynamics and place a greater importance on gender identity and preservation, which would have a dramatic effect on motivation.

This study could be conducted with other classes similar in nature, in order to establish whether this correlation is relatively stable across classes, age groups and ability levels or whether it is an isolated phenomenon. This would improve the validity of the impact that these teaching strategies have on disengaged pupils as it can be repeated in other situations and environments. Conducting the study with a single sexed male class may also highlight different preferred learning styles between genders.

In conclusion, this research project has found a positive relationship between the use of co-construction, collaborative learning and scaffolding along with the careful consideration of group dynamics as teaching strategies which improve MEA levels within a single sexed, key stage three, core physical education class. The results obtained from this research suggest that teaching strategies should be tailored to the needs of the pupils within any given class, personalising learning wherever possible. Being flexible in how teachers teach, and therefore how pupils learn, is essential in being able to adapt the delivery of education in order to impart knowledge most effectively.

The action research project demonstrated positive results in pupil MEA levels due to the social and psychological factors affecting participation (gender, age, motivation and subject delivery) being addressed. Gender stereotypes were broken down by redefining what is seen to be acceptable feminine behaviour, by allowing pupils to demonstrate behaviour in relation to the situational context, without posing a threat to their femininity.

Age related factors were addressed by considering and understanding that pupils during adolescence have a heightened sense of comparison with others in order to define what is, and what is not acceptable or desirable behaviour. This overcome by allowing pupils extra time to get changed after physical activity giving them an opportunity to restore their appearance and help define that certain behaviour can be exhibited and expressed when conducting physical activity and the results of which (perspiration, hair out of place etc.) can be rectified afterwards.

Motivational sources were shifted from ego orientation and extrinsic rewards, to a task and mastery approach aimed at cultivating intrinsic motivational sources. This also helped combat gender stereotypes and age related factors as less importance was given

on comparing oneself with others, but instead completion of a self reference goal or mastering a task. And finally, the subject delivery was tailored to suit the needs of the learners, through the use of co-construction and collaborative learning. This enabled pupils to be able to reconnect and identify with what they were being taught allowing them to restructure how they learnt which affected how they perceived the activity being undertaken. This action research project has highlighted how important social and psychological factors are in affecting participation. Therefore, it is important to take into consideration the gender, age, motivation of pupils and subject delivery, personalising learning wherever possible in order to maximize learning and pupil enjoyment within physical education and physical activity.

These are useful findings in the context of fostering physical literacy on account of motivation being at the heart of the concept.

### **Further Reading**

For free access to the full case study please visit:

<http://www.pescholar.com/resource/phase/ks3/3183/engaging-disengaged-students-physical-literacy-conference-2013/>

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## The Reconceptualisation of Gymnastics: Equipping Physical Education Teachers to promote Physical Literacy in Schools

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*Michelle Flemons*

### Abstract

This paper considers the way in which Gymnastics has been marginalised in the physical education curriculum and proposes a review of teaching methods which would benefit Gymnastics and enable the activity to play a part in promoting physical literacy

### Introduction

Many advocates for radical change in physical education have repeatedly argued that the curriculum is currently focused on a traditional 'one size fits all', sport technique based, multi- activity form' (Kirk, 2013, p3). Others have argued that this 'traditional curriculum' is dominated by games (Green, 2002) and that the development of other areas has subsequently been stifled. For example, the development of gymnastics has been marginalised due to a range of barriers (Morton and Doherty, 2008) which in turn has restricted children's opportunity to progress in certain aspects of their physical literacy journey.

This paper discusses the barriers to teaching gymnastics in schools and the need for gymnastics to 'move with the times' if it is to be accessible and engaging to young people and their teachers in the current physical education climate. I will justify the significance of developing young people's creativity through physical movement and show how gymnastics provides the foundation to many of the fundamental movement skills needed for confident and competent involvement in any physical activity. This in turn might help to promote lifelong participation. Furthermore, I will demonstrate that the reconceptualisation of gymnastics for today's teaching climate will allow teachers to be more knowledgeable about physical literacy and thus be better equipped to promote physical literacy within their physical education lessons.

### Curriculum for Physical Education

The 'traditional curriculum' (Green, 2002) experienced in schools focuses primarily on physical competence and places little emphasis on the development of the 'whole' child. In contrast, Whitehead's (2010) concept of physical literacy is based on the monist notion of the human condition (i.e. the mind and body work as one and each part cannot function without the other). It focuses on the development of the whole child. In other

words, Whitehead argues that 'I do not have my body, I am my body' and physical literacy is conceptualised to further this aim. Bailey et al (2009) support this idea when highlighting the importance of physical education in having a positive and profound effect in the following domains; physical, lifestyle, affective, social and cognitive.

In contrast while the traditional curricula, may, by default, contribute towards developing some of the key attributes of a physically literate individual, overemphasis is placed physical competence. As a result there is little room for the inclusion of activities that might establish ones '*sensitivity to and awareness of embodied capability leading to fluent self expression through non verbal communication and to perceptive and empathetic interaction with others*' (Whitehead, 2013, [www.physical-literacy.org.uk](http://www.physical-literacy.org.uk)) or indeed for ensuring individuals' understanding of their embodied self within the world. Due to a more skills based, teacher led approach to teaching, children are limited in having opportunities to respond fully to reading their environment and interacting with its changes with imagination and intelligence. The games dominated traditional curricula restricts children to experiencing only one type of environment. Actions and rules may vary, however the similarities are great.

In order to initiate much needed change, the habit of recycling of the traditional curriculum must be broken. The question is how can this be initiated? In order to ensure physical education teachers are equipped to embed physical literacy within the curriculum, they themselves need to have a clear understanding of the nature of physical literacy and how this capability will feed into an understanding of who they are, where they are on their own physical literacy journey, how they respond to the environment and how they perceive themselves and the world around them.

### **Physical Literacy and Physical Illiteracy**

Whitehead (2013, [physical-literacy.org.uk](http://physical-literacy.org.uk)) describes physical literacy as '*a disposition to capitalise on the human embodied capability, wherein the individual has the motivation, physical competence, knowledge, and understanding to value and take responsibility for maintaining purposeful physical pursuits/ activities throughout the life course.*'

Each individual is, as described by Whitehead (2013), on a unique physical literacy journey throughout their lives. If at any point an individual lacks or loses motivation, confidence and physical competence to value physical activity, they risk becoming physically illiterate. Whilst children that aspire to become physical education teachers could potentially be described as having the motivation, confidence and physical competence, based on their own experiences, their perception of physical literacy is somewhat limited to the boundaries of the traditional curriculum. Once they become physical education teachers, these limitations created by their own lack of experiences leave them ill equipped to deliver lessons that can start or re start the physical literacy journey for every child. (Whitehead, 2013) A lack of understanding of the nature of physical literacy has prevented this concept from having a direct effect on teachers' beliefs as to what should be nurtured in physical education.



## Teacher Beliefs

An individual's beliefs are fostered and embedded during the acculturation phase of life (between birth and entering teacher education). These beliefs act as filters for teacher learning and are major determinants of a teacher's practise (Borko and Putnam, 1996). The consequence of this is that, for example, where teacher education recruits' appreciation of their own physical literacy journey is minimal they will have no grounds on which to relate this concept to teaching physical education. It can be argued that the recruits' lack of understanding of physical literacy will act as a barrier to its importance in the delivery of National Curriculum for Physical Education; not only, according to Dewar and Lawson (1984) during their teacher Education, but also during their teaching career.

Sirna, Tinning and Rossi (2010, p73), drawing on the work of Bourdieu (1977), describe the school as the 'field' or social setting which is '*infused with power struggles and organising structure*' where students and newly qualified teachers in particular continue to form their beliefs and perceptions, moulding them to frame the constraints in which they work. Through continual experimentation, socially constructed ways become embodied within the teachers' identity and become naturalized, therefore cementing historical behaviours into the present. Although recruits start their teacher education with pre conceived beliefs and perceptions that will 'filter' their learning (Borko and Putnam, 1996); there is no reason why they cannot be introduced to the concept of physical literacy, its importance and value and subsequently build the concept into their teaching of physical education.

The main issue here is that their beliefs will already have been well established. Recognising this is significant when determining the value added nature of PETE programmes. As Tsangaridou (2006) suggests, teachers' beliefs shape the professional knowledge acquired through teacher education programmes rather than initial beliefs being shaped by professional knowledge. If recruits have no knowledge or understanding of physical literacy prior to starting ITTE, this provides a real challenge for the trainers. It will be essential that these recruits have sufficient time to grasp the concept, so that it can play a part in shaping their growing professional knowledge.

Having an appreciation of recruits' pre-conceived ideas can ensure Physical Education Teacher Education (PETE) programmes impact on teacher pedagogy and beliefs (Richardson, 1996) and teacher attitudes (OCED, 2006), and thus, according to Calderhead (1996), influencing teacher behaviour. The peregrination of PETE recruits' beliefs was noted by Philpot and Smith (2011). They substantiated that there was a change between the beginning of the course, when recruits aligned physical education with sport, and their views on graduation, when they perceived physical education as more than sport. However, recruits felt that the curriculum needed to be made up of and heavily influenced by sport. This is not necessarily conducive to a curriculum that focuses on educating the whole child as is required for the development of physically literate children. This is not helped by the perception that teaching 'sport' is more akin to coaching and is, therefore, skills based (Curtner – Smith, 2002). Philpot and Smith (2011) also noted that the graduating students' beliefs that PE is 'more than sport' were unlikely to last the duration of their first year in teaching.

PETE educators need to understand fully the nature and unquestioned acceptance of the beliefs and perceptions PETE recruits arrive with when they enter teacher education, if they are to have any impact on change in physical education. Physical education ideology should ensure that learners leave school having made progress on their individual physical literacy journeys. For any young person to finish their time at school physically illiterate, would be unquestionably highly regrettable. Work that is aligned to fostering physical literacy should spring from teachers' commitment to, and sound grasp of, the value of physical literacy.

### Barriers to teaching a Variety of Experiences

In addition to the problems created by the recycling of a 'traditional curriculum', it is important to highlight the barriers to delivering the physical education curriculum in a way that could potentially provide opportunities to educate the whole, embodied child and '*capitalise on the human embodied capability*' (Whitehead, 2013, [physical-literacy.org.uk](http://physical-literacy.org.uk)) through gymnastics based activity.

Tinning (1979) recognised that there was very little gymnastics taught within the school curriculum and this has not changed in recent years. The problems of inadequate teaching of other activities (i.e. other than games) can be traced back to minimal personal experiences and therefore lack of subject knowledge in a given area (Docherty and Morton, 2008). This creates concern and lack of confidence. As an outcome, Gymnastics, for example, can be misconstrued as a 'risky' activity.

Unfortunately society today has an unhealthy obsession with risk management, and due to the adoption of a claim culture, we have become very health and safety aware. (Docherty and Morton, 2008). Although in some respects this is necessary, it has had a negative impact on children's' development through play outside of the classroom. The simple, basic fundamentals such as hanging, swinging and climbing are often avoided. These basic skills that were previously developed through play are essential in developing upper and lower body strength and a fundamental level of fitness (Docherty and Morton, 2008). Indeed, ensuring that children can support their own body weight is an important safety skill. It is worrying that this essential physical ability is not being developed by many children (Nilges and Lathrop, 2000).

Due to a decline in physical activity opportunities outside of school, coupled with limited time for curriculum gymnastics, it has been suggested that children will not necessarily be as well prepared as they need to be to perform certain gymnastics based activities. (Nilges and Lathrop, 2000). This also impacts on their competence and confidence in other physical activities and can minimise the amount of physical activity an individual will engage in during later life. However, regrettably, gymnastics does not present itself as being accessible to either children or physical education teachers.

The media depicts gymnastics solely as Olympic gymnastics with tiny, lean figured athletes in an elite artistic gymnastics arena. Routines are made up of demanding, complex and challenging movements that create fear in the hearts of many as well as engendering apprehension on the part of the performer. (Markovic, Sporis and Cavar, 2011). However, this level of performance is beyond, all but the most competent of



performers. Therefore, while most teachers would agree that gymnastics is an important activity for the growth and development of children and their physical abilities (Tinning, 1979), few are confident to teach it.

Pedagogically the picture is not much better. Kirk (1992) gives a descriptive history of physical education and positions gymnastics being either made up of tightly regulated, teacher directed skills and drills, or alternatively the more female dominated process orientated educational gymnastics. The smell of a dusty school hall with old and often disused/ condemned gymnastics equipment does not inspire or capture the imagination of the youth of today who were born in an era dominated by modern technology and a 'here today, gone tomorrow' culture.

Due to such pre-conceived ideas based only on the media's portrayal of gymnastics, and the way gymnastics has been replicated over the years through a 'cafeteria approach' to its the teaching in the form of educational gymnastics - teachers are reluctant to teach it. They also cite: lack of subject knowledge, concern over safety and the perceived demanding requirements needed to teach and perform. Due to a lack in one or more of these competencies, teachers will opt out of teaching gymnastics (ACHPER, 2008) thus limiting the learning experiences to which children can have access.

In the following section I will define creativity and demonstrate its significance in developing the whole, embodied child.

## Creativity

Creativity has been defined by McFee (1994:173) as '...the common communication of one's thoughts and feelings expressed through the instrument of one's' body.' This demonstrates how creativity is key in the expression of an individual, and therefore central to educating the whole child. This is further supported by Papendorp and Friedman (1997:4) who believe that the (creative movement) process 'is a co operative activity of the emotions, intellect, body and spirit'. This again relates back to the monist notion of the human condition that underpins the concept of physical literacy.

Gymnastics provides an appropriate arena for fostering creativity. Reflecting back on Whitehead's (2013) definition of physical literacy, creativity is central to its development and relates to many of its constituents. Lykeas, Koutsouba and Tyrovola (2009) defined creativity as each individual's skill or original way of problem solving. They also identified three significant factors affecting its development: the teacher as the trigger factor for the students' creative forces, the curriculum as a flexible framework and guide for the teachers, and most importantly the teaching method which ultimately brings together teacher, student, knowledge and reality. The focus needs to be on facilitation of learning induced by a stimulus rather than the more 'traditional' ideology of the teacher being perceived as 'master of the game'.

## Discourses surrounding gymnastics delivery in schools

Drawing from Kirk's (1992) work as mentioned earlier, one can see quite clearly how the teaching of gymnastics in schools has become weak and somewhat fractured. The lack of knowledge, skills and experience on the part of the teachers has contributed

significantly to this situation (Morton and Doherty, 2008). The importance of developing creativity within children thus adding value to their physical literacy journey within physical education is also underestimated. When creativity is neglected, human potential is wasted (Papendorp and Friedman (1997).

Teachers will often adopt one of two approaches; skills orientated/teacher led or alternatively an educational gymnastics 'watered down' approach: this latter is process orientated and more often than not lacks the form or skill mastery relating to gymnastics based movement (Smith-Autard, 2002).

Kruger (1978) questioned the contribution of artistic gymnastics in assisting children to develop the coordination's, physical fitness and confidence to manage their present and future movement problems successfully. Docherty and Morton (2008: p41) clearly support this view when they observed that *'Spotting children through a particularly difficult stunt does not always necessarily mean they will acquire that stunt or even enhance body management skills.'*

In order to overcome the issues raised in this section, I would recommend the reconceptualisation of gymnastics as one solution to promoting a well rounded physical literacy experience in physical education.

## Reconceptualisation of Gymnastics

Changing the definition, nature and purposes of gymnastics in physical education will facilitate the opportunity to develop physical fitness, motor development, posture, body management and creativity. Utilising educational gymnastics taught in its purest form could, potentially, allow for learners to benefit in these ways. The use of open ended tasks accommodates inclusion. This can, however be problematic when pupils answer the tasks with non gymnastic based movement which requires little skill. Educational gymnastics can be more accessible, requiring less expertise, however consequently it can lack a clear relationship with gymnastics (Docherty and Morton, 2008).

Smith – Autard (2002) developed the midway model, which could potentially allow the best of both worlds: combining the process orientated educational gymnastics with the product orientated competitive 'professional' model. This model brings together the use of the methodology and content of educational gymnastics with the exploration of traditional gymnastics movement (Standevan, 1978). The approach can be complemented with resourced based teaching. Using Cirque Du Soleil, The Chinese and Russian circus as well as free running, team gym and cheerleading as an inspiration will not only capture the imagination and inspire children of today, but also inspire them to engage with their own creative development. Smith – Autard (2002) is an advocate of this in relation to dance and she highlights the importance of form when creating movement and movement sequences. Exiner and Lloyd (1974) emphasise the importance of the teacher giving guidance without tightly controlling the pupils' work.

This would allow children to explore fully both their physical competence and creativity, thus really engaging them in their physical literacy journey.

The midway model can be supported by the use of models based practise; for example,

co operative learning. This can be described as a student centred model where students take the lead in planning and organising the lesson themselves and take ownership of setting up small tasks independently in small groups. The teacher acts as the facilitator as is central to the success of using this pedagogical model. (Dyson & Grineski, 2001; Dyson & Rubin, 2003; Dyson & Casey, 2012). The model essentially ensures that cognitive and social development are equally addressed and seen as equally important.

Facilitation of learning allows the learner to shift from being a passive recipient of knowledge to an actively engaged individual who is involved in the decision making process. This encourages their use of imagination, improvisation, initiative and personal judgement. (Lykeas et al, 2009). It was also noted that a more creative method of teaching is highly essential for psycho- emotional and socio – emotional development; promoting opportunities for students to build trusting relationships with adults and peers. This can be instigated through allowing children to explore and function independently. The two key elements to maintaining a secure and meaningful learning environment are teachers' strength in subject knowledge and their knowledge of the students with whom they are working. This equips the teacher with the right knowledge base to allow them to ask the right types of questions to facilitate learning effectively.

Moving away from a more traditional skills based approach makes sense in terms of gymnastics delivery in physical education lessons. Clear, inclusive progressions where children learn to manage their own bodies in their own time with a focus on high quality movement as well as developing creativity would be an ideal solution. Children can develop a range of skills and physical abilities that will help to reduce injury and improve performance in all sports. (ACHPER Active and Healthy Magazine, 2008).

## Conclusion

I have discussed the barriers to teaching gymnastics in schools and the need to move with the times in order for the activity to be accessible and engaging in the current physical education climate. I have justified the significance of developing learners' creativity through movement and have demonstrated how gymnastics provides the foundation to all fundamental movement skills needed for confident and competent involvement in any physical activity, thus promoting lifelong participation.

In order for teachers to be able to fully encompass physical literacy within their everyday teaching they need to confident and comfortable themselves by fully understanding the notion of '*capitalis(ing) on the human embodied capability*', (Whitehead,2013, physical-literacy.org ). One way of achieving this is to not only change the teachers' approach to pupil learning, but also to step away from the old and move into a modern era complemented by the assets of the world around us. By reconceptualising gymnastics to make it a more attractive option as a school based activity to children and teachers alike, we can indeed make a significant contribution to fostering physical literacy as a valuable concept within in teacher education, teaching and learning.

Reconceptualising gymnastics is just one way of moving physical education forwards and promoting a physical literacy journey that can be embedded within physical

education ideology. Educating the 'whole' child and providing opportunities for this will become central to the very essence of the future. Without it, can physical education ever really move forward at all?

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## **An Investigation into Teaching Strategies and Assessment Methods to foster Physical Literacy**

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*Claire Bannon*

### **Abstract**

Physically literate people are those who enjoy movement and appreciate the level of time, challenge and effort that is often required when involved in physical activity (Whitehead, 2010). It is this appreciation that I aimed to foster and promote within the pupils that I teach. The case study on which I report aimed to explore the potential of different teaching strategies in motivating young learners to want to be, and to be, physically literate.

### **Background**

My first two years of teaching were spent in an inner London school. Typically, pupils in the school had very poor general health and comparative to other schools within the borough, our pupils underperformed physically in most sporting competitions. The school was also based in a community where success in PE was not prioritised by parents and children:

- Often parents refused to let their children take part in extra-curricular clubs or sporting competitions outside of lesson time.
- Parental engagement at parents' evenings was also very low with pupils remarking that their parents didn't think it was important to come to see their PE teachers.
- Diets followed by many pupils within the school were typically very poor.

This meant that many of our pupils had a greater chance of experiencing problems such as heart disease, diabetes and obesity and generally there was a lack of motivation towards physical activity and a very low recognition of the benefits of an active lifestyle.

As a result, a departmental aim of the PE department I worked within was to focus on improving the general fitness of pupils within the school. This resulted in compulsory Bleep tests for pupils, which were completed during lesson time, at the beginning and end of every term throughout the school year. Results were recorded and monitored to track progress. Results were also used to inform parents of the general fitness of their child in comparison to the national averages in an attempt to foster parental support for



the importance of maintaining an active lifestyle.

It was felt that pupils did not generally enjoy the process of Bleep testing and during those lessons; pupil engagement was often notably low. Pupils often commented negatively about having to do the Bleep test and it was evident from the teacher's perspective that pupils did not work as hard as they possibly could during this activity. Typically, across the department the trend was that pupils began to give up more readily as they progressed through the school. By KS4 it was a struggle to get pupils to begin the Bleep test, let alone reach an average level. As a PE teacher I began to feel as though the Bleep test was giving my pupils the wrong idea about PE and what it means to be physically active, or indeed physically literate. I was worried that it was disengaging pupils and impacting negatively on their motivation towards the subject. Yet, it was a departmental policy and practice that had to be followed. Therefore, I felt it necessary to attempt to change pupils' opinions and attitudes towards the Bleep test by trying to integrate it into the process of working hard to achieve success – rather than a measurement of success. I wanted to re-engage pupils and attempt to show them that success has its own journey, and that the journey to success can be just as rewarding as success itself.

## Methodology

Participants in the case study were a class of 21 female students aged 11-12 years old. Data was collected through the process of questionnaires, interviews, fitness testing and reflective journals kept both by the teacher and pupils. Questionnaires were focused on investigating pupil attitudes and opinions towards PE, the Bleep test, and how much they valued the importance of working hard to achieve success. Interviews were then conducted to probe further into pupil opinions. Two participants were selected for interviews based on their responses in the questionnaires – one whose responses had shown a positive opinion of PE, and one whose responses were negative. The Bleep test was also conducted and the results were included within the data collection to attempt to triangulate data.

Throughout the study reflective journals were kept in order to attempt to monitor effective teaching strategies or experiences. These journals allowed participants and the researcher to record their thoughts and reflections after each lesson together. Participants were also encouraged to use these as a way of recording their own progress through the use of ipsative assessment. Participants set their own targets each lesson relating to physical activity within the lesson and could then evaluate their success in reaching these targets in their reflective journal. Their homework every lesson was to reflect on why they had achieved, or not achieved their target for that lesson. It was hoped that recording these thoughts would allow me to understand what worked for pupils and what might need changing; what motivated them to continue along their journey?

At the end of the study, questionnaires and interviews were repeated in order to evidence any changes in opinions or attitudes. Bleep testing was also repeated in order



to evidence whether real improvements had occurred and to attempt to identify any correlations between pupil opinions and pupil progress.

Data analysis took place after the study to evaluate the impact of the investigation. As questionnaires had been constructed using Likert scaling, results were easily quantifiable. Results were then compared between the beginning and end of the study in order to analyse whether there had been any changes in pupil opinion or attitude.

Four themes emerged from interview transcripts which were then used to code transcripts.

- Prior learning/previous experiences.
- Controlled learning environment.
- Psychological responses.
- Value of experience.

Transcripts of interviews were compared from the beginning and end of the study to identify whether responses under the four emerging themes had changed. Reflective journals were also coded using the same emerging themes identified from the interviews. This was in order to attempt to understand possible causal factors of changes in questionnaire and interview responses.

Participants' Bleep test scores were compared to identify whether progress in this area had been made. Where a participant's score improved, questionnaire responses from the same participant were then analysed to identify whether changes in opinion, or attitude, had occurred. The same process was followed if participants' scores did not improve, or if they decreased. This was in order to evaluate whether there were any correlations between attitudes and opinions of pupils and their scores in the Bleep test.

## Findings

Participants' opinion of and attitude towards PE changed dramatically from a very negative or undervalued subject, to one of their favourite. Similarly, Bleep test scores improved quite dramatically. Every single participant's score improved, some by over two whole levels.

Analysis of data collected throughout the study suggested causal factors to be:

- Quality/Type of feedback – relevant to the individual and based on own prior attainment rather than comparatively to others in the class, or even national averages. For example, phrases such as “you have worked extremely hard there”, or “You’ve improved since last time” were valued more than phrases such as “you’ve got a good score”.

- Supportive culture – participants noted that having mutual respect for all within the class provided an environment where mistakes would not be ridiculed. Therefore, pupils were more likely to attempt activities with the potential of achieving success, even if they were afraid that this success might not be instantly recognised. It was also noted frequently that help from peers encouraged pupils to continue, and that they also enjoyed helping others to be successful.
- Celebrating success – participants and researcher all noted that celebrating success, no matter how small, was a rewarding experience that motivated pupils to want to continue. Participants also noted that knowing success was possible encouraged them to work hard. This was linked back to “Feedback” – by the end of the study participants believed that hard work was necessary to achieve success, but that all have the potential to be successful. This was due to the feedback they received from their teacher who emphasised the need to work hard, but who also celebrated and praised participants who did this. Participants’ attitude towards success shifted from an end outcome towards the work they did to get there; they believed they were successful if they had worked hard and made small improvements, rather than believing they were unsuccessful because they didn’t get the top level.
- Target setting – participants noted that the process of Ipsative assessment and the use of target setting as teaching strategies were effective. Comments in reflective journals evidenced a motivation towards trying to beat own personal scores, and how using previous scores as targets gave pupils something to aim towards. This, again, linked to feedback as participants noted that being praised by their teacher, or “friends”, for beating their score encouraged them to keep trying.

## Moving forward

Accelerated progress of many of the previous under achievers resulted in a narrowing of the gap between them and the higher achievers in the co-hort. This initially threw up a very interesting finding in that it highlighted the need to push the higher achievers as their resilience appeared to be impacted negatively by the success of their less able peers. Similar to Dweck’s (2000) findings, it appeared that higher achieving girls were less willing to take risks with activities where they were not confident in achieving an outcome that sustained their high achieving status. The success of less able peers appeared to threaten their confidence in their own ability, or their motivation to continue their involvement. Current work aims to address this issue.

There was clear evidence from this investigation that through modified teaching strategies and assessment methods, learners became more motivated and confident. They set their own goals and accepted responsibility for their own learning. These are all traits that indicate that these learners were making progress on their physical literacy journey.

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## **ICT and Physical Literacy: The Use of Podcasts as an educational Tool to promote Motivation and raise Attainment in developing Knowledge and Understanding in Physical Education.**

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*Elizabeth Myers*

### **Abstract**

The issue of ensuring that learners attain and retain motivation in respect of classroom based work in Physical Education (PE) has seldom been a focus of investigation. This study looks specifically at the use of ICT to promote motivation and learning in A Level PE.

The research investigation explored whether the use of podcasts as an A Level Physical Education (PE) revision tool could improve motivation and examination performance. The pupils within an A Level PE class took a pre-test mock examination paper, after which the pupils were separated into either the control or intervention group. Over a six-week period the control group used traditional methods of revision along with revision lessons. The intervention group used traditional methods along with the additional use of podcasts to aid their revision.

The podcasts covered revision material that was combined with popular songs and animations. After the six-week revision period pupils took another mock examination paper. The results found that whilst most pupils improved in their examination performance, the intervention group had greater gains in examination performance overall. The results concluded that the use of podcasts could improve examination performance over and above using traditional revision methods alone. This investigation supports the notion that the use of podcasts within education can improve student attainment when used in conjunction with traditional revision methods.

### **Introduction**

Information Communication Technology (ICT) rapidly and incrementally changes over time. The use of ICT in the modern world has evolved to become an integral part of everyday life, whether communicating at work via email, using Intranet/Internet sites to access information, downloading web content, using mobile technology or subscribing to

podcasts and RSS feeds. It is important that education responds, not only to the shifts in society, ensuring that what is being taught and learnt in schools across the country remains relevant and suitable using ICT to enhance learning opportunities, but also has a secondary focus on developing ICT literate individuals who are competent and confident in using a wide array of digital media, computer systems and ICT.

In 2002, the use of ICT was added to the Secondary National Strategy (DfES, 2002) as its contribution to supporting high quality teaching and learning was recognised. In 2007, the use of ICT within education was further recognized by its statutory inclusion within the National Curriculum for England and Wales (DCSF/QCA, 2007). The National Curriculum (DCSF/QCA, 2007) for Key Stage three and four stipulates that all schools need to provide opportunities for sufficient and regular time for the teaching of ICT skills, knowledge and understanding, and for access by pupils to appropriate tools. There should be planned opportunities for pupils to use and apply their ICT capability as part of their learning in other subjects of the curriculum, and ICT may be used to provide additional support for pupils who have made slow progress, are less able or are falling behind, to get them back on track. This focus on integrating ICT skills within other subjects to enhance learning, and learning ICT skills in isolation, are by no means the only ways in which we should be preparing young people for an increasingly digital world. This is something that needs constant review to ensure that education teaches young people to be responsible, knowledgeable, effective and safe ICT users.

One of the many ICT tools that can be used to fulfil the National Curriculum aims and outcomes (DCSF/QCA, 2007) is the use of podcasting as an educational tool. Podcasting is a relatively new technology that has yet to be fully utilised widely within educational settings.

A podcast is a type of digital media that may consist of a series of episodes of audio files subscribed to, and downloaded, through web syndication or streamed online to a computer or mobile device. Currently, podcasting is being debated as a promising e-learning tool that will possibly influence teaching and learning in the classroom and transform the concept of mobile learning beyond the classroom (Cebeci and Tekdal, 2006).

Meng (2005) defines the term podcasting as the process of capturing an audio event, song, speech, or mix of sounds and then posting that digital sound object to a website or blog in a data structure called an RSS 2.0 envelope or otherwise known as a feed. Podcast content can include audio, video, and image materials, but currently audio podcasts, commonly known as audiocasts or audioblogging, are the most common content used in educational contexts (Rossell-Aguilar 2007). Podcast content and frequency can be diverse, in terms of material covered, and length, ranging from hourly three-minute newscasts, through to daily twenty-minute news summaries or

commentaries, to weekly one-hour in-depth discussions (Bell, Cockburn, Wingkvist and Green, 2007). The length of the podcast may depend on what material is to be covered, the nature of the audience (children or adults) and the structure of the podcast itself (educational content vs. recreational content). Psychological factors such as how to maintain an audiences' attention should be considered with any podcast, but this is especially the case with longer podcasts or podcasts that cover highly complex or specialist material.

Podcasts are normally subscribed to, or streamed to, mobile devices or computers via a website, application or blog. This is made possible through web syndication. Web syndication is a way of publishing informational feeds about the new and updated content of a website to other websites or people who have subscribed to these feeds. A feed or a channel is a type of XML file that contains information about new or updated content of a website or a blog (Cebeci and Tekdal, 2006).

RSS feeds are created by content publishers or developers and then delivered to their subscribers by a feed reader or feed aggregator, although it is possible to develop your own RSS feed with limited knowledge through the use of free or commercial plugins as part of a Content Management System (CMS) such as WordPress or Joomla. Feed readers are programs that regularly or periodically check for new information on subscribed feeds. If new information is detected on a website, application or blog then the feed reader will automatically download the referenced content files to a user's device; either mobile (PDA, smart phone or MP3 player) or fixed (computer) (Cebeci and Tekdal, 2006). This is made possible through the sophisticated nature of wireless and Internet technology, allowing content uploaded to a website in the UK to be made available almost instantaneously on a mobile device on the other side of the world. The power of this technology, especially with the popularity of social networking sites such as Facebook and Twitter, means that RSS technology is incredibly effective in distributing information or content quickly, and on mass, with relative ease. Web syndication, as a technology for use within education, can facilitate the communication between pupils, parents, teachers, and school communities instantaneously.

Clark and Walsh (2004) produced one of the earliest reports describing the potential of podcasting in education. They highlighted that listening is instinctual, and that linguistic psychologists have found that unlike reading and writing, children do not learn how to understand the spoken word, but are instead hard-wired with the skill (Hew, 2009). This potentially means that pupils will be more engaged with listening to information rather than reading or writing the same information, due to our innate nature to attend to, or tune in to, the spoken word. Durbridge (1984) supports this notion and stresses the advantages of audio for learning, stating that the spoken word can influence a learner's cognition, adding clarity or meaning and improve motivation by conveying directly a sense of the person who is speaking. This has a clear impact for podcast creation, as the pitch, tone and language used within the podcast should aim to create an affinity with

the listener, thus allowing for a positive sense of the person who is speaking to be created.

In a modern world, with many distractions such as television, the media, the Internet, friends and family, it is sometimes difficult to find the time or be in the right place to undertake learning tasks in a conducive environment. RSS, web syndication and podcast technology is revolutionary in its ability to facilitate 'mobile learning' opportunities, allowing learning to take place unrestricted by location or activity. For example, an educational activity can take place whilst traveling to school or work by listening to a podcast whilst traveling, or listening to a podcast whilst at the gym. Downes (2004) highlights the potential for this emerging educational trend of 'mobile learning'. He foresees that the delivery of learning content through mobile devices such as smart phones, PDAs, MP3 players and similar mobile devices or tools is something that can be realised imminently within education. He also emphasizes that with this technology learning is no longer confined to a particular fixed location but instead, as a result of wireless technology, accessing educational content will be available at any time and anywhere in the world. As XML encoded content and syndicated delivery systems become more sophisticated, the location or manner in which learning or educational content may be available is limitless.

In summary, podcasting can serve as an anytime and anywhere mobile learning solution. After podcasts are downloaded into a mobile device, they can be listened to at one's own convenience. The flexibility of merely listening is a technological advantage of podcasting that may make mobile learning applicable, cheaper, and popular when it is compared to its counterparts such as WAP-based or web-based mobile learning (Cebeci and Tekdal, 2006). Podcasting can make learning content attractive to students, improve concentration and motivation and facilitate active learning and engagement experiences (DfES, 2004; Piaget, 1972; Rogers, 1975). Podcasts could also be used to support learners when revising, revisiting information or completing homework. It can be used as a form of supported mobile learning recapping points made within the lesson, as a revision tool, learning new information or extending knowledge (Cebeci and Tekdal, 2006).

## **Research Question**

Can A Level PE examination performance be improved through the use of podcasts as a revision tool? Does the use of podcasts in addition to traditional revision methods produce gains in examination performance that exceed traditional revision methods alone? Does the use of podcasts improve educational attainment?

## **Design**

The pupils within an A Level PE class took a pre-test, mock examination paper, after

which the pupils were separated into two groups; a control group and an intervention group, of roughly the same mean grade performance.

Over a six-week period the control group used traditional revision methods along with revision lessons. The other group (intervention group) used traditional revision methods along with the additional use of podcasts to aid their revision. The podcasts covered a range of course material combined with popular songs and animations.

After the six-week revision period pupils took another post-test, mock examination paper. The results of this examination paper were compared to their original examination performance prior to the six weeks revision. The differences in examination performance were then calculated, illustrating any improvements in examination performance between the pre and post mock examination tests. The differences in improvements between the control and the intervention group were analysed to determine the impact of podcast use.

## Data Collection

The grade scores for both examinations were given a mark out of 100 and what that corresponded to in terms of grade equivalent. A revision log was also given to the students so that they could track how many hours revision they completed, and how many times they listened to a podcast. This information provided an understanding of the gains in examination performance in relation to the number of hours revised and the type of revision activity completed.

## Results

The results of the pre-test mock examination were as follows:

Table 1: Pre-test mock examination results.

Participant number	Pre-test mock examination numerical score	Pre-test mock examination grade score	Control group (C) or Intervention (I) group
1	89	A	C
2	83	A	I
3	80	B	C
4	78	B	I
5	78	B	C
6	71	B	I
7	67	C	C
8	67	C	I
9	64	C	C
10	56	D	I

Grade boundaries >80 = A, >70 = B, >60 = C, >50 = D, >40 = E.



The control group consisted of five pupils with mock examination grades of A, B, B, C, and C. The intervention group (podcast users) consisted of pupils with mock examination grades of A, B, B, C, D. The number of revision hours recorded by participants during the six-week revision cycle is outlined in the revision log results table below:

Table 2: Revision log results.

Participant number	Number of hours revised over the six week period in total (excluding lesson time)	How many of these hours were revised by podcast?
1	6	0
2	10	5
3	7	0
4	18	6
5	8	0
6	10	4
7	6	0
8	9	3
9	6	0
10	12	6

Table 3: Total number of hours revised.

Control or Intervention group	Total number of hours revised	Total number of hours revised using a podcast
Control	33	0
Intervention	59	24

The group who had the largest total number of hours revised was the intervention group with a total of 59 hours. Of these hours, 24 of them were completed using a podcast. Without this extra podcast revision time both groups had a similar amount of total revision time, with 33 hours undertaken for the control group and 35 undertaken for the intervention group. The results of the post-test mock examination were as follows:

Table 4: post-test mock examination results.

Participant number	Pre-test mock examination numerical score	Post-test mock examination numerical score	Pre-test mock examination grade score	Post-test mock examination grade score	Overall examination improvement
1	89	90	A	A	+1
2	83	88	A	A	+5
3	80	81	B	A	+1 B→A
4	78	85	B	A	+7 B→A
5	78	80	B	A	+2 B→A
6	71	76	B	B	+5
7	67	70	C	B	+3 C→B
8	67	71	C	B	+4 C→B
9	64	65	C	C	+1
10	56	62	D	C	+6 D→C

Grade boundaries >80 = A, >70 = B, >60 = C, >50 = D, >40 = E.

The results in the table above show that all participants were able to improve their examination performance. 6 out of the 10 participants were also able to improve their result by a whole grade boundary.

Table 5: Overall examination improvement.

Control or Intervention group	Total number of numerical points gained	Total number of grade boundaries improved
Control	8	3
Intervention	27	3

The overall examination improvement as illustrated in Table 5 highlights that the intervention group saw the largest gains in examination performance, improving their results by 27 numerical points as opposed to the control group who only improved by 8 numerical points.

## Discussion

The results found that whilst most pupils improved in their examination performance, the intervention group saw greater gains in examination performance. This could be as a result of the intervention group having a greater total number of hours revised over the six-week period. During discussions with the intervention group post study, they stated that they preferred revising using the podcasts, as they were able to listen to them whilst going about everyday activity. They also said that due to the learning material being broken up with songs they were able to revise for longer and with greater concentration. Some of the intervention pupils went as far as saying that they repeated the podcasts because they enjoyed listening to them, and it didn't 'feel' like they were revising. This is a clear example of how podcasts can facilitate active engagement (DfES 2004) whereby students are engaged in learning tasks and enjoy learning. Another intervention participant said that they were able to concentrate more easily, taking in, and understanding, the information contained in the podcast much more easily in comparison

to when writing or reading to revise. This supports the notion that the use of podcasts can tailor learning and revising tasks to support auditory learners.

The increased gains in examination performance may relate to the extra hours revised, but when the participants asked whether you would have done any extra revision if you didn't have the podcasts, the majority said they felt they would not have committed extra hours to revising traditionally, but instead revised due to the flexibility and ease of listening to the podcasts whilst they were going about everyday life. It was surprising when interpreting the results to find that the intervention group had almost double the total amount of revision hours in comparison to the control group, as a direct result of twenty-four more hours revised through using the podcasts. The intervention participants stated that podcasts were an attractive revision tool as they didn't require any additional resources such as a pen or paper, desk or quiet space; just an MP3 player, and that it could be used whilst multi-tasking. This could be important feedback in structuring future revision methods; organising tasks as convenient snippets of information rather than structured or formal tasks.

The podcast creation was time consuming and required a certain level of ICT proficiency in order to create content that was engaging and professionally produced. Researching the topics and the additional media material such as music breaks also required careful consideration ensuring the right media was chosen and the topic was fully covered in accordance with the course materials. This process at present is something that would not be accessible for all teachers in terms of the level of ICT proficiency required and the time allocation required to create materials.

## Conclusion

Podcasting can be associated with a number of benefits and limitations. Similar to wikis and blogs, podcasts are not always accurate, and as a result the quality and accuracy of podcasts can be compromised. The free form nature of podcasting has a double implication; it allows you to download and upload audio and video files in a quick and easy way, but in an open and collaborative web anyone can easily duplicate copyrighted material without the permission of the copyright holder(s) and also add misleading or unsuitable content. Another limitation is in the set up of the RSS feed. Once the web syndication system is set up and customized, the distribution and subscription to feeds is relatively simple and easy to use. The difficulty lies in the programming and implementation of the actual RSS feed, although there are numerous open source tools available to automate the creation of RSS feeds (Cebeci and Tekdal, 2006).

Feedback from the intervention group suggested that the nature of podcasts being asynchronous in consumption allowed for convenient access and multi-tasking (riding the bus, walking, or working out whilst listening to a podcast), which was highly valued as a characteristic. Podcasts can also provide flexible curriculum pathways to encourage student motivation and participation, engagement and help to facilitate educational success (Cebeci and Tekdal, 2006). It is important to stress that the use of ICT, and in particular podcasts, should be used in conjunction with traditional teaching methods in order to create holistic individuals who are both literate in ICT and traditional teaching and learning tasks.

Education as a profession continually seeks to improve the quality of teaching and learning, and in doing so, explores a multitude of teaching and learning strategies. Podcasts could be used as a teaching and learning strategy, or tool, to facilitate the personalization of learning, fostering active engagement and providing positive and conducive learning environments, whereby all pupils can succeed (Cebeci and Tekdal, 2006). Podcasts can be used as a learning tool to enrich the learning experience within education and improve educational attainment. More research is required to establish the full learning potential podcasting may hold as a tool for use within education and to overcome the technological and time-consuming barriers in their creation and distribution. However it would appear from this small study that forms of ICT can be beneficial in respect of fostering the motivation and learning that are elements of physical literacy.

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## What is the Relevance of Physical Literacy for Adults?

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### Abstract

In this article I propose to explore how physical literacy can be applied to adults. I shall raise questions about the process in which practitioners work with adults. This will lead to a discussion on empowerment and its significance in the promotion of physical literacy.

### Making the Case for Physical Literacy

If we examine the most recent definition of physical literacy by Professor Whitehead (2013) she identifies the following specific features (1) the motivation, confidence, physical competence, knowledge, and

(2) understanding to value and (3) take responsibility for maintaining purposeful physical pursuits/activities throughout the life-course.

The first feature represents common aspects of work shared with physical education and the language that practitioners use when they explain what they are trying to achieve. However, the 'understanding' to 'value' and 'take responsibility' imply something very different.

Translating these dispositions into action steps implies that the adult will acquire these dispositions over time, come to appreciate what purposeful physical pursuits have to offer and learn to love them. They will have support of practitioners who have the skills to enable the adult to understand, value and take responsibility for participation. This does not exclude the possibility that an adult may come to this appreciation of his or her own volition.

So, what is the current situation? Is the adult population already sufficiently active because they have understood the value of purposeful physical pursuits or are some adults simply not convinced?

The UK Physical Activity Guidelines (CMO, 2011) recommend that adults need to



undertake 30 minutes of moderate physical activity on at least five days a week to benefit their health. Yet, a recent survey by the ESRC (Farrell et al, 2013) of physical activity levels paints a very different picture, Professor Propper (Bristol University) says that 80% of adults fail to meet national government targets<sup>1</sup>.

This represents only 3 per cent of the time a person is awake yet the majority of adults are sedentary and sit in front of a television for 16-25 per cent of a day. This point is reinforced when it is recognised that many adults are less active at weekends and holidays than weekdays even though they are likely to have more free time. Not having enough time to take part in purposeful physical pursuits e.g. walking, is not an adequate explanation any more. In fact from the evidence above, most adults do not see taking part in any form of purposeful physical pursuits as a priority in their lives.

This issue is confounded when it is recognised that most adults have some difficulty with understanding the public health message (Department of Health, 2009) and fail to recall how much physical activity they need to do. The media also compound this problem by frequently citing research that contradicts established messages or raising false hopes with reference to new fads. As a result, the picture can be very confusing for many adults.

It would be reasonable to say that we have failed to demonstrate that engagement in regular physical activities can be a powerful force in promoting a person's wellbeing and enabling them to flourish.

In a workplace health project (Sport England, 2007) with sedentary adults to encourage them to become more active and maintain a commitment over a year, the evaluation revealed that the main reason for staying with the project was "I have more energy". This association with being active on a regular basis with having more energy and a sense of vitality provides a powerful argument for a more positive message for inactive adults. We need to use this idea that purposeful physical pursuits can energise lives and enable people to feel that they have more vitality and dynamism.

In this article the term 'purposeful physical pursuits' is used because it is preferred to physical activity and avoids a specific association with sports.

Purposeful physical pursuits encompass a wide range of possibilities including dance, competitive sport, adventurous activities, fitness, tai chi and recreation activities without favouring one over another. Sports are often used as an overarching term covering many forms of purposeful physical activities but they cannot seriously be associated with dance or tai chi and in addition sports can put some people off engaging in different forms of physical activity.

A second argument for a positive message to promote a commitment to purposeful physical pursuits is their potential for enriching lives; an emphasis concerning widening peoples perspectives about what they can do in their lives, extending their horizons of what they are capable of doing, achieving a sense of success and feeling good about what they have achieved. We need to remember also that this engagement will often be in a social context and can lead to building new social networks and a sense of belonging to something that people value.

In the process of energising lives, increasing vitality and dynamism and enriching lives, purposeful physical pursuits enable individuals to build a wellbeing resource that underpins their sense of flourishing well. A commitment to taking part in a purposeful physical pursuit on a regular basis can have positive effects on the complex inter-related systems of one's body leading to an optimal level of functioning. It is this process that leads to feelings of vitality, energy and dynamism and the achievement of a *wellbeing resource*. It also provides the enabling conditions for enriching lives in other ways, developing other capabilities and enabling people to feel good and flourish well. In the same way, certain forms of exercise can help to restore people's physical capacity and aid recovery following ill-health, an operation or a condition that inhibits a person's normal life. In some cases people may not be able to recover the good health they once had, but it will help them to be as good as they can be or better than they would otherwise be.

Thus, adults can be placed in two categories, in the first one are people who acquired an interest in purposeful physical pursuits within their family and were supported by a school (or were introduced to them at school) and have maintained an interest and commitment. In the second category are adults who are either inactive (and report no physical activity)<sup>2</sup> or are irregularly active in some sort of purposeful physical pursuit such as walking once a week, three times a month or just at weekend. In fact this represents the vast majority of the population.

An inactive adult (and perhaps a sedentary adult as well) is likely to be someone who had no interest in physical education at school or did not find the experience satisfying. As a result, engaging in purposeful physical pursuits is a low priority in their lives or it never crosses their minds even to consider finding the opportunity to engage in them.

For adults undertaking no physical activity or are irregular participants, the process of becoming more active will require a change in their normal behaviour. However, those who are inactive can be:

- adults who have no interest in becoming more active
- adults who have never had the opportunity to enjoy being active



- adults who have been turned off specific purposeful physical pursuits with bad experiences at school
- adults who dropped out from participating when they were young
- adults who are simply too busy with other forms of purposeful (but not physical) pursuits e.g. volunteering
- adults with family or caring responsibilities who finding time to be active difficult.

So, how or when does an inactive adult make a decision to take part in purposeful physical pursuits? A friend, a doctor or an advertisement (in a local paper) may trigger some sort of interest or need. For the inactive adult the most likely scenario is that they will either start walking on their own initiative or become a member of an organised local community for aerobics, pilates, joga classes or join a fitness centre with friends. In this context, they will come into contact with a practitioner who has qualifications and experience in a specific purposeful physical pursuit.

This highlights the complexity of enabling adults to come to appreciate the value of purposeful physical pursuits in their lives. In many ways it is similar to promoting these valuable pursuits<sup>3</sup> in schools, however, children in schools are in a learning environment whereas making adults aware of these values is far more complex and demanding. This is a community health promotion issue that goes beyond the scope of this paper. Nevertheless, it can be addressed in the context of health practitioners and their roles in the empowering the individual to take responsibility for his or her own health.

An adult's contact with a community health practitioner is crucial because positive experiences can lead to a love of being active, especially if the social group is welcoming and supportive. A great deal rests in practitioners' capability and understanding of how they engage with adults and provide positive experiences that stimulate a need to return to the activity time and time again. At the same time practitioners must avoid creating a dependency on them by individuals and take steps to empower the adult to take more responsibility for being physically active on a regular basis.

Practitioners engaged in promoting a specific purposeful physical pursuit have to go beyond their practical knowledge of the content that they can engage adults with and their basic understanding of supporting disciplines. Community health practitioners need to reach out and connect productively with disadvantaged communities, lonely or disinterested people, vulnerable communities or 'hard to communicate with' communities, but also they need also to reach out and connect with inactive individuals who could be persuaded or attracted to specific purposeful physical pursuits. Secondly, they need to engage them with a form of content that excites, attracts them and keeps their interest. These processes require two more capabilities for the practitioners – the

capability to sustain the interest of the adults so that they acquire a commitment to be active on a regular basis and secondly they become empowered to take responsibility for maintaining their commitment.

If the experience of being active in a specific purposeful physical pursuit (or even pursuits) is rewarding, enjoyable and successful adults will return again and again and develop their interest and deep feelings of satisfaction in their participation. As the commitment grows, the adult will come to a greater understanding of the benefits of their regular participation and begin to value its qualities and role in their lives.

## **A changing Landscape**

Over the past few years there have been major changes in the landscape of how the government works and as a consequence how the promotion of better health is involved. The White Paper Healthy Lives, Healthy People (2011) sets out the government's new direction and proposals for public health; local authorities will direct health improvement and behaviour change will lie at the heart of this new initiative. This move will ensure that public health is responsive to the different needs of each community, it will create local freedom together with accountability and ring-fenced health improvement budgets. Public health leadership together with responsibility will be returned to local government. In this new initiative individual responsibility for behaviour change is a central issue.

Baroness Warsi (2011), speaking about building a new culture of social responsibility proposed that the country needs a "responsibility revolution" and a change is needed in society's thinking. We need a conversion of the heart and mind, and it is a task that together we can do something about. Responsibility is about what an individual does and less about what the government can do. To bring about such a change cannot be achieved by government alone, it needs an empowered society. The idea of empowerment has had a major impact on development work and community action, but the theoretical principles underpinning this work have only just begun to influence work in public health. Thus, it is important to devote time to discussing the meaning of empowerment for individuals and communities because this has will have a major influence on how public health professionals put this theory into practice.

Drydyk (2008) in a critical review of empowerment suggests that to be empowered means that people are able to make decisions and influence their life-choices, overcoming barriers that hinder their ability to make informed choices in the opportunity structure in which they act. As a result, people will be better able to shape their own lives. He goes on to propose that empowerment as a goal is to have control over the determinants of one's quality of life and health, and empowerment as a process is to create a professional relationship with an individual client (or community setting) in which they take control over determining both the goals of a change process and the means needed to bring about a desired improvement. The empowerment process highlights that

individuals need to have the means, the internal resources and skills, that need to be unlocked and nourished in order to enable a person to make considered changes and develop in a positive direction.

The concept of empowerment is important and represents a big challenge for all practitioners working with adults and promoting specific purposeful physical pursuits. However, this should not be taken as a professional's right to impose their will. For the professional to have an agenda, other than facilitating increased control over the processes of change in a community or a person's health-related behaviour, it would contradict the definition of empowerment as a process. It is morally problematic to attempt to make participants do what they have not consciously and deliberately freely chosen (Tengland, 2008).

The role of health practitioners has traditionally been seen as an educationalist who can give advice on what to do and how to do it. They are seen as experts in a specific area with access to information, resources and expertise. Laverack (2013) calls this a 'power-over' relationship. Another role has emerged and at its heart is the ability of the practitioner to enable the individual to gain more control over decision-making and his or her choices of action. He calls this a 'power-with' relationship and one that is non-coercive. He goes on to suggest that informed and autonomous choices refer to the capacity to be self-governing that lies at the core to empowerment approaches. The key attributes of the practitioner in an empowering role are as enabler, a helper, a motivator and guide to support others to facilitate change in their behaviour that is more health enhancing. Laverack quotes Per-Anders Tengland (2007) when he says that the logic of using an empowerment approach is justified because it is well founded and ethically sound to do so. Tengland (2012) compares behaviour change models and empowerment in the context of the ethics of health promotion strategies. He makes the point that behaviour change interventions can use various kinds of strategies to target people's behaviour in the form of information, persuasion, coercion and manipulation. On the other hand, empowerment is a collaborative method where individuals are 'facilitated' to make changes in non-coercive ways. In his article he tries to show why we should prefer empowerment methods.

Thus, the health practitioners need an additional capability, one in which they facilitate a person's behaviour change by enabling them to learn to take more control over the change process. They should be 'experts' on how to achieve an empowering process.

This implies that people can be inspired to recognise the significance of a personal resource and its potential impact on their lives. Health professionals need to recognise that it is not enough to provide people with knowledge about improving their health and provide information about opportunities, their professional skill must go way beyond this. Their knowledge and understanding needs to be applied in such a way that

professionals can use their existing knowledge base of public health in order to develop strategies to 'know what they can do with what they know and how they are enabled to frame possibilities beyond the conventions of the present' (Bruner, 2007; p2).

## Conclusion

In this article I have used the 2013 definition of physical literacy which highlights the need to address the 'understanding to value and take responsibility' for maintaining purposeful physical pursuits throughout the life-course. This is particularly relevant when dealing with adults.

It is quite clear from the surveys of participation levels that many adults do not value purposeful physical pursuits nor do they have any understanding of what they entail. It is clear also in the context of health that many adults do not recognise the significance of taking responsibility for their health.

As a result, there is a great deal of work that needs to be done. In the first instance, practitioners working with adults can learn a great deal from physical literacy, and proponents of physical literacy need to understand the challenges of encouraging more adults to engage in purposeful physical pursuits and seriously consider the role of empowerment. Practitioners would be advised to explore empowerment strategies but these need to be read alongside texts and articles on physical literacy that can provide insight into how this can be achieved.

In this collaborative process, adults seeking to engage in purposeful physical pursuits would be better served.

<sup>1</sup> However, in this case the national government targets are not the same as the UK Physical Activity Guidelines (CMO, 2011). In the ESRC survey they see the target as performing moderate physical activity on at least 12 times a month that is 8 less than the CMO report. In this case there are likely to be considerably less adults meeting national health guidelines.

<sup>2</sup> An inactive person or irregularly active person is one who does not meet the recommended (CMO, 2011) level of physical activity (30 minutes on at least five days a week) to improve their health.

<sup>3</sup> See the article 'What is the value of Physical Literacy?' in this Bulletin for an explanation of its value.

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## Physical Literacy, 'Race' and the Sociological Imagination

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*Kevin Hylton*

### Abstract

This paper argues that in relation to physical literacy we must continue to problematise the philosophies that underpin the concept to the point that it is less utopian, idealistic and politically neutral.

For those advocating physical literacy, physical educators are encouraged to consider its ideals as a philosophical underpinning. A realisation of physical literacy is an aspirational outcome of physical education that Whitehead (2012) urges the profession to incorporate in its pedagogies. Whitehead describes six key elements that constitute physical literacy that could all be described as theoretical end states. Physical literacy has a mix of psychological, social, cultural and physical dispositions that Talbot (2012: xvi) states is a challenge for physical educators. This paper draws on principles from critical race studies that begin from the standpoint that society is fundamentally unequally structured that, amongst other things, is the result of past and present racial processes (Hylton, 2009, Hylton, 2012, Hylton and Morpeth, 2012). This pragmatic realist approach to physical literacy forces a recalibration of the philosophical idealism of the end state that is physical literacy with a critical consideration of the physical literacy journey that is on the whole more constrained for black and other minoritised groups. In doing so, the paper draws directly on papers that consider broader concerns in relation to 'race' for those working with and developing the concept of physical literacy. These publications incorporate previously published works that focus on the salience of physical literacy in relation to broader considerations of 'race' in society (Hylton, 2009, Hylton and Morpeth, 2012), 'race', sport and leisure (Hylton, 2005), and sport, social capital and social networks (Hylton, 2008)<sup>1</sup>.

Whitehead (2013) states that everyone can be physically literate, yet without doubt conceptions of physical literacy are theoretical constructs. These constructs draw from the same idealistic pools that inform policymakers that support the view of the freely available, positive benefits of physical culture that spawned sport for all. As a result physical culture [or sport] have been purported to have properties that enable them to contribute to the smooth running of society as a form of 'cultural glue' which helps to hold it together yet their settings as contested arenas are often left undisturbed (Hylton and Totten, 2008). As a result, a reasonable sociological imagination would conclude that

certain significant social dynamics that impact our ability to access, take part in and sustain our physical literacy, and in many cases sport per se, are ignored or marginalised. Critical social scientists refuse to accept ideas, concepts, or paradigms that do not systematically centre broader power relations and historical disparities in their exploration of problematics or critiques (Hylton, 2005, Hylton, 2009). The fashion in which physical literacy is theorised and developed in practice seems to take place in conditions that suggest stasis, pluralism and equality.

In the foreword for the systematic review of the literature on BME communities in sport and physical recreation for Sporting Equals and the UK Sports Councils Long et al (2009: 1) state that,

Research suggests that inequality and discrimination persist in the provision of and access to sport and physical recreation opportunities by black and ethnic minority (BME) communities. These communities are poorly represented at decision-making levels and for a number of reasons are excluded or face a range of barriers to sports participation.

I argue elsewhere that I advocate the basic standpoint that we live in an unequal society, where resources and power are unevenly distributed and that part of the job of critical writers is to demystify these social arrangements (Hylton, 2005: 90). Part of this demystification process is to recognise that individual agency, determination or motivation is not enough for individuals from particular background to consistently freely access opportunities for physical literacy in their preferred activities. The notion of being on an individual physical literacy journey cannot be disputed (Whitehead, 2012, Whitehead, 2013) yet the potential for broader structural and institutional constraints affecting such a journey seem frequently marginal in the way physical literacy is articulated.

Each journey is likely to encounter twists, turns and maybe setbacks along the way. Journeys may stall on account of a range of personal circumstances, some, maybe, beyond the individual's control. However with determination and the help of others, individuals' journeys can re-start and indeed flourish (Whitehead, 2013).

Does the notion of 'physical illiteracy' really apply to social groups excluded by racialised and even more complex intersecting processes on the journey to physical literacy? Amongst a plethora of authors, Porter (ScottPorterResearch, 2001) reported that it is the fear of racial discrimination – real or perceived – that is the core issue keeping BME groups away from sport and as such conceptions of physical literacy must include as part of its context and critique what people do, when, why, for how long and who with. Otherwise those affected or victimised by racialised processes are likely to remain 'physically illiterate' no matter what their standing is in terms of their actual physical abilities. Whitehead (2012: 7) reinforces this point,



While all can be physical literate, it is the case that, if at any stage of life, individuals lack or lose the motivation, confidence and physical competence to value physical activity and take steps to maintain activity, they can no longer be described as being physically literate, in other words they may become physically illiterate.

Just as in other aspects of education we must ask questions about why individuals may lack motivation, confidence and perspective to value physical activities and their environs. Similarly, questions should be asked about why there is an imbalance in the literacy, motivations and exclusion of social groups in their take up and practice of certain physical pursuits. All physical pursuits are not the same qualitatively, socially, culturally or even economically. Any consideration of physical literacy as an organising principal for educationalists must be underpinned by broader notions of social dynamics and how they impact individual and group behaviours. Lin (2001) contends that we should consider how different social groups have different access to social capital, often related to privileges of structural positions or social networks (Hylton, 2008). The consequence of the marginalisation of racialised relations in theorising social capital is that historical power relations and inequalities are marginalised or ignored thus leaving some analyses narrow, colour-blind and pluralistic in nature. In his analysis of social capital, Field (2003) agrees that networks can promote inequality due to their restrictive access to the means of accruing social capital through association. Sport networks have been seen to operate with a noticeable inability to include others from an ethnically diverse background, thus reinforcing the marginalisation and power differentials people face in other social arenas. Some connections are clearly more useful than others in terms of their ability to build bridges and open up opportunities. This has become particularly emphasised by the literature on racial exclusions, racism and sport (Hylton, 2009, Long *et al.*, 2009, Hylton, 2010). History has shown that ignoring racialised processes and formations in sport and wider society neither renders them benign nor harmless and even the creation, (re)creation and contestation of public spaces in terms of how our spatial practices structure how we experience sport/physical activity (passively and actively) is poorly understood and should therefore be problematised (Hylton and Morpeth, 2012).

Vickerman and DePauw (2012) argue that those involved in developing physical literacy throughout the lifecourse must respond to diversity in a proactive way that some in the public sector have been slow in adapting to. In a case study of BEMSport (Hylton, 2008), a black sports pressure group, I argued that BEMSport occupied a space in regional sport networks that was paradoxical; BEMSport's existence contested the discourse of equality within the public sector, which presents public sector sport as equitable in terms of the development and implementation of sports policy/practice. BEMSport's existence contests the discourse of equality within the public sector, which presents local government sport as equitable in terms of the development and implementation of sports policy/practice. BEMSport's presence highlighted the historical developments that led them to challenge the cumulative negative outcomes of public sector activity. BEMSport's story is a counter-story, a competing discourse, an alternative paradigm that situates the black experience of sport in a process that constrains as it liberates, empowers as it disempowers, includes as it excludes; all of these processes impacting

upon the environment in which physical literacy is experienced and developed. Harrison et al. (2004) are clear that 'race' and diversity are neglected in physical education and sport and they query its lack of significance in this academic arena. Though sport and leisure theorists have been more proactive in recent times they have also been criticised for such tardiness (Hylton, 2005, Hylton, 2009).

In relation to physical literacy I argue that we must continue to problematise the philosophies that underpin it to the point that it is less utopian, idealistic and politically neutral. It must move beyond relying on the politics of the reader to write 'race' and its related intersecting factors in so that its inherent philosophies incorporate the social world and couch its conception with a less theoretical and more pragmatic realist backdrop.

1 It is recommended that these papers are consulted for a more in-depth analysis of these themes.

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## Physical Literacy and its Association with Health

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*Len Almond*

### Introduction

In this article I propose first to explore the relationship between purposeful physical pursuits and health benefits, and secondly, the relevance of recent discussions on health literacy to physical literacy.

The conclusion will summarise the key messages that we can take from a discussion of the health benefits associated with purposeful physical pursuits and a clearer understanding of health literacy.

### Physical Activity and Health

In an analysis of documents that examine the relationship between physical activity and health (BHFNC, 2013a; WHO, 2010; Department of Health, 2011; Public Health England, 2013) there is very clear evidence that inactivity and sedentary behaviour are detrimental to a person's health and wellbeing. They go on to propose that the promotion of physical activity in different forms is good for a person's health and wellbeing and needs to be recognised as a key component of public health. In support of this argument there is clear evidence that getting the nation to be more active has major economic benefits (BHFNC, 2013b) and this represents a significant factor in the current austerity climate.

Yet, a recent survey by the ESRC (Farrell et al, 2013) of physical activity levels paints a very bleak picture, Professor Propper (Bristol University) says that 80% of adults fail to meet national government targets<sup>1</sup>. It is quite obvious that many adults do not recognise the value of being active in purposeful physical pursuits on a regular basis.<sup>2</sup> In the same way, the physical activity levels of children are low which indicates that most children are not getting the health benefits of appropriate physical activity. This evidence for the United Kingdom (BHFNC, 2013c)<sup>3</sup> mirrors a similar trend in other countries (WHO, 2010).

There are many ways to define health but the World Health Organisation's definition, 'a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity' (WHO, 1948) is seen as a classic example. Since then, the Ottawa Charter (WHO, 1968) has put an emphasis on health as a resource for everyday life and the Bangkok Charter (WHO, 2005) adds a qualification by recognising the determinants

of the quality of life. More recently, the Department of Health's Outcomes Framework (Department of Health, 2012) adds increasing life expectancy and the reduction of health inequalities as important outcomes.

In a discussion on health activism, Laverack (2013; p.4) identifies four elements from the definitions of health. The first is the experience of health -how it is perceived and what it means to people, the second is people's social interactions and the networks to which they belong are part of health, the third is people's capacities, capabilities and resources, and the fourth is physical functioning and the recognition that health is embodied. He goes on to say that the discourse of health has tended to be defined by interpretations of illness and disease.

This is a crucial point because the role of physical activity is usually identified in terms of preventing ill-health and treating specific conditions. Thus, the value of purposeful physical pursuits is often seen in terms of the prevention and treatment of specific medical conditions. Physical activity is seen as an instrumental tool to support preventative and therapy (treatment) programmes – the treatment of specific conditions. Therapy programmes are valuable and primary care teams need to ensure that effective programmes are in place, but, this approach alone is inadequate and we need to reconsider how the prevention message can be promoted.

There is a powerful case for promoting the idea that more people should be more active more often and of course this leads decision makers to highlight the role of a prevention agenda especially when it is linked to reducing health care costs. There is a major problem with the prevention agenda because it tends to be associated with a negative message: 'if you don't exercise regularly you put yourself at risk from acquiring a number of medical conditions which could reduce your life expectancy, constrain your ability to maintain your health at an optimal level and influence your wellbeing'. People are warned of the dangers of ill-health caused by lifestyle factors that can be avoided.

It would appear that this approach has failed because large numbers of people have not been convinced that they should become more active. If a positive message and a different image of purposeful physical pursuits is promoted, it could be possible to address the prevention agenda without the association with negative messages. There is a need for a more positive message that reaches individual people, engages their interest and convince them of the need to be more active.

In the evaluation of a workplace health project (Sport England, 2007) that promoted physical activity with sedentary adults to encourage them to become more active and maintain a commitment over a year, the evaluation revealed that the main reason for staying with the project was "I have more energy now". This represents a positive

message and a very powerful argument. The association of 'having more energy' and gaining 'a sense of vitality' with being active on a regular basis provides a key to persuading inactive adults that this can be important for their wellbeing as well as their health. The idea that engaging in purposeful physical pursuits can energise lives and enable people to feel that they have more vitality and dynamism is a positive message that may have far more currency than a message that says physical activity can reduce your risk for a number of medical conditions.

In support of this argument for a positive message, we need to promote also that a commitment to purposeful physical pursuits has the potential for enriching lives. They can widen people's perspectives about what they can do in their lives, extend their expectations of what they are capable of doing and engender a 'feel good' factor about what they have achieved. Such engagements will often be in a social context and they can lead to building new social networks and generating a sense of belonging to something that people value.

It is this involvement, I would argue, that leads to feelings of vitality, energy and dynamism and the achievement of a *wellbeing resource*. Such a resource provides also the enabling conditions for enriching lives in other ways e.g. a feeling that one has the capacity to volunteer to work with disadvantaged groups, developing other capabilities and enabling people to feel good and flourish well.

If people can be attracted to purposeful physical pursuits and develop a commitment because it energises and enriches their lives, they will find that their risk of chronic disease is reduced which is an added health value. For some people there is a further additional value because certain forms of exercise can help to restore people's physical capacity and aid recovery following ill-health, an operation or a condition that inhibits a person's normal way of life. It can also be seen in another way; people may not be able to recover the good health they once had but purposeful physical pursuits and certain forms of exercise can help them to be as good as they can be or better than they would otherwise have been.

What is the relevance of this discussion to physical literacy? Developing a commitment to being active on a regular basis and maintaining such a commitment over the life course is central to the definition of physical literacy. However, what are the elements of physical literacy that need to be considered and how can an understanding of physical literacy increase levels of physical activity so that health and wellbeing can be enhanced? In order to address these questions I would like to turn to a discussion of health literacy and draw some implications for a more complete understanding of physical literacy.

## Health Literacy

Peerson and Saunders (2009) in their paper on Health Literacy Revisited highlight the importance of healthy literacy to the health prevention agenda and health promotion. They address first the meanings attributed to literacy

such as the ability to read and write and propose that a 'literate person' is someone 'who can with understanding both read and write a short simple statement on his [or her] everyday life' (United Nations Educational, Scientific and Cultural Organization, 2005, p. 15). However, they suggest that 'literacy' can also be given a broader interpretation such as the ability to grasp meaning and develop critical judgement (United Nations Educational, Scientific and Cultural Organization, 2005). They suggest also that it can refer to a person's knowledge of a particular subject or field, such as nutritional literacy, computer literacy, cultural literacy, media literacy, scientific literacy and medical literacy and they identify papers to support their argument (p.287). Their discussion is really useful and provides a clear insight into the debate.

Frisch et al (2011) in their paper on defining and measuring health literacy say that in an exploration of health-promoting behaviour, the concept of health literacy is deemed to be a factor of major influence. Yet they suggest that ongoing discussions about health literacy reveal that no agreement exists about which dimensions to include in the concept. As a result, Frisch et al (2011) undertook a critical analysis of different examples of the literacy domains and revealed seven distinct dimensions: functional literacy, factual and procedural knowledge, awareness, a critical dimension, an affective dimension and attitudes.

Nutbeam (2000) identifies three types of these dimensions in his account of health literacy: functional health literacy (basic reading and writing skills to be able to understand and use health information), interactive health literacy (more advanced cognitive and literacy skills to interact with health-care providers and the ability to interpret and apply information to changing circumstances) and critical health literacy (more advanced cognitive skills to analyse critically information to exert greater control over one's life). There is an implication in Nutbeam's three-tiered concept of health literacy that the more advanced skills within critical health literacy will lead to greater autonomy and personal empowerment that can enhance health.

However, Peerson and Saunders (Peerson and Saunders, 2009) recognise that current health literacy concepts implicitly include motivation as a vital part of health literacy [e.g. (Kickbusch et al., 2005; Nutbeam, 2008)]. They also claim that the motivational dimension should be regarded separately from health literacy in order to explain discrepancies between the ability to engage in health-promoting behavior, and behaviour that is actually observed. In line with this consideration, attitudes and emotions should be treated as standalone dimensions rather than considered implicit parts of health literacy.

In a recent article Sørensen et al (2012) aimed to capture the evidence-based dimensions of health literacy in order to develop a more integrated model and definition of health literacy. They provide a very comprehensive table of definitions of health literacy (p.4) as well as a further table of conceptual models (p.6-7). They propose that in

recent years four understandings of literacy have emerged from the debate, the notion of: 1) literacy as an autonomous set of skills; 2) literacy as applied, practised and situated; 3) literacy as a learning process; and 4) literacy as text” (p.1).

While acknowledging that health literacy entails different dimensions, they argue that the majority of the existing models are rather static and do not explicitly account for the fact that health literacy is also a process. According to their ‘all inclusive’ definition, this process requires four types of competencies: (1) access refers to the ability to seek, find and obtain health information; (2) understand refers to the ability to comprehend the health information that is accessed; (3) appraise describes the ability to interpret, filter, judge and evaluate the health information that has been accessed; and (4) apply refers to the ability to communicate and use the information to make a decision to maintain and improve health (p.9).

They go on to say that as contextual challenges and demands change over time, the capacity to navigate the health system will depend on cognitive and psychosocial development as well as a person’s previous and current experiences. The skills and competencies of health literacy will evolve and unfold during the life course and are associated with life long learning. As health literacy develops it will progressively allow for personal empowerment and greater autonomy. In this way the process of health literacy can be seen as part of a personal journey towards improved quality of life.

Their integrated model (figure 1, p.9) provides a detailed framework that portrays a new conceptual model that illustrates the inter-relationships within health literacy. They propose that health literacy, in their understanding, should be regarded as an asset for improving people’s empowerment within the domains of healthcare, disease prevention and health promotion.

In the above discussion there appears to be some common factors. Health literacy is more than factual and procedural knowledge about health information; it can refer to a person's knowledge of a particular subject or field, but also to the development of critical judgement that will lead to greater autonomy and should therefore be seen also as an asset for improving personal empowerment that can enhance health.

## Conclusion

In order to address this topic, it was important to outline the benefits of regular physical activity in the form of purposeful physical pursuits. There is strong evidence to argue that being active on a regular basis can generate significant health benefits. It is felt that negative messages are inappropriate and there is a need for positive messages that highlight the role that purposeful physical pursuits can play in enriching lives as well as energising lives. Physical activity as therapy also has a key role in helping adults to restore their capacity in order to enhance the quality of living and enable them to participate more fully in everyday life. In order to enjoy these benefits it is important that purposeful physical pursuits are engaged in on a regular basis and therefore developing a commitment and learning to value them is a central motivation for maintaining this



engagement over the life course.

The discussion on health literacy provides insights into how we can view our understanding of physical literacy. It is very clear that critical judgement, autonomy, agency and personal empowerment (and responsibility) are important and we need to consider carefully how we recognise their significance within physical literacy. The article by Sørensen et al (2012) on an integrated model deserves our attention because it could help to refine our understanding of physical literacy.

1 However, in this case the national government targets are not the same as the UK Physical Activity Guidelines (CMO, 2011). In the ESRC survey they see the target as performing moderate physical activity on at least 12 times a month that is 8 less than the CMO report. In this case there are likely to be considerably less adults meeting national health guidelines.

2 See the article, What is the relevance of Physical Literacy for Adults? In this Bulletin for more discussion on this point.

3 See also <http://www.bhfactive.org.uk/young-people-resources-and-publications-item/373/index.html> for further information on the three other home countries.

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# Physical Literacy and Creativity – First Thoughts

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## Abstract

This paper contains some first thoughts on developing creativity as an enriching aspect of physical literacy and some considerations concerning the potential for creative activity to add further value to the quality of life, with a specific focus on childhood. The paper is structured to consider firstly the concept of creativity and secondly the related attributes of physical literacy as stated in the extended definition. It will then be suggested that making progress in respect of physical literacy can support the development of creative abilities, and, in a mutually reciprocal fashion, those learners who are becoming proficient in respect of creativity could more readily make progress in their physical literacy journey through life

## Introduction

These ‘first thoughts’ stem from years of experience of observing infants and young children at play and through gradually realising the great extent to which the young are inherently creative. Their playful lives seem to involve a perpetual round of insatiable curiosity, experimentation, trial, error and success. Learning is achieved through movement and increasing movement ability drives inquisitiveness to discover whatever can be found in the immediate and extending environment. Risk taking and testing ability to the utmost seem to be important motivators. Confidence is seen as much in acceptance of failure as in delight in achievement. As Compton (2010:p1) states: ‘Play and creativity are intrinsically linked’. These experiences of observing creativity in action prompted the idea that this is a concept worthy of nurture as an enriching aspect of lifelong physical literacy and a topic worth pursuing in further discussions of physical literacy.

## Creativity

### Scenario 1

Watching Don climb up the steps to the top of the slide in the local playground and slide down to the ground, then to run round to the steps and start again seemed to be just a great way to engage in active play. However, after several turns, he stops at the bottom and, rather than going round to the steps, he turns and laboriously pulls himself back up the slippery slide to the top and then slides down again. Next he throws a ball up the

slide and tries to catch it as it comes rolling down. His sister appears and they play a kicking and throwing game, using the structure of the slide as a goal for kicking under and as a net for throwing over and they make up rules as they go along.

## Scenario 2

Children are out playing on the grass with a collection of chiffon scarves. One child says that he has a kite and runs around, trying to keep it up in the air; another makes hers into a ball to send up and catch; a third announces; 'This is a parachute' and flies off to outer space, whilst a fourth child spreads two scarves out on the ground to make puddles for jumping into and over.

There had been no prompts to the children to play in these ways, no adult intervention to make suggestions, no stories from which to generate responses, no other players to copy, just a slide and a ball in a playground and a grassy area with a supply of scarves. These are children confidently engaged in playful creative activity involving them variously in self-expression, invention, investigation, imagination, decision-making and fun.

Before proceeding further it is worth asking the question: what is creativity? The Oxford Dictionary suggests that it is 'the use of imagination or original ideas', whereas in Wikipedia ([www.wikipedia.org](http://www.wikipedia.org)) we see that "Creativity is the ability to generate innovative ideas and manifest them from thought into reality. The process involves original thinking and then producing."

Kozbelt (2010) offers 'the four Ps' in his identification of the dominant factors of creativity, namely process, product, person and place. In addition to the scenarios above, the following example illustrates the four Ps in action. Inuit carvers of the Northwest Territories of Canada work with soap-stone rock. The carver selects a rock, hews off a piece of stone, commits his tools to the stone along with an idea and vision of what may emerge as a finished product. In the process the carver employs the skills learnt since childhood, honed and refined through years of experience, to reveal a completely original and personal product. This scenario also demonstrates the concept of 'manifesting an idea from thought to reality'.

Johnstone (in Compton 2010:p7) offers a comprehensive overview of creative development. She suggests that being creative can involve problem solving, discovery, imagination and lateral thinking. She cites Beetlestone (1998 :p2) who proposes six categories in her construct of creativity. Broadly, these involve:

- engaging creatively as a form of learning
- expression
- being productive, as in making something
- being original
- thinking creatively and problem solving
- emotional interaction between the individual and the environment

Robinson (2001: p137) states that intelligence is essentially creative and that our lives are 'shaped by the ideas we use to give them meaning'. He also reminds us that creativity is possible in 'all areas of human activity' and that it draws from 'intuitions and feelings as well as from practical knowledge and skills', involving a process of 'seeing new possibilities'. Craft (2001) suggests that creativity involves playfulness, exploration, ideas, purposefulness, problem solving and imagination, whereas Barnes (2007) suggests that the characteristics of creativity are curiosity, connection making, originality, ownership and questioning.

## Physical Literacy

The short definition of Physical Literacy focuses on physical competence, knowledge, understanding, motivation and confidence, whereas the broader definition embraces factors that can be related specifically to the development of creativity. The first of these is the statement 'D', (Whitehead 2010:p13) that 'physically literate individuals will be perceptive in 'reading' all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these with intelligence and imagination'. The statement 'E' refers to 'self-expression'.

It seems therefore that as children become more physically competent and increase in knowledge and understanding of their movement potential, they can achieve greater freedom to explore their environment more widely, can make connections and transfer movement knowledge from one situation to another and are increasingly enabled to use their intelligence, imagination, self expression and ingenuity as creative learners.

To take ownership of becoming an imaginative and creative mover requires the learner to 'move outside the box' and to be prepared to re-discover the quality of probing and exploration in movement that was a natural element of play in the early years. To have the confidence and motivation to adopt a discovery-learning approach, to be prepared to engage in 'trial and error', to have a willingness to embark on a movement experience that is flexible and to be open to change as it progresses, may present considerable challenge. Having a new idea and then drawing on the existing bank of movement experience to work with that idea, to bring it to fruition in a different form, calls for considerable imagination and tenacity and an ability to suspend disbelief. Learners thus engaged are doubtless enhancing their physical literacy.

## Developing a Model to demonstrate Links between Creativity and Physical Literacy

In the chart below (Fig xxx) the key attributes of physical literacy, are collated under the three headings of 'Movement Attributes'- to include Physical Competence, Knowledge and Understanding; 'Affective Attributes' – to include Confidence, Motivation and Self-esteem; and 'Interactive Attributes' – to include Indoor and Outdoor Environments, People and Resources. Set alongside these are charted some examples of ways in which creativity can enhance physical literacy and in the column opposite are some examples of ways in which physical literacy can enhance creativity. The arrows are



included to suggest that these are not discrete, but rather, inter-related concepts and activities.

Relationships between physical literacy and creativity'		
Maude, P. (2014) in Pickard, A. and Maude, P. (eds)		
<u>Contributions of Creativity to Enhancing Physical Literacy</u>	<u>Attributes of Physical Literacy</u>	<u>Contributions of Physical Literacy to Enhancing Creativity</u>
<p>Through tackling self-set as well as teacher-promoted creative challenges, learners can explore alternative aspects of movement vocabulary, enhance and evaluate creative experiences and thereby also gain further knowledge and understanding of physical competence</p> <p>Enabling creative learners to enhance their confidence, motivation and self-esteem through encouraging and supporting their playfulness, inquisitiveness, creative enquiry, experimentation, searching, failing and succeeding, provides increased depth to physical literacy</p> <p>Creative exploration of movement spaces, the texture of the environment, work surfaces and access to various levels, pathways, and directions of movement, enhances learners' physical literacy</p> <p>Working creatively alongside younger learners and peers as well as with older children and adults strengthens the ability to engage in social aspects of physical literacy, such as cooperation and competition</p> <p>Free, creative movement exploration of natural resources, man-made and manufactured equipment promotes extensive variety, proficiency and enrichment in the use of resources</p>	<p><b>Movement Attributes</b></p> <p>Physical Competence</p> <p>Knowledge</p> <p>Understanding</p> <p><b>Affective Attributes</b></p> <p>Confidence</p> <p>Motivation</p> <p>Self-esteem</p> <p><b>Environmental Attributes</b></p> <p>Environments - indoor and outdoor</p> <p>People</p> <p>Resources</p>	<p>Increasing movement vocabulary and enhancing skilful performance can expand potential for creative activity</p> <p>Through movement observation, through analysis of self and others and through studying movement, learners can bring greater knowledge to their creative endeavours</p> <p>Building increasing confidence engendered through skilful performance and familiarity with wide applications of movement, enhances intrinsic motivation and self-esteem generated through achievement and success</p> <p>Skilful exploration of a wide range of environments enables learners to apply related experience from one environment to another, thereby extending opportunities for the flowering of creativity</p> <p>Interacting comfortably in movement with younger learners and peers as well as with older children and adults can stimulate and strengthen the creative experience</p> <p>Having the ability to interact with a wide range of natural, man-made and manufactured resources, increases exploratory and creative opportunities</p>

For example, under the heading 'Contributions of creativity to enhancing physical literacy' and sub-heading 'Movement Attributes', it is suggested that 'through tackling self-set as well as teacher-promoted creative challenges, learners can explore alternative aspects of movement vocabulary, evaluate creative experiences and thereby

also gain further knowledge and understanding of physical competence’.

Another example from the same column but in the lower section entitled ‘Interactive Attributes’, it is suggested that ‘Creative exploration of movement spaces, the texture of the environment, work surfaces and access to various levels, pathways, and directions of movement, can enhance learners’ physical literacy’. This would be achieved through breadth of experience and increased ability to ‘read’ the environment.

Making progress in their physical literacy journey enables learners to nurture and support the development of their creative abilities. Taking an example from the box entitled ‘Affective Attributes’, learners whose confidence is strong as a result of having achieved skilful performance levels and an extensive movement vocabulary, along with sound knowledge and understanding of movement, are well prepared to ‘move outside the box’ of prior experience in order to explore new and creative movement territory. In another example from the same column, in the section entitled ‘Environmental Attributes – People’, it is suggested that ‘Interacting comfortably in movement with younger learners and peers as well as with older children and adults can stimulate and strengthen the creative experience’.

## Summary and Question

This paper is a compilation of first thoughts concerning links between creativity and physical literacy. Having established a broad definition of creativity and discussed the attributes of physical literacy as defined in the extended definition, we proceeded to explore the concept of creativity as an enriching element of physical literacy and the opportunities of drawing on all attributes of physical literacy in enhancing creativity. The paper culminates in the proposal of a model illustrating examples of the interplay between creativity and physical literacy.

Question.

Having studied the model proposed below, can you add further statements to support the links between creativity and physical literacy?

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## **Coaching without Borders: the Role of the international Sport-Coaching Framework in Promoting Physical Literacy worldwide.**

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*Pat Duffy & Sergio Lara-Bercial*

### **Abstract**

Using the definition of physical literacy proposed by Whitehead (2010) as a backdrop, this article will consider the implications of the publication of the International Sport Coaching Framework (International Council for Coaching Excellence, Association of Summer Olympic International Federations and Leeds Metropolitan University, 2013). We will argue that the education and development of suitably qualified and skilled coaches at all levels of the participation spectrum is paramount to the fostering of motivated, confidence and competent individuals who value and take responsibility for pursuing meaningful physical activity throughout their lives.

### **The International Sport Coaching Framework: Bringing Coaching to the Fore.**

All over the world, millions of volunteer and paid coaches guide the participation of hundreds of millions of children, participants, players and athletes on a daily basis. With growing appreciation of the role of coaches in society and the challenges that accompany the job, the global sport community and its partners recognised the need for a common, worldwide set of criteria to inform, guide and support the development and qualification of coaches. To this effect, the International Council for Coaching Excellence (ICCE), in conjunction with the Association of Summer Olympic International Federations (ASOIF) and the support of Leeds Metropolitan University (LMU), brought together back in 2011 a project group containing a wide representation of international sport coaching stakeholders, organisations and experts to develop the International Sport Coaching Framework (ISCF). Version 1.1 of the ISCF was released in London in August 2012 and, following a 12-month consultation period, version 1.2 was launched at ICCE's Global Coach Conference in Durban, South Africa, in September 2013. Both versions have been published by ICCE's partner Human Kinetics.

The purpose of the ISCF is 'to provide an internationally recognized reference point for the development of coaches that is flexible and responsive to the needs of different sports; countries; organizations and institutions and which provides benchmarks for the recognition and certification of coaches' (ICCE, ASOIF and LMU, 2013; p10). The ISCF therefore recognises that the context for implementation of coaching systems will vary significantly between sports, countries and continents. Nevertheless, a globally accepted

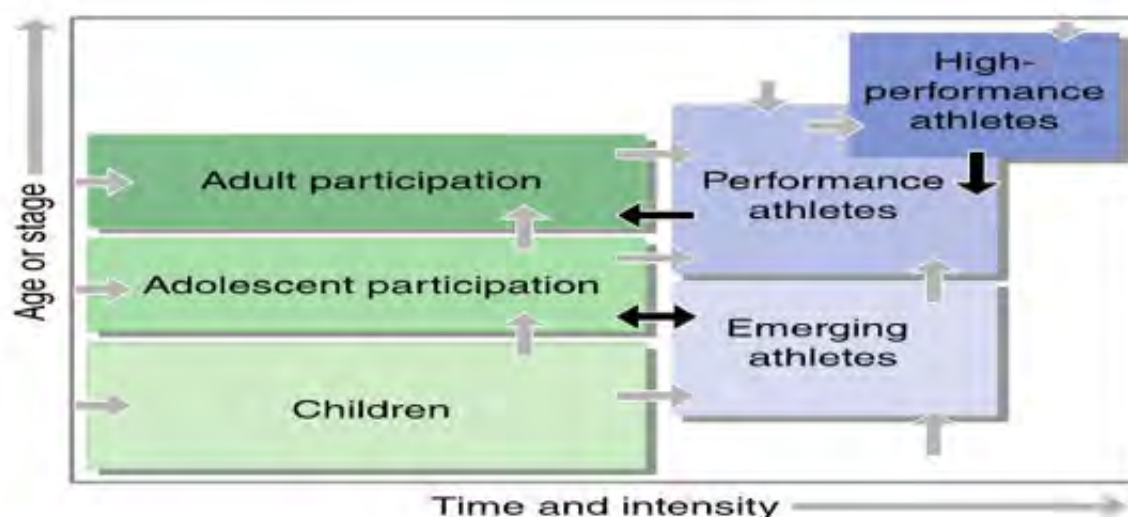
reference point provides all members of the coaching family with a common language and a powerful tool to evaluate, plan, develop and compare their systems and processes around coach education, development, deployment and employment.

### The Framework's Key Features

The ISCF emphasises that a person's engagement in sport<sup>1</sup> throughout the lifecourse follows varying trajectories underpinned by different motives, goals and aspirations. This is captured in the definition of sport coaching:

*'a process of guided improvement and development in a single sport at identifiable stages of athlete development'* (ICCE, ASOIF and LMU, 2013; p14).

Such definition implies a focus on the long-term development of the person as well as the athlete throughout the lifecourse. Based on the work of Côté (1999), Balyi and Hamilton (1995) and Lyle (2002), two main categories of sport engagement are proposed, namely Participation and Performance Sport, and six associated domains (Figure 1).



E6211/ICCE/Fig.4.1/475964/JenG/R6

Figure 1 – Sport participation spectrum and pathway (reproduced from the International Sport Coaching Framework v 1.2 (ICCE, ASOIF and LMU, 2013; p 20)

Participants and athletes in the various domains will have different motivations to take part in sport, diverse goals, needs and requirements. The obvious consequence for coaches is that in order to meet their needs, they will require distinct capabilities according to whom and where they coach. Therefore two discrete coaching categories

are defined: Participation and Performance Coaching (Figure 2).



E6211/ICCE/Fig.4.3/475986/JenG/R4

Figure 2 – Coaching Categories and Domains (reproduced from the International Sport Coaching Framework v 1.2 (ICCE, ASOIF and LMU, 2013; p 23)

Coaches, and conversely the organisations that employ and/or deploy them, are responsible for developing their capability and competencies to do the job in relation to the domain in which the coach practises.

In summary, the ISCF proposes that coaching should concern itself with both the development of lifelong participation and enhanced performance; that in doing so it can and should produce a wide array of multiple developmental outcomes beyond the acquisition of physical skills; that for this to happen, it is necessary to match coach capability to the needs and stage of development of participants and athletes; and that providing relevant and continuous development and learning opportunities for coaches should be a major goal of coaching organisations.

### Coaching and Physical Literacy: The Big Picture

Physical Literacy (PL) is defined as 'a disposition in which individuals have the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits throughout the lifecourse' (Whitehead, 2010; pp11-12). Within the context of this definition, Whitehead argues that physically literate individuals will achieve enhanced quality of life related to

the development of self-esteem, self-confidence, healthier lifestyles and more positive relationships with others. Moreover, Whitehead goes on to propose that PL is not a 'state of being' but rather a capability that has to be both developed and maintained through the course of a person's life. Most importantly though, it is the belief that PL can be achieved by all and that, in doing so, the support offered by others such as teachers, coaches, parents and peers is of paramount importance. Whitehead's conceptualisation of PL contains a great number of ideas which resonate strongly with the coaching literature.

There is no doubt that sport participation, like many other forms of physical activity (think dance, fitness classes or outdoor pursuits), has the potential to develop motivated, confident, competent, knowledgeable children, youth and adults who value and take responsibility for being physically active<sup>2</sup> (and if we dare say, develop individuals who are mentally alert). However, for coaching and sport to have this kind of impact, it has to happen in a particular way. Sport is no magic bullet (Coalter, 2012) and it has been shown, particularly with adolescent and young adults, to harvest the potential to produce both positive and negative outcomes if delivered the wrong way (Alexander, Stafford and Lewis, 2011; Côté and Fraser-Thomas, 2011). At the very least, when inappropriately delivered, sport can leave people indifferent and/or apathetic... for life.

Various authors (Côté, Strachan and Fraser-Thomas, 2008; Duffy, Muir and North, 2012; Fraser-Thomas, Côté and Deakin, 2005; García-Bengochea, 2008; ICCE, ASOIF and LMU, 2013) have recently used Bronfenbrenner's bioecological model of human development (Bronfenbrenner, 1979; 2001) to offer an explanation of the role that sport and coaching can play. In line with Bronfenbrenner, these authors propose that an individual's participation in sport happens within a bioecological niche consisting of a number of concentric layers of influence or nested systems at micro, meso, macro and exo level (from the immediate proximity to more removed, yet important influences). They also describe four interrelated components which impact on development: (a) proximal processes involving bidirectional exchanges between the individual and the context; (b) the person, with his or her existing individual characteristics; (c) the context as a multi-layered backdrop; and (d) time, consisting of the various dimensions of temporality such as duration or frequency. Together, and for every individual, these Process-Person-Context-Time (PPCT) configurations account for if and how development happens.

Using this model, it is fairly straight forward to understand the positioning of coaching within the PL jigsaw. Invariably, despite the importance of the meso, macro and exo layers of the context, a great deal of influence on the direction and outcome of the proximal processes is exerted at the microsystem level. In this layer, the interactions between the individual and any significant other in his or her immediate environment will condition the outcome of the experience. In respect of children, youth or adult participants, these significant others will include family, peers, teachers, and most importantly to us, sport coaches. Their ability to, over time, affect not only the participant, but also others around them in the microsystem, and in the outer layers of influence if necessary, is vital.

As aforementioned, Bronfenbrenner's model places high relevance on the existing

characteristics and resources of the person as key factors to determine what people will gain from their interactions with their environment. In other words, PL is not something that happens to the person, PL happens because and within the person. Such realisation puts extra value on the early experiences of sport for children and young people in order to provide them with the necessary tools to maximise their participation and to drive it throughout their life cycle. As with everything else in life, if we lay the foundation appropriately we will be able to build taller and long-lasting buildings. But moreover, it also signals the need for trained coaches who work with adults that perhaps have missed out on positive early experiences as children and young people, or those whose participation has lapsed, and need a guiding hand to help them rebuild their confidence, motivation and drive.

This led the ISCF working group to explicitly highlight, not only the need to align coach education and development with the needs and wants of participants, but to promote coaching that goes beyond the teaching of only technical skills and towards the fostering of the holistic development of the person and an intrinsic desire and motivation to be and remain involved in sport and physical activity for life.

### **Developmental Outcomes of Sport: The What, Where and How**

There is no doubt sport can have very beneficial effects for participants at many levels. However, we contend that what they actually get from it is highly dependent on the actual person, the people around him/her, the features of the context and the duration, intensity and frequency of the activity. Simple as it sounds, we feel it is very important to recognise that sport cannot be all things to all people. Otherwise we run the risk of painting every sporting experience with the same brush and creating dislocated expectations amongst participants, stakeholders, administrators and the coaches themselves, thus paying lip service to the overall experience.

In recent times, a plethora of authors and reviews, particularly in relation to youth sport, have brought our attention to the fact that personal development in and through sport should be considered from a bio-psycho-social perspective by contrast to the more traditional approach concerned only, or mostly, with the development of physical and technical skills (Bailey et al, 2010; Fraser-Thomas, Côté and Deakin, 2005; Weiss and Weise-Bjornstal, 2009). This current push has been heavily influenced by the Positive Youth Development (PYD) movement (Benson, 1997; Lerner et al, 2000) and its view of youth as 'resources to be developed, not problems to be managed' (Roth and Brooks-Gunn, 2003).

One PYD construct which has found a lot of support in sport is the 5 Cs for positive development developed by Richard Lerner and colleagues (Lerner et al., 2000). In a nutshell, young people who score highly on the areas of Competence, Confidence, Connection, Character and Caring have been shown to be less prone to engage in risk or anti-social behaviours and to be able to thrive through the transitions between childhood, adolescence and early adulthood in their way to making important contributions to themselves and to their communities. Returning to the definition of PL, it would seem that three of the Cs (i.e. Competence, Confidence and Connection) would



be paramount for the development of physically literate individuals. It is therefore plausible to assume that coaching for PYD would likely result in the development of PL as well.

As we highlighted previously, it is also important to keep in mind that, while there are many positive outcomes arising from sport participation, the literature is also rich in showing the potential for detrimental effects (Côté and Fraser-Thomas, 2011). In the UK, the NSPCC's Child Protection Research Centre produced a comprehensive report highlighting that, while most children and young people described participation in sport as a positive experience, there were worrying levels of harm reported some of which was institutionalised as part and parcel of the sporting experience (Alexander, Stafford and Lewis, 2011). This should never be so.

Ensuring that coaches understand their role from a long-term, holistic perspective and that they are in possession of a small, yet effective set of tools to allow them to bring it to life is the real challenge. A growing number of authors have written extensively about the 5 Cs in a sporting context (Fraser-Thomas and Côté, 2005; Holt and Jones, 2008; Jones et al, 2011; Côté, Strachan and Fraser-Thomas, 2008) and the concept has been practically used in a number of resources to support children's, adolescent's and adults' coaches, enabling them to offer a more holistic experience to the people they coach (Haskins, 2010; Lara-Bercial, 2012; Lara-Bercial, 2013; sportscoachUK 2011).

However, it is vital to acknowledge that people's participation in sport ranges from participating for as little as one session a week to as much as over twenty hours and is, in the main, led by lowly-qualified, volunteer coaches (North, 2009). The implications of this are far-reaching for the coach and programme developers.

### **It is about time!**

Returning to Bronfenbrenner's model (Bronfenbrenner, 2005), vital to human development is the dimension of time. The interaction between the developing person and his or her context needs to meet certain parameters of frequency and duration in order to produce any effects (hopefully positive ones!). How do we then get children and young people into sport and most importantly, how do we keep them there, how do we buy time? Richard Bailey and colleagues (Bailey, Cope and Pearce, 2013) conducted an extensive review of the literature concerning children's motivations to take part and stay involved in sport and the implications for coaching. They found five primary mediating factors: (a) perception of competence; (b) fun and enjoyment; (c) parents; (d) learning new skills; and (e) friends and peers. Yet, most importantly they highlighted the pivotal role of the coach in aligning the sporting environment to the ever evolving needs and wants of children and young people as they progress through childhood and adolescence.

Along the same lines, 'a caring and mastery-oriented climate, supportive relationships with adults and peers, and opportunities to learn social, emotional and behavioural life skills' have been proposed as fundamental features of an environment conducive to positive development in and through sport (Weiss and Wiese-Bjornstal, 2009; p7). If a mismatch occurs between children's needs and motivations and the socio-cultural

environment of sport, drop-out is the likely outcome. If children drop out of sport we have lost the battle of time and more than likely, the war for PL too.

It is highly relevant to signal that there should not be an expectation that every coach working with children and young people should put everything else (i.e. skills development) to one side for the sake of developing the psycho-social aspects or PL. This is not a case of either or, but a case of (a) trying to integrate the two in a seemingly seamless way, and (b) being able to prioritise developmental outcomes based on the needs and stage of development of the child and the context, intensity, frequency and duration of the activity. Our educated guess is that the mix will be very different for a soccer coach who only sees a bunch of 8 year old kids for 45 minutes every Saturday morning for 25 weeks of the year compared to a swimming coach who sees the same 8 year old over 10 hours a week for 45 weeks. Both coaches will have to account for the five factors elicited by Bailey et al.'s review, and create a positive environment, but how they select and bring together the components to realise this situation may be very different.

Nonetheless, with the above in mind, programme developers should carefully consider how to enhance the 'time-buying' features of the programmes they build such as coach continuity and training, appropriate levels of competition, parental understanding of and support for programme objectives, built-in opportunities for social development and the overall motivational climate.

## Closing thoughts

As we described at the outset of this article, a number of policy documents have recently acknowledged the importance of recognising the specific needs and wants of children, young people and adults in sport, the need to coach in a much more holistic way, and the associated capabilities required by coaches to do so. Most importantly though, is the fact that these policy documents have started to be translated into practical applications for coaches and coach developers in the real world. Both authors of this paper have been involved in the development of many of these initiatives and feedback from coach developers and coaches alike has been very encouraging. Interestingly, many coaches highlight the impact of these resources at an awareness-raising level, but moreover, as liberating them from the traditional, entrenched culture of what Bailey and colleagues have called the technocratic approach to coaching (Bailey et al., 2013). Help us spread the word, help us remove the borders!

*<sup>1</sup> 'In the context of this ICSSPE Bulletin paper 'sport' should be understood to cover the wide range of physical pursuits or activities available in a society ( e.g swimming, dance, gymnastics etc.) not just competitive team games.*

<sup>2</sup> For a full review see Côté and Fraser-Thomas, 2011; Holt and Neely, 2011; Weiss and Wiese-Bjornstal, 2009



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The International Sport Coaching Framework can be purchased from ICCE's publishers Human Kinetics at <http://www.humankinetics.com/products/all-products/International-Sport-Coaching-Framework-Brochure-Version-12-9255641>

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## Developing Physical Literacy through Coach Education: A Northern Ireland Perspective

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### Abstract

The Lifelong Involvement in Sport and Physical Activity (LISPA) model and physical literacy (PL) have been endorsed by Governing Bodies (GBs) in Northern Ireland through the alignment of their policies and programmes accordingly. The importance of lifelong participation in sport and physical activity for health, and the impact that LISPA has made on the development of PL in childhood are important for coach education in Northern Ireland. The following discussion will include; i) a review of research conducted with GBs to determine their inclusion of PL into existing coaching programmes; ii) the outcomes of a pilot programme for the development of PL; and finally iii) a review of Activ8 Wildcats a PL programme that up skills coaches in the community. In view of the fact that the concept of PL was new to most of the coaches it was decided to focus, initially, on just one element of this capability, being physical competence as the introduction to the work. The affective elements of the concept, particularly motivation and confidence, were incorporated where this was felt to be appropriate.

### Introduction

One of the many opportunities for developing children's PL is through sustained participation in programmes delivered by governing bodies/branches of sport (GBs), which may take place within school, club and community settings. 'Sport Matters' The Northern Ireland Strategy for Sport and Physical Recreation 2009- 2019 (Department of Culture, Arts & Leisure, 2009) supports the development of PL through coaching. In recent years GB's have been encouraged to follow the Long-Term Athlete Development (LTAD) model, (Balyi 2004), when designing and implementing their participant and coaching development strategies. Since 2006, Sport Northern Ireland (SNI), the leading public body for the development of sport in Northern Ireland (NI), has worked to evolve the LTAD model into the LISPA model to incorporate sports participation for all individuals. The LISPA model and PL have received endorsement from GB's through the alignment of their policies and programmes accordingly. The importance of lifelong participation in sport and physical activity for health, and the impact that LISPA has made on the development of PL in childhood, indicates a need to provide additional opportunities for children and young people to be active and develop the movement competence or fundamental movement skills (FMS) associated with PL (SNI, 2011). The

following discussion will include; i) a review of research conducted with GBs to determine their inclusion of FMS into existing coaching programmes; ii) the outcomes of a pilot programme for the development of FMS; and finally iii) a review of Activ8 Wildcats an FMS programme that up skills coaches in the community.

### **Review of GBs' Incorporation of PL in Participant and Coaching Strategies**

The aim of the review was to highlight the extent to which GB's have incorporated LISPA and FMS into their participant and coaching development model/strategies, and how this is evidenced through the delivery of grass roots participation programmes aimed at developing children's FMS in club and community settings. From the review, which consisted of a survey and focus groups being conducted with GB leaders and coaches (Haughey and Breslin, 2010), it was apparent that a significant amount of work had been achieved by GBs in NI to develop FMS in children through structured, professionally driven and evaluated movement skills programmes. However, the study highlighted the need for further training and support and sharing of information across GBs. To further facilitate the delivery of FMS, coaches considered that learning from others across sports, sharing of resources online, visiting other settings (e.g. school), observing coaches deliver a practical session, using peer supported learning and being aware of the curriculum being delivered in schools were all valuable. A co-ordinated approach was recommended for a wide range of stakeholders in education, sport and health when determining the design and evaluation of existing and future FMS programmes. To address the need for more FMS training for coaches, a pilot training programme was recommended and subsequently delivered.

### **Pilot Children's Coach Development Programme**

While there is a general consensus surrounding the role of multi-skill clubs (Morley, 2009) and the environment they create in contributing to the development of PL in children (Bailey, Collins, Ford, MacNamara, Toms and Pearce, 2010), current understanding of coaches' views in a multi-skill environment is not known. Lyle (2008) described the emergence of the multi-skill coaches as the most significant coaching development in recent years, reinforcing the need to focus research around this area. Therefore, a pilot FMS coaching programme was developed for club based coaches. Three sports, canoeing, Gaelic football and netball, were selected (from thirty-three funded by SNI) to participate in the pilot programme. The programme aimed to enhance the knowledge and understanding of the coaches involved in the programme on the 'how to' develop FMS of all participants involved in their sessions. The focus of the programme was the development of FMS, in addition to incorporating the 5C's of competence, confidence, connection, character and caring, and creativity (scUK – Coaching the Whole Child, 2010) which begin to look at the affective elements of PL. Key learning from this pilot would assist the future implementation of a specialist training course to enhance the promotion of PL within the sports sector in NI.

An evaluation of the pilot programme, commissioned by SNI, was conducted by the University of Ulster (Haughey and Breslin, 2012). The evaluation consisted of interviews and observations of sessions with the coaches and coach mentors on programme completion. The interviews indicated a lack of understanding from the coaches of what the term PL means. Although understanding of FMS was demonstrated, the term PL was less understood. When the term was described, volunteer coaches believed it was an important area for development. Observations of the coaches delivering a coaching session to children illustrated the need for continued support for club coaches to develop FMS to ensure transfer of learning from the programme to practical coaching. From a mentor's perspective, there were a number of barriers to the introduction of FMS into coaching sessions which included: i). Parents or other coaches asking why they are doing it as it is not sport specific ii). Coaches may aim to include all of the fundamentals in one session which may be too much with the intended focus of the session being lost and finally iii). Time/personnel constraints, i.e. if the only coach trained in the fundamentals is not in attendance then the session is likely to revert back to sport specific sessions. Collectively, these findings suggest there remains a need to provide CPD sessions and/or educational pamphlets clarifying FMS and PL, what the terms mean and how this can be introduced into traditional coaching sessions.

Efforts have been made by some GBs to tailor the Children's Coach Development coaching programme to their sport, so that links can be readily made between FMS and the sport. With the support of SNI, two GBs (Canoe Association NI and Ulster GAA) have taken steps to develop sports specific resources and innovative videos to supplement learning for coaches during and following the Children's Coach Programme. The aim of these resources is to assist coaches to integrate FMS in the sport specific setting. While many coaches have been able to obtain knowledge relating to FMS through generic modules, this integration into the sports specific setting has remained a challenge to date. Another programme in NI currently promoting PL is the Activ8 Wildcats programme.

Activ8 Wildcats Clubs are multi-skills club which operate throughout NI by local council sports development units. These clubs offer young people the opportunity to participate in sessions that actively promote the development of movement skills in a non-sport specific setting. These clubs are essential to the enhancement and development of FMS within the community setting. A series of coach development needs have been identified within the programme through a needs analysis process, supplemented by more in-depth questionnaires, focus groups and session observations (Toole, 2011). Prominent development needs identified by this coaching population relate to the coaches' knowledge and understanding of child development, specifically development of skill acquisition in younger children from FMS to sports specific skills (SSS) and motivating and communicating with children.

Informed by the needs identified by the coaching community, a series of interventions

have been developed, implemented and piloted. Formal, non-formal and informal support for coaches involved in delivery at this level via; delivery of a suite of scUK Fundamentals of Movement workshops (x4), roll-out of the 1st4Sport Multi-skills Development Level 2 qualification, co-coaching opportunities, observation and mentoring including video-based self-reflection and the development of a programme specific coaches resource (Activ8 Wildcats Resource) and associated coach orientation of this resource (Lara-Bercial, 2012). The Activ8 Wildcats resource has been designed to support coaches in terms of understanding the needs of participants within their programmes. In addition, to enhance the profile of children's coaching and support the development of coaches, SNI host an annual NI Children's Coach Development seminar. This event involves leading coach developers in the children's coaching domain delivering a programme of development opportunities for both paid and volunteer coaches.

## Conclusion

Programme development and consequential research conducted in NI over the last decade has gained a better understanding of the workforce in predisposing, enabling and reinforcing coach practice to develop the FMS of children and young people. There has been a positive influence and impact on the development of those involved in coaching as there have been opportunities for the coaching workforce to develop their skills to promote FMS and subsequently PL. For example, there has been the development of pedagogy for fundamentals through programme development (Children's Coach Development, Activ8 Wildcats, scUK Coaching the Whole Child and 1st4Sport Level 2 Multi-Skills Development in Sport) which is the driving force for coaching development in NI. However, there are challenges ahead including the need to effect attitudinal and behavioural changes amongst all stakeholders involved in promoting physical activity, which will demonstrate an understanding and appreciation of the need to develop PL throughout the life course. The transition of coaching style from one that is directive in skill/drill like activities to one that is more creative, and which guides and empowers all participants will be vital to the development of this area. A coordinated approach and acknowledgement of what each sector (education, sport and health) can provide to the development of FMS and subsequently PL will only enhance future developments in this area.

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## A story of physical literacy in primary initial teacher training and education

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Liz Taplin

### Abstract

*This article considers the importance of physical literacy in preparing primary trainee teachers to teach physical education, by focusing on the situation in England. An overview of the current situation is provided, which suggests that there are a number of factors which need to be addressed to ensure trainees are better prepared to teach physical education. Thereafter, a short methodology presenting a case for the narrative approach used in the second part of this article is followed by the story, which focuses on two fictional trainee teachers and shows how an understanding of physical literacy plays a crucial role in helping all trainees to become better teachers of physical education.*

The Office for Standards in Education (Ofsted, 2009; Ofsted 2013) reported that the teaching of physical education in two thirds of primary schools inspected across England was either good or outstanding. However, Ofsted's positivity did not extend to initial teacher training and education (ITTE), as in the same reports, inspectors recommended that more time should be allocated for physical education because subject knowledge amongst primary school teachers needed improving.

A number of sources (eg Talbot, 2007) indicate that some higher education institutions provide less than six hours of teaching for physical education. Others provide more, but do not necessarily achieve what is needed, that is: confident, knowledgeable and motivated teachers of physical education.

However, Talbot (2008) indicates the issue is not merely dependent on time allocation, stating: 'while coverage of cognitive development has never apparently been questioned within initial teacher preparation, physical development has too often been marginal or invisible' suggesting that a change of philosophy is required. However, Carney & Winkler (2008) warn the profession that until physical education is a core subject in the primary curriculum, it will continue to be marginalised during initial teacher training.

Hannay (2008) also feels it is not necessarily lack of time during ITTE that causes problems, as she found that her trainees did not have as much opportunity to observe or teach physical education as the statistics suggest. Nor did they find the positive learning opportunities they deserve on placement. Unable to learn from their qualified colleagues in school, perhaps because their role models lack subject knowledge or the motivation to

teach, or increasingly because they are required to attend planning meetings whilst their class is taken by a sports coach, it is essential that trainees find a nurturing approach when back in university. It is also essential that they are provided with a sound philosophy as to why physical education is important.

Despite unprecedented financial input in recent years<sup>1</sup> the situation does not seem to have improved. Time allocation during ITTE remains low and trainees are either influenced by their own negative experiences of physical education; or at the other end of the spectrum, by their preoccupation with sport. Either way their approach to teaching physical education is dubious before they even move into the school setting.

In July 2013, the Government announced funding specifically for primary physical education (DfE, 2013). £150 million is being made available to primary schools over the next two years, to improve the provision of physical education. The money can be used by schools in a number of ways (for example, hiring specialist physical education teachers or coaches; or paying for professional development for teachers). However, no money has been allocated to initial teacher training prompting fears that when the funding ends in two years, no real progress will have been made.

Talbot (2008) suggests that 'we need to be working towards competence and confidence in our primary workforce.' The proposal in the second part of this article is that an understanding of physical literacy will help achieve this. But first, an explanation of what is to come...

Goodson et al. (2010, p1) suggest that stories give our lives 'structure, coherence and meaning' and that the outcome of the process is narrative learning, or learning through story. And whilst Sikes (2002) warns that the use of a fictional approach can be open to accusations and that it is not a legitimate form of evidence, she then offers encouragement by stating that 'It is natural for us to make sense of our lives, the lives of others and the context in which we live through telling and hearing/reading stories' (pxii).

Clough (2002) is a proponent of the use of narrative in general and story in particular, in educational research. He suggests that fiction enables facts to be drawn from a range of situations in order to provide 'a deeper view of life in familiar contexts' and that it can 'make the familiar strange, and the strange familiar' (p8). With this in mind, the following story draws on a number of real events and characters, with the sole purpose of advocating the use of physical literacy as the basis for preparing primary school trainees to teach physical education.

## **Sandy and Ellie**

Sandy and Ellie are newly qualified primary school teachers, soon to take up their first teaching posts. Both attend ITTE at the same university, judged by Ofsted to be an outstanding provider. Both received the top grades of either 'good' or 'very good' on all of their teaching placements, suggesting these young teachers have promising careers ahead of them. Sandy will be working with a Year 1 class (five to six year olds) and Ellie will be working with a Year 4 class (eight to nine year olds). They will be required to teach all subjects in the primary curriculum, including physical education. Despite what

research (eg Hopper, 2005) indicates, both feel confident and excited about the prospect of teaching physical education, because their appreciation of physical literacy has given them a reason to teach physical education; a sense of purpose and a focus on children as individuals.

Given the perceptions with which they arrived at the start of their course this might be surprising and a look at their respective stories highlights the remarkable journey each experienced. Sandy and Ellie both completed a Bachelor of Education degree (BEd), a three year course covering subject knowledge, pedagogy, education studies, professional studies and five school placements which included gaining experience with a range of ages and in a range of settings. During their training there was an emphasis on the core subjects (English, mathematics and science), but they also had input in all of the foundation subjects. Sandy, a science specialist, received twenty hours of physical education during her course; whereas Ellie, a physical education specialist, received 170 hours of physical education plus numerous opportunities to engage in out-of-lecture-time enhancement activities directly related to physical education and children's physical activity.

Sandy came to university with a very negative attitude towards physical education and she was determined not to participate if at all possible. Her experience of physical education when she was at school was distressing and had the ultimate effect of discouraging her participation in any sort of physical activity. Raised by her mother, a single parent, Sandy moved home, and therefore school, several times during her first ten years of life. She missed out on the vital play experiences of the early years and never discovered the love of movement enjoyed by most infants (Bailey, 1999; Maude, 2001). The lack of opportunity, instruction and encouragement, all played a part in Sandy failing to reach developmental milestones (Gallahue & Ozmun, 2006). When she entered secondary school at the age of eleven, she was overweight and poorly equipped to participate in physical education lessons. She had no idea how to catch or throw in netball, nor where to stand or what to do. The teacher shouted at her and told her she was too fat to run. She was devastated and felt humiliated. From that moment on, she avoided physical education at all cost. That is until she was confronted with the subject during teacher training, when she suddenly realised that she would not be able to avoid it anymore. As she sat waiting for the first lecture to begin, she felt physically sick and she could not begin to contemplate ever being able to teach the subject in school. What if the lecturer asked her about the rules of rugby, or to do a forward roll? Everyone else looked so at ease, whilst Sandy was wriggling uncomfortably in her chair. She folded her arms and began thinking about strategies to avoid the lectures and to avoid teaching the subject when in school.

Sitting a few rows in front of Sandy was Ellie, who was given a ball as a plaything before she could even crawl. Her sports-mad parents ensured she could catch, throw, kick, swim, climb not long after she had learned to walk. Her sports-mad older brother used her for tackling practise for hours on end. By the time Ellie started primary school at the age of four and a half, she was already competent and confident in terms of being physically active – it was part of who she was. Physical education lessons; break times; and after school clubs were all opportunities to participate and she seized them with glee. Moving onto secondary school, she was selected for school teams and sport

became the main reason for going to school. Representing the school led to district and county selection. As soon as she stepped over the white line onto the pitch or court, she became fiercely competitive. For Ellie, sport was all about winning. As captain of the school hockey team, she was responsible for leading training sessions; she imposed strict rules about attending practice and she would not tolerate shirkers. She demanded loyalty and commitment to the team. Sport gave her life structure; she felt good, she knew how to win and lose; she learned to be a leader. As well as expertise in hockey and netball, Ellie was a competent swimmer, played tennis and had her trophies displayed in her bedroom. As a senior pupil, she had been responsible for helping to run the junior teams and she was confident her Sport Leader qualifications would hold her in good stead when it came to teach physical education. When it had come to choosing a specialism as part of her generic training to be a primary school teacher, physical education had been the obvious choice. As she sat waiting for the first lecture she was supremely confident that this was one subject she would find easy and she felt there wasn't much anyone could tell her about sport.

Sandy and Ellie both presented an immense challenge for the university lecturer, as neither trainee had a sound understanding of what physical education is, nor why it is taught. In their respective ways, Sandy and Ellie thought it was about coaching sport and providing an opportunity for elite performers to shine. Ellie knew how that felt and could articulate the importance of children playing sport and being competitive; but it hadn't occurred to her that some children might have difficulty engaging in physical activity; that they might not have the level of skill needed in order to be competitive and consequently that they might not feel confident. Sandy thought physical education was sport and an opportunity for those not academically gifted to show off their physical skill. She simply dreaded the idea of moving in front of a class of children and was worried about how she might have to try to run as fast as the athletic elite in her class.

There was a silent intake of breath from both trainees when the lecturer said the S word wasn't to be mentioned in the first lecture. 'Sport emerges from physical education, but it isn't going to be our focus,' she declared. Ellie looked puzzled; Sandy began to breathe a little easier. 'Does anyone know anything about physical literacy?' There was a general shaking of heads, so the lecturer explained that the aim of physical education is to help all children to develop their physical literacy and that physical literacy is about having the motivation, confidence, motivation, knowledge and understanding to be physically active throughout life (Whitehead, 2010). 'The role of the class teacher in physical education, is to help nurture every child's physical literacy and to guide them on their individual journeys.'

By the end of the first lecture, Sandy, Ellie and the other trainees, felt a mix of emotions, but mainly relief and excitement in equal measure. The practical workshop had encouraged the trainees to move for fun; to start feeling comfortable with their own bodies; to begin developing relationships with others in the group (Sherborne, 2001). A new-found shared understanding that every individual was on their own unique physical literacy journey had united the group; the concept even had Sandy and Ellie nodding in agreement. Sandy, for the first time in her life, had enjoyed being physically active; Ellie, for the first time in her life, realised that she didn't have to be in a win lose situation to enjoy physical activity.

By the end of the module, both students understood that physical education was as much for those with movement difficulties, as those with high ability. They now realised that it would be their job to ensure every child was given an opportunity to make progress on their unique physical literacy journeys. They both appreciated that progress fostered confidence, which motivated the children to be active, which created opportunities for physical competence to develop.

At the end of her course, Sandy, while looking forward to teaching physical education, was still concerned about her uncertain subject knowledge and lack of experience, but she was determined that she was going to break the negative cycle. Just because she'd had a bad experience of physical education in school, she wasn't going to impose the same on the children she taught. She understood that her Year 1 class needed to develop a love of being active and needed to gain a range of movement skills. She felt confident she would be able to guide her children on their physical literacy journeys and she vowed to show an interest in what they did at home and to encourage them to join the after-school clubs run by her colleagues. She also felt confident about being able to observe her children moving and to begin making judgements as how best she could help them, although she knew this was going to need practise. And to her utter amazement, she had started to be physically active! Most days she walked to wherever she was going and at weekends she had begun exploring the local parks.

At the end of her course Ellie was excited about a lot of things. She was excited about teaching her class physical education, but now realised that some children would need extra help and that she would need to find a way to support them. She knew she was going to need to get to know every child in order to help each individual to make progress and she appreciated that it was going to be necessary to give the children a range of movement experiences. She understood that games, or sport, on its own wouldn't be enough. Ellie was also excited about being able to run after-school clubs and to help coach some teams - she knew her expertise would be useful in this respect, but she resolved that she would run some clubs which were open to all-comers. She was also determined to become the physical education subject leader at some point, so that she could begin influencing school policy in a positive way.

## Conclusion

These stories are somewhat idealistic, but nevertheless make some key points. For every 'Sandy' there are probably tens of others who are determined not to get involved or who feel ill-equipped to teach physical education. Perhaps this is because of negative personal experience and/or too little time devoted to the subject during ITTE. There is a growing call (Carney & Winkler, 2008; Carney & Howells, 2008) for physical education specialists to work in primary schools. Teachers like 'Ellie' (once she had developed an understanding of physical literacy) could have an important role to play – they understand young children and they understand the aim of physical education. However, had 'Ellie' been unleashed in school prior to developing her understanding of physical literacy, there would have been a high possibility that she would have alienated a great many children.

Talbot (2009) urges that there is a 'need to lay the foundations for lifelong participation' and that this is the crucial role of primary physical education. Physical literacy is the framework on which to build these expectations.

As the concept of physical literacy becomes more widely understood and valued, it is increasingly acknowledged as the aim of physical education (afPE, 2008; Ofsted, 2012). This article suggests that an understanding of physical literacy can help primary trainee teachers to become better teachers of physical education. Not only does it impact on the progress children make in terms of developing their physical literacy, but it also impacts on the trainees' own physical literacy journey.

Whitehead (2010) is clear that all adults involved in children's lives need to have an understanding of physical literacy. During ITTE, the primary trainee needs to become aware that physical literacy cannot be taught, but that it has to be nurtured. They need to understand that every child is unique, that children will have different strengths and weaknesses, a range of previous experiences and a variety of learning styles. The trainee needs to understand that some children will need motivating to participate; all will thrive on being praised and encouraged; and all will thrive on appropriate challenges and feedback. The trainee needs to appreciate that every individual is travelling their unique physical literacy journey and that the role of teacher is to guide each child along the way. Crucially, the trainee needs to be aware that as one of the child's significant others, they are a role model, they need to act responsibly and need to be aware that a careless or insensitive comment could adversely affect a child for life.

The first task during ITTE is to allay the trainees' fear and to address misconceptions of physical education - an understanding of physical literacy is central in achieving this. Thereafter, the teaching and learning can focus on equipping the trainee to understand how best to nurture children's love of being physically active. Not every new teacher aspires to be a physical education subject leader; however, it is essential that every new teachers understands the value of children developing their physical literacy.

<sup>1</sup> From 2003, the Physical Education and School Sport Club Links strategy and the subsequent Physical Education Sport Strategy for Young People provided £millions in funding for a number of strands including professional development in physical education for teachers. This funding stream ended in 2012.

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## Embedding Physical Literacy in Teacher Education at the University of Bedfordshire

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*Angela Newton & Sophy Bassett*

### Abstract

This paper examines changes made in revalidation of the University of Bedfordshire's undergraduate Physical Education provision in 2010. This included embedding the concept of physical literacy to strengthen the degree's academic underpinning and to provide a reasoned ideology for sustainable physical education programmes. This particular change is the focus of the article below.

The changes made to the degree are described, particularly in terms of the structure of the first two years, including pre-course and induction activities. The subsequent impact of the changes is considered up to the present day. This includes a summary of a study conducted by university staff on year 1 games teaching.

Finally, considerations for the future are shared as we move into the final year of the revised programme.

### Introduction

In Physical Education Teacher Education (PETE) it is important to challenge student values and beliefs if we are to move the teaching profession forward. Pre-service teachers (PSTs) begin their courses with a set of values, beliefs and expectations informed by previous experiences. Their notions of the goals of physical education at the beginning of their training courses are influenced by their experiences as a learner rather than a prospective practitioner. Since Kirk (2011) has suggested that Physical Education (PE) teaching has for some time been dominated by PE-as-sport techniques, it is important as teacher educators that we support PSTs in their development of a reasoned rationale for our subject that extends beyond physical skill. This includes challenging already established beliefs and engaging PSTs in critical analysis of the subject and effective methods of delivery.

### The BA QTS Degree

The University of Bedfordshire provides one of the few remaining concurrent Physical Education initial teacher education (ITE) courses in Great Britain. This is a four year BA (honours) degree leading to the award of qualified teacher status. In 2010 the course

was reviewed and revalidated affording the opportunity to reconsider the underlying rationale for the degree. A key feature of the review was to strengthen the academic underpinning through relevant current and appropriate research.

Previously, the degree had adopted an approach to practical Physical Education that we referred to as ‘Areas of Learning’. The areas were defined as ‘Body Management, Aesthetic, Interaction, Challenge and Health’. Adopting such an approach allowed us to construct a curriculum model free from the constraints of any changes to the National Curriculum for Physical Education by successive governments. The limitation of the Areas of Learning approach was that it lacked a clear philosophical underpinning. Our discussions in 2010 centred on providing a stronger rationale for the subject. The concept of physical literacy as a fundamental goal of Physical Education (Whitehead 2006) had been established for some time and seemed to provide the philosophical platform we were looking for. At Bedford we aspire to develop teachers who are able to teach confidently and competently across a broad range of activities in line with the views of Killingbeck, Bowler, Golding and Sammon (2007) and Murdoch and Whitehead (2010). This viewpoint implies that a narrow activity base in any curriculum model will clearly limit the development of physical literacy in individual learners. A broader curriculum model will support the promotion of a variety of desirable attributes and is thus more likely to enable learners to appreciate the need for physical activity throughout the life course.

**What we did**

The revised course explicitly underpinned the practical units with a theoretical framework based on the concept of physical literacy. Members of the department unpacked the concept of physical literacy to identify the relevance of its attributes to curriculum content in school (Killingbeck et al. 2007). They considered four areas of activity and their relationship to physical literacy. Units of work containing practical areas in the first two years of the degree embedded the attributes identified in Table 1. These were ‘Reading the Environment, Interaction, Health, Physical Competence and Expression and Communication’. It was acknowledged that all activities could contribute to the development of each attribute, whilst certain activities made a more significant contribution to some of these attributes. With this in mind, practical units of work were constructed as demonstrated in the table below. Year one would look at attributes more obviously inherent in the activities whilst year two would examine the other attributes. Health would be considered in each unit. Contextualising physical literacy through specific activities, would allow the whole concept to become extended and enriched. For example the ability to interact with others perceptively and empathetically through the experiences of lifesaving in swimming, contact improvisation in dance and tactical play in games would expand PSTs’ knowledge of how pupils might develop their embodied capabilities through a breadth of activity.

Table 1: Table to show the development of physical literacy attributes across year one and year two practical units

Unit Title	Activity Focus	Embedded Attributes
Physical Literacy Foundations 1	Games, Outdoor and Adventurous Activities and Health	Interaction, Reading the Environment and Health
Physical Literacy Foundations 2	Athletics, Dance, Gymnastics and Swimming	Physical Competences, Expression and Communication and Health
Applied Physical Literacy 1	Health, Net and Wall Games and Outdoor and Adventurous Activity	Physical Competences, Expression and Communication and Health
Applied Physical Literacy 2	Athletics, Dance, Gymnastics and Swimming	Interaction, Reading the Environment and Health

### Implications for Lesson Planning

The changes made to the practical units in year one and two of the course have also influenced PSTs' lesson planning. In addition to fulfilling National Curriculum requirements PSTs are also challenged to consider planning for physical literacy. In conjunction with writing clear lesson objectives, PSTs are required to highlight opportunities to develop pupil personal characteristics by identifying which attributes might afford a particular focus in relation to the lesson aims. This contributes to Whitehead's (2011) notion of physical literacy as a disposition embracing far more than merely physical competencies.

### Where are we now?

The new degree has now been running for three years. The effects on PSTs' values and beliefs have been evident in aspects of their coursework designed to develop reflective practice. In the previous degree, there was rarely a mention of 'Areas of Learning' but physical literacy now features regularly as an element of their emerging ideologies.

### Year One Induction

To ensure that PSTs are aware of the notion of physical literacy as early in the degree as possible, the incoming year one PSTs are set a number of pre course reading tasks

accompanied by other suggested readings based around physical literacy. This ensures that they have at least some notion of the term and the language associated with it and can start to consider their own ideas of what Physical Education is. These preparatory tasks are then drawn upon in the induction week of the degree, where tasks are reviewed and discussed and links are made in both practical and theoretical activities. This also includes a one hour introductory lecture by Professor Margaret Whitehead.

## Year One Study

In order to investigate whether the underpinning of physical literacy in the degree was being achieved, members of the department undertook a study to explore how they sought to embed physical literacy in the year one generic striking and fielding (S and F) games unit within the Physical Literacy Foundations 1 unit (Bassett, Sammon and Casey 2013). In this unit, PSTs were given the opportunity to develop their understanding of physical literacy through the introduction of its key principles and philosophies and with a specific focus on three attributes, namely Reading the Environment, Interaction and Health via a Teaching Games for Understanding (TGUFU) Model. If, as Whitehead (2010) suggests, teachers are to become a significant other, both the teaching approaches and the needs of individuals should be considered. The study identified a unique set of challenges within the degree as the teacher educators had to model the TGUFU approach and embed the elements of physical literacy into their teaching to enable the PSTs to recognise the need for a blend of pedagogy with consideration of aspects of experience, understanding and interaction that are seminal to physical literacy (Bassett et al. 2013). This offered quite a challenge for the year one PSTs. Not only was their subject knowledge being developed, but also their philosophy of Physical Education was being challenged. In addition the pedagogical approaches most suitable to achieve these ends were being placed under scrutiny. Consequently, both the teacher educators and PSTs were required to teach and learn in new ways. The teacher educators had to embed the elements of physical literacy in their teaching so that PSTs understood the nuanced blend of pedagogy through the TGUFU model and the promotion of physical literacy, in the interests of motivating pupils to engage in physical activity throughout their life course.

Through analysis of reflective blogs, peer discussion and pre and post unit interviews, the three members of the department identified that through working in realistic and productive practical contexts, the PSTs gained confidence in performance, decision making, group work and creativity. They became increasingly able to link aspects of physical literacy to the modified games contexts in which they were working and understood the need to develop curriculum activities drawn from a broader generic focus on genres of games and not individual games. The PSTs also showed a developing appreciation of links between practical activities and theoretical contexts and how physical literacy could become inherent in their delivery of striking and fielding games within their own teaching. However, the study could not predict whether the PSTs would have sufficient confidence to pursue this understanding in consequent school placements.

## Year Three Assignment

The new degree has just completed its third year. At the end of the year PSTs were asked to produce a synoptic assignment that involved creating a scheme of work for key stage 3 and providing a rationale for their choice of contexts and pedagogies. It was notable that the majority of PSTs attaining marks in the good honours category cited physical literacy as part of their rationale. This has provided a degree of optimism moving forward into the final year of the new degree programme.

## Year Four Praxis

At the end of the academic year 2013/14, the first cohort will graduate from the new degree programme. As part of their final year of study, Professor Margaret Whitehead will return to give a key note lecture. She will review the current Physical Education agendas and influences, including physical literacy, in order to further challenge the students' emerging ideologies and to explore a range of alternative ideas. Following this lecture PSTs will write a final assignment that articulates their physical education ideology in the context of a PE teacher in the 21st century. This assignment will give the authors of this article another opportunity to review the impact of physical literacy on the values and beliefs of PSTs.

## Looking ahead

The full impact of the ideology underpinning the new degree will not become apparent until our current PSTs have established themselves in a teaching post. We acknowledge that the "organisational socialisation" (Lawson 1983a, 1983b), that is, the socialisation that PSTs encounter when entering their first posts, can prove more powerful than the "professional socialisation" (Lawson 1983a, 1983b) that they have been exposed to in their initial teacher education. The authors intend to track a selection of the first cohort graduating in 2014 across the first five years of their teaching. We remain hopeful that we will have prepared teachers who are inspired to make a difference.

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## Knowing, experiencing and Owning- Perceptions of Physical Literacy in young Adults

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*Helen M Hazelwood*

### Abstract

This paper begins to address the question - how do you encourage young adults to understand and apply the concept of physical literacy? Report in the paper is the way that by participating in a series of some novel activities, students hoping to be involved in sport as a career were encouraged to transform into practice knowing the theory, through experiencing and owning the concept of physical literacy.

In the second year of the three year Physical and Sport Education undergraduate degree programme at St Mary's University College Students may opt to take the Applied Physical Literacy module. The module consists of 30 hours of taught sessions and structured independent learning comprising reading and writing a reflective journal. Many of the students aspire to become physical education teachers; others hope to be coaches whilst others, who have embarked on the programme with Physical Education as their favourite school subject, are unsure how they can use it in a career. For students with such a background and aspirations some advanced form of physical literacy might have been expected by both the staff and the students themselves.

### Knowing

The module commenced with a taught session where the concept of physical literacy was thoroughly discussed and its importance as an underpinning for physical education emphasised. The idea of physical literacy as more than movement competence was explored and Whitehead's definition adopted as a basis for discussion; "a disposition acquired by human individuals encompassing the motivation, confidence, physical competence, knowledge and understanding that establishes purposeful physical pursuits as an integral part of their lifestyle." (Almond & Whitehead, 2012, p68).

Understanding of the concept was fostered by weekly taught introductions where students were asked to consider an aspect (from the above definition) of physical literacy and how they were making progress in that area.

### Experiencing

However the module was also planned with the rationale that if physical literacy is based on a monist philosophy (Whitehead 2010), then the best way to understand and embrace it is to experience it for oneself: at times going through the apprehension, enjoyment and challenges that may be experienced by the learners they will one day be coaching or teaching. Participating in this wide range of activities puts into practice the existential tenet that we are embodied beings resulting from our experiences. In recording their journey in a reflective journal students were able to review and consider their own development in Physical Literacy as a result of their experiences and record their physical literacy journey as described by Taplin (2010).

Whereas Hayden Davies (2008) described physical literacy as more than being proficient in one or a small number of physical activities Mandigo, Francis, Lodewyk and Lopez (2009) go further describing physical literacy as encompassing movement competence in a wide variety of physical activities. Almond and Whitehead (2012, p68) go further still in a definition of physical literacy stating that there are additional aspects which must not be overlooked: “the motivation; confidence; knowledge and understanding of physical pursuits as an integral part of lifestyle.”

This provided the rationale for the activities selected: there was an attempt at provision of a range of social and physical environments and also a wide range of skills to be employed. Activities included Judo, Handball, Volleyball, Parkour, Tai Chi, Street Dance, Boccia, Double Dutch skipping, Sitting Volleyball and Rowing. Sourcing activities that might not have been experienced before was deemed important in providing experienced ‘sports people’ with challenges to competence, confidence and motivation not always experienced in the sports with which they are familiar. In providing novel situations it also created learning opportunities where students could explore their ability to draw on any existing motivation, confidence and physical competence in new activities and environments. The activities also questioned some stereotypical attitudes held - that Tai Chi was just for old people for example. In participating in a new activity there was also the hope that some would continue to participate underpinning the objective of Physical Literacy of lifelong physical activity. One outcome of providing novel activities was that it was a ‘leveller’ and partially successfully dispelled the differences in physical competence, confidence and addressed the balance between the genders. Where some excelled when it came to dance others found an unexpected proficiency in double Dutch skipping.

## Owning

As young adults aged 19-30, the students are deemed by Erikson (1970) to have focussed in their adolescence on identity and for these students one could expect that many will have identified themselves as a ‘sporty person’. Thus the new activities experienced in this module may have challenged this identity. For some experts in football, rugby or netball, a non-competitive activity with no ball was a challenge to the expectations of what comprised a Physical activity. For these games players part of the enjoyment and motivation of being involved in physical activity is the socialising with other ‘sporty people’ but for those who were expert in individual or more solitary activities such as athletics and solitary training this cooperative and team work was a challenge, at



times frustrating yet at others unexpectedly enjoyable as new relationships were formed and cooperative learning was experienced at its best.

As young adults they may be considered to be acutely aware of the body image. Gallagher (2005, as cited in Whitehead, 2010, p59) suggests that physical activity impacts the “emotive evaluation of one’s own body image” and this was evident in mixed sex groups which tried out judo positions and dance moves where there was close contact- for some this was mildly embarrassing whilst for others it seemed not to be an issue. One could surmise that previous experience has filled some students with sufficient confidence not to be held back by their preoccupation with their own body image and this connotes with Whitehead’s (2010) assertion that positive experiences enhance self confidence that impacts the whole person and life beyond physical education.

“A physically literate individual will be perceptive in reading all aspects of the physical environment anticipating movement need or possibilities and responding appropriately to these with intelligence and imagination.” (Whitehead, 2010, p44). This aspect of physical literacy was especially evident in the marked change in the physical environment when rowing on the river. Some admitted to fear of capsize and getting wet. For others the fear hit when in the boat and the realisation dawned that others could impact their safety regardless of their own actions. The need for cooperation, teamwork and strict adherence to guidelines given by the coach was shocking for some who were used to their own decision- making having the biggest impact on their lives. They realised a heightened reliance on others not experienced in many other team sports. Early data analysis suggests that they considered themselves not to have demonstrated the attributes of a physically literate individual on this occasion. Responding to and synchronising with music was another notable challenge and surprised some with their inability to master seemingly simple movements and keep in time. However benefits such as working in small groups and being able to express emotion through movement helped to overcome the disappointment of not excelling immediately in an activity.

In spite of recognising the inherent risk in sports like rowing and Parkour, it was interesting that many sports people related a dislike of a direct authoritarian approach taken by some coaches. In these activities where safety was paramount a more explicit giving of instruction was deemed unpopular by some whilst for others it was regarded as providing reassurance that ‘horseplay’ was not acceptable. For many experiencing a wide range of teaching styles from expert coaches was enlightening and data suggests that it has impacted on the students as prospective teachers and coaches in a way that a theoretical understanding might not have done.

“Physically literate individuals move with poise economy and confidence in a wide variety of challenging situations.” (Whitehead, 2010, p44) so the wide variety of activities chosen gave a broad experience of a number of factors but especially physical skills. For some a new sort of physical challenge was memorable. Rowing and Tai Chi demanded mastery of very precise movements and Street dance added the element of trying to synchronise with music and with one’s group. Ball skills were required in team games like handball, volleyball and boccia and combative skills in judo. Students realised the wide range of skills needed and some recognised that they lacked proficiency in more than one or two

activities and thus this challenged their identity as a physically literate individual.

In moving from what was known (physical literacy) to what was an unknown (the new activities) student had an individual opportunity for assimilation as they made sense of what they already knew and related it to their experience so participating in transformational learning suggested by Mezirow (1997) and exemplifying the idea of knowing, experiencing and owning the concept of physical literacy.

In Boccia students tried to understand the involvement in sport for someone whose movement capability was restricted by a neurological condition. Some reported feelings of empathy as they tried to put themselves in a less autonomous situation. In Tai Chi and Judo a spiritual dimension was introduced – one could say that this is present in all sport but it was made explicit by the coaches in these two activities- and there was recognition in their movements for the need to be conscious of oneself as a whole being ,underlining the essential monist philosophical underpinning of physical literacy.

The end goal of the physical educator is to nurture individuals into lifelong participation in physical activity. Almond (in Whitehead 2010 p125) states that it is not enough merely to provide opportunities for people to engage in physical activities but it is essential to provide practitioners who can engage with people and make them love being active. Not only was this the intention in finding expert coaches for these activities but it was also the desired outcome: Nor just that students should make progress in each of the activities but that it would rekindle a desire to take part in a wide variety of activities and to love being active. To suggest some success in these areas, some of the students have taken up some of the activities and joined classes or clubs to progress their learning and others have realised that they need to widen their teaching and coaching experience of different physical activities and sports in order to embed themselves in a physically literate identity: They can be said to have been involved in knowing, experiencing and owning physical literacy.

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## Understanding the Physical Literacy Journey of Children: the Canadian Assessment of Physical Literacy

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*Patricia E. Longmuir*

### Abstract

The Canadian Assessment of Physical Literacy is a multi-faceted assessment protocol that enhances our understanding of the physical literacy journey among children 8 to 12 years of age. The child's capacity is assessed within physical competence, motivation and confidence, knowledge and understanding, and daily behavior domains to provide a comprehensive description of the child's capacity for a healthy, active lifestyle. The feasibility, validity and reliability of the Canadian Assessment of Physical Literacy have been established through 6 cycles of data collection with almost 2,000 children. Protocols and resources for administering the assessment are available at [www.haloresearch.ca](http://www.haloresearch.ca).

### Understanding the Physical Literacy Journey of Children: The Canadian Assessment of Physical Literacy

#### The Need to Enhance Physical Literacy

The concept of physical literacy encompasses the knowledge, skills, and motivation that an individual utilizes to support a physically active lifestyle across the lifespan (Whitehead, 2010; Lloyd et al., 2010). As such, physical literacy can be viewed as a journey that continues throughout the life of each individual. On a daily basis, an individual's physical literacy will vary, reflecting a constellation of factors, such as growth, maturation, education, personal choice and life experience. Given the rapid pace of change in early life, childhood would seem to be a critically important time to foster positive changes in physical literacy.

A growing body of evidence suggests that most children today are struggling to achieve optimal levels of physical literacy. Among children of school age, only a small minority achieve the minimum amount of daily physical activity recommended for optimal health (Colley et al., 2012). Physical activity declines with increasing age (Bar-Or & Rowland, 2004), in some reports as early as 3 years of age (Taylor et al., 2009), with the decline occurring much more rapidly among females (Thompson et al., 2003). The physical fitness of children is also in decline (Tremblay et al., 2010), while the burden of non-communicable diseases associated with sedentary lifestyles increase (United Nations General Assembly, 2011).

Promoting the positive development of physical literacy is dependent on the ability to accurately and reliably assess physical literacy throughout the life journey. As a multi-faceted concept, physical literacy interventions can be focused across a very wide spectrum. Most commonly to date, interventions have focused on measuring and then increasing only one component of physical literacy, such as physical fitness (Kriemler et

al., 2011), motor skill (Goodway & Branta, 2003; Logan et al., 2012) or physical activity behaviour (Van Sluijs et al., 2007; Kriemler et al., 2011). Results achieved from this approach have been decidedly mixed (Task Force on Community Preventive Services, 2001), with no single strategy identified that can consistently provide positive results across different settings and populations.

## Physical Literacy Assessment as the First Step

Interventions to enhance physical literacy would be most effective if they could be targeted to areas of deficit or factors needing additional support. For example, there are many more avenues for increasing physical activity among sedentary individuals than among their highly active counterparts. Similarly, efforts to enhance physical literacy through improvements in motor skill would be expected to have relatively little impact on individuals who are already highly skilled. Thus, the ability to assess is fundamental to both the design and evaluation of intervention efforts to enhance physical literacy.

Assessment is foundational to many fields, including health and education (Lloyd, Colley Tremblay 2010). Assessments can identify aspects of the physical literacy journey that are currently sub-optimal, and measure changes in physical literacy over time. However, the multi-faceted nature of physical literacy makes assessment a complex undertaking. An initial model for the assessment of physical literacy in children 8 to 12 years of age was proposed by Lloyd and colleagues (2010). They proposed that physical literacy be assessed via four interacting core domains: physical fitness, motor behaviour, physical activity behaviour, and psycho-social/cognitive factors (Figure 1). A high level of physical literacy would be reflected by the child's ability to apply their skills across multiple contexts, such as land, water, ice and air (Lloyd et al, 2010). Others have prioritized similar concepts as playing a key role in physical literacy, but have also emphasized the importance of factors relating to motivation and confidence (Whitehead, 2010; American Academy of Pediatrics, 2000).

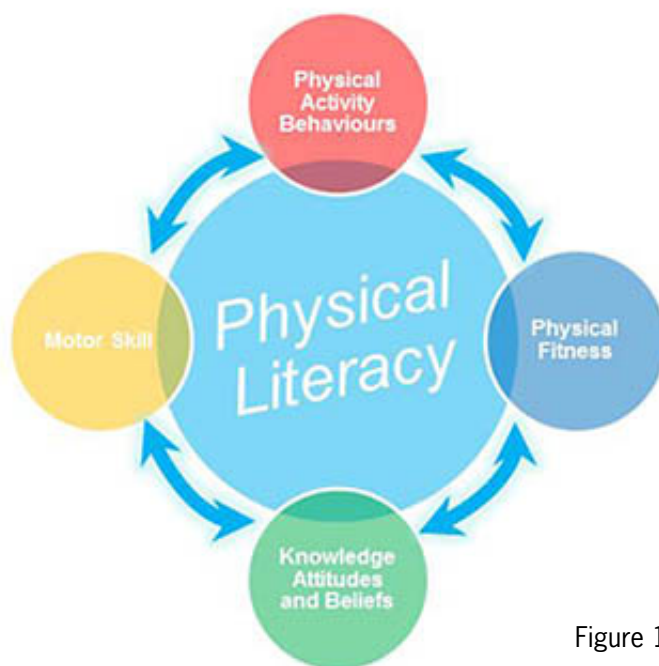


Figure 1. Four core domains of physical literacy.

Identifying the facets of physical literacy to be included is a first, but not the only step required to develop an effective assessment protocol. Once developed, the feasibility, validity and reliability of the assessment must also be verified. Validity represents the accuracy of the assessment – do the assessment tasks actually measure the intended facets of physical literacy. Reliability addresses the ability of the assessment to provide

similar results under different conditions, such as when the assessment is implemented by a different examiner or if the assessment is completed on a different day or time. While valid and reliable assessments of physical literacy components (e.g., physical fitness, motor skill) have been in use for decades, a comprehensive assessment that would encompass all of the key domains within physical literacy is essential to enhancing our understanding of the physical literacy deficits that influence the increasingly sedentary lifestyles (Troiano et al., 2008; Colley et al., 2011) of children.

## **The Canadian Assessment of Physical Literacy (CAPL)**

The Canadian Assessment of Physical Literacy (CAPL) was developed as a measure of the physical literacy of children 8 to 12 years of age. It encompasses multiple assessment procedures within four overlapping domains: daily behaviour, physical competence, motivation and confidence, and knowledge and understanding (Appendix 1). Physical competence, which is comprised of health-related physical fitness and fundamental motor skills, motivation and confidence, and knowledge and understanding are the overlapping domains at the core of the model. Daily behaviour is a more global concept that encompasses and interacts with the core domains; it both influences these domains and is influenced by them.

The development of the Canadian Assessment of Physical Literacy ([www.haloresearch.ca](http://www.haloresearch.ca)) occurred over 6 research cycles that were completed between 2009 and 2013. In total, components of the CAPL have been completed by approximately 2,000 children ranging from 6 to 15 years of age (Appendix 2). During the final phase, complete CAPL data were collected on 715 children (57% female) in grades 4, 5 and 6 (mean age = 10 ± 1 year; range 8 to 12).

The CAPL is distinguished from other methods of evaluating physical literacy by the research documentation of the CAPL protocol development and evaluation. The feasibility, validity and reliability of the CAPL protocols when administered by research staff to children in grades 4, 5 and 6 have been established (Longmuir et al., 2013). The validity of the CAPL assessment results for these students, within each domain, have been established relative to physical literacy ratings provided by teachers. The validity of the CAPL model of physical literacy assessment was established through a Delphi expert review process (Francis et al., 2013). The reliability of the assessment protocols has been established between different examiners, within each examiner, and for assessments conducted over short (4 days or less) or longer (8 days or more) intervals (Longmuir et al., 2013). Thus, researchers and practitioners can be confident that the CAPL assessment results will accurately identify a child's current level of physical literacy.

The CAPL is a multi-faceted assessment that incorporates multiple measures within each domain (Appendix 3). In calculating an overall physical literacy "score", the domains of daily behaviour and physical competence are weighted more heavily than the domains of motivation and confidence or knowledge and understanding. This differential weighting was recommended through a Delphi expert review process (Francis et al., 2013), primarily based on the rationale that the daily behaviour and physical competence domains rely primarily on objective measures of performance. In contrast, the motivation and confidence and knowledge and understanding domains rely on the child's self-reports of their feelings, perceptions, knowledge and understanding. It was the opinion of the Delphi experts that the factors that cannot be directly observed, and may be more prone to reporting bias, should receive less weight when calculating the total physical literacy score.

The CAPL was developed with the intention of providing researchers and practitioners with an accurate and

reliable assessment of a child's physical literacy. Now that development of the assessment protocols has been completed, detailed instructions (manual and videos) for conducting the CAPL are available, at no cost, on the web site of the Healthy Active Living and Obesity Research Group of the Children's Hospital of Eastern Ontario Research Institute ([www.haloresearch.ca](http://www.haloresearch.ca)).

Within the CAPL, daily behaviour is assessed primarily through pedometer step counts of daily activity measured over one week. Self-reported screen time and sleep behaviour are also incorporated into the daily behaviour domain score.

The physical competence domain incorporates measures of health-related physical fitness and fundamental motor skill. Health related fitness evaluates aerobic endurance (PACER shuttle run (Scott et al., 2013)), muscular strength (grip strength (Tremblay et al., 2010)), muscular endurance (plank hold (Boyer et al., 2013b)), flexibility (sit and reach (Tremblay et al., 2010)), and body composition (height, weight, waist circumference (Tremblay et al., 2010)). Fundamental motor skills are evaluated through the completion of an obstacle course, with both the quality of each skill and the overall time for course completion contributing to the assessment. The obstacle course enables the evaluation of skill performance in a dynamic format that is more similar to childhood physical activity with peers than more traditional motor skill assessments that evaluate each skill in isolation (Boyer et al., 2013a).

The motivation and confidence domain assesses the child's self-perceived adequacy and predilection for physical activity (CSAPPA sub-scales (Hay, 1992)). It also asks children to report on the perceived benefits of physical activity, the importance of barriers to physical activity, and their skill and activity levels compared to their peers (Garcia et al., 1995). The assessment of knowledge and understanding was grounded in Canadian curricula for physical and health education. A series of questions assess the child's knowledge of recommendations for daily activity and screen time, appropriate use of safety gear during participation and effective methods of enhancing skill and fitness. The child's understanding of the meaning of key concepts, including cardiorespiratory fitness, muscular strength and endurance and health, are also evaluated. The child's understanding of the application of these concepts in daily life is evaluated through the completion of a short paragraph about physical activity, exercise and fitness. Finally, children are asked to indicate their preferred leisure time activity from a list of active and sedentary pursuits (manuscript on the development and testing of the knowledge assessment is in preparation).

## Future Directions

The availability of the Canadian Assessment of Physical Literacy provides researchers and practitioners with a reliable and valid assessment of a child's physical literacy journey at a particular point in time. Considering the child's performance on each assessment task, and combining individual items to calculate domain scores for daily behaviour, physical competence, motivation and confidence, and knowledge and understanding will provide a snapshot of the child's physical literacy strengths and weaknesses. Thus, assessment results may be used by practitioners as the foundation for education or training sessions to enhance physical literacy. Sequential assessments can be used to evaluate the impact of education/training on specific aspects of physical literacy or the child's overall performance across multiple domains. Ultimately, such evaluations combined with revisions to the education/training sessions will lead to greater intervention effectiveness and enhanced childhood physical literacy.

Although the availability of the Canadian Assessment of Physical Literacy represents a substantial step forward



in our ability to monitor the physical literacy journey during childhood, much remains to be done. The feasibility, validity and reliability of the CAPL has been established only in children from 8 to 12 years of age. Preliminary data collection indicates that the CAPL may also be suitable for children as young as 6 years of age or as old as 15 years, but refinements are likely required in order to optimize the assessment across this broader age range. Specifically, the assessment of knowledge and understanding needs to be adjusted to suit the expected knowledge at each age. The format for administering the motivation and confidence and knowledge and understanding assessments (currently done via questionnaire) will need to be revised for use with children who do not yet read. The obstacle course motor skill assessment is also likely to require revision to suit the more advanced skills required for continued involvement in physical activity with peers during adolescence.

Currently, research is being completed to build on the CAPL materials available to date. One project is evaluating the CAPL manual and training videos to determine their effectiveness in enabling researchers and practitioners to accurately implement the CAPL protocols and effectively interpret the results obtained. A second project is developing a physical literacy screening assessment. The goal is to enable leaders without specialist training in physical literacy assessment to easily and quickly identify those children who are in greatest need of additional physical literacy support. Partnerships with leaders in the recreation, education, allied health, coaching and healthcare sectors will ensure that the physical literacy screening assessment has broad applicability so that the benefits of physical literacy education/training can be provided to all children, including those who are not currently engaged in traditional sport or recreation programmes.

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## Research into Assessing Physical Literacy in Northern Ireland

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### Abstract

This article outlines the findings of a research project and a follow-up study commissioned by Sport Northern Ireland relating to the development of an assessment tool for physical literacy. A parallel development, namely the creation of physical literacy co-ordinators, is discussed in a later paper in the Bulletin within the section Physical Literacy Across the World. The discussion concludes with a summary of the recommendations of a cross-sectoral Physical Literacy Task and Finish Group which highlight how considerably more resources are required to develop assessment indicators for PL and to further advocate the importance of PL.

### Introduction

A literature review commissioned by Sport Northern Ireland revealed findings which suggested that if physical literacy (PL) is developed in childhood it will have the potential to increase the degree to which individuals undertake regular health-enhancing physical activity throughout their lifespan (Delaney, Donnelly, News & Haughey, 2008). The review further recommended the development of an assessment tool for PL within the context of current and future PL projects in NI and suggested a number of proposals that would assist in its development. In accordance with these recommendations, Sport Northern Ireland commissioned a Research Partnership Team<sup>1</sup> to design and pilot an appropriate assessment tool for PL. The Research Partnership Team subsequently developed a multi-component assessment tool which aimed to assess psychomotor and affective domains by adapting existing tools from PL programmes and other sports.

### The Assessment Tool

Movement competence was assessed by observing children performing ten motor tasks. The tasks assessed three core motor skill components namely locomotor, body management and object control skills, and were consistent with Council for Curriculum, Examinations and Assessment's (CCEA), (2007) guidance for physical development and movement<sup>2</sup> in the Foundation Stage (Years 1 and 2, aged 4-6). Seven of the tasks were defined as 'discrete tasks' and three as 'rich tasks'<sup>3</sup>. For each skill a measurement scale was adapted from existing motor assessment tools including Bruinink's (1978) Test of

Motor Proficiency and Henderson and Sugden's (1992) Movement Assessment Battery for Children, which focused on limb positioning, balance and fluency of movement. Children's self-perceptions and attitudes towards physical activity and sport were also assessed using modified versions of Harter's (1985) Self-perception Profile for Children and Brustad's (1993) Children's Attitudes to Physical Activity Scale. Once developed and pilot tested<sup>4</sup>, the tool was used to assess the aforementioned motor competencies, self-perceptions and attitudes of children who had received a structured PL programme, compared to children who had not (Breslin et al., 2009). A representative sample<sup>5</sup> of schools within NI who received a structured PL programme (n=5) and those who did not (n=5) participated in the research in October, 2008.

## Results

Within the motor competence tests, the findings showed no differences between children who had received a structured PL programme compared to those who had not. However, a significant school effect was revealed, as some schools despite the PL intervention scored higher than others in motor competence. All children showed similar positive attitudes towards physical activity, while those who received a structured PL programme showed higher levels of self-perception, suggesting that the psychological components of a PL programme may be impacted while motor competence requires more time to develop. This is an interesting finding for the design and delivery of PL interventions as it indicates that positive effects on motor competence may not be immediate and may require extended practice. These findings correspond with the relevant provisions of the NI Primary Curriculum (CCEA, 2007) for the Foundation Stage which state that "Physical Development and Movement is about experiencing and developing a range of fundamental movement skills" (p.43). The wording of this guidance indicates an expectation that children leaving the Foundation Stage will have developed and experienced fundamental movement skills rather than acquired or mastered them. The curriculum further acknowledges the importance of affective development by stating that "Physical development helps children gain confidence and self-esteem and enables them to feel the benefits of being healthy and active" (p.43). Arguably, these findings suggest teachers of PL programmes are following this guidance by focusing on affective development in addition to the acquisition of motor skills.

## Discussion

The researchers highlighted some of the limitations due to the cross-sectional nature of the study, making recommendations that further investigations incorporating a pre-test, midpoint and post-test into the study's research design are required to give a more accurate indication of the causal effects of a structured PL programme on children's development (Breslin et al., 2012). Notwithstanding these limitations, the findings do give some indication that children's experience of a structured programme results in higher levels of self-perception that could be fostered further in the design of any future interventions. The findings from the study, particularly the school effect, highlighted that perhaps the ethos of the school's governance towards physical activity, PE and PL may

in part be the reason why some schools are more likely to have 'physically literate' children compared to others.

In light of the apparent school effect on children's motor competence outcomes, follow-up research investigated whether the ethos of the school could be a predictor of the psychomotor component of PL (Breslin et al., 2010). This study adopted a qualitative approach wherein semi-structured, face-to-face interviews<sup>6</sup> were conducted with eight of the ten primary school principals and eight of the ten teachers from the schools involved in the original PL pilot study. From the interviews, it was not clear that a single factor alone could predict which schools would perform highly in the motor competence component of PL. However, it was evident that when some aspects of PE and school sport were present, positive outcomes could be anticipated. For example, the physical resources available to the schools may have played a part<sup>7</sup>. The findings also indicated that principals were supportive of PE and school sport irrespective of their personal training and involvement in physical activity and sport<sup>8</sup>. Principals also supported the view that parents, volunteers, the local community, local clubs and governing bodies of sport had a role to play in fostering a positive learning environment in PE and sport, and that this contributes to the vibrancy of the subject in the school. Interestingly, in terms of initial teacher training in PE, none of the teachers considered themselves to be a specialist and all considered that their initial training was insufficient in preparing them for the delivery of PE. However, previous teaching experience, in-service training through attendance at ELB courses, support from their PE co-ordinators and observing sports coaches delivering sessions in their schools were all seen to be beneficial. Teachers had a positive view of the assessment of PL, but did stipulate that the method and administration of the assessment should be manageable and should reflect the demands of assessment elsewhere in the curriculum.

## Conclusion

Following the completion of the PL Research Report, a cross-sectoral PL Task and Finish Group<sup>9</sup> was established to review<sup>10</sup> the main findings and compile a list of recommendations (PL Task and Finish Group, 2009). A key recommendation was that the term 'assessment indicators' (of progression) should be used rather than 'assessment tool'. There was consensus that these indicators should be an enabling resource as well as an indicator of performance to ensure that both the assessor and the child can be informed of where they are at, where they are going and what is required for a child to progress to the next level. To achieve this, appropriate use of formative and summative approaches was advised. Members acknowledged the range of assessors and recommended that two types of assessment indicators should be developed simultaneously for use by specialists/researchers in large-scale, population based studies, and also practitioners, including non-specialists, for use on an on-going basis 'in the field'. Congruence between the two types of assessment indicators should be maintained where applicable and appropriate training should be provided and resourced. To reflect the holistic definition of PL, the group considered that the assessment criteria applied during the pilot project should be extended to include cognitive development. The final assessment indicators, should encompass psychomotor, affective and

cognitive domains<sup>11</sup> and be validated and promoted by a range of stakeholders from various disciplines representing education, sport and health sectors.

The importance of agreed terminology and a standardised approach within and across all organisations, policies and practices was reinforced by members. In addition, to assist with the promotion of PL, partners should continue to advocate the importance of developing and assessing PL within their organisations and also when working with other agencies. The Group recognised that the production, publication and dissemination of a general information note on PL would perform an important advocacy role. Therefore, members subsequently created an information note, entitled “Developing Children’s Physical Literacy”, which was circulated to all schools and national governing bodies of sport in NI.

The preceding discussion acknowledged the significant developments in relation to the assessment of PL, however, the recommendations of the PL Task & Finish Group highlight how considerably more resources are required to develop assessment indicators for PL and to further advocate the importance of PL.

<sup>1</sup> The Research Partnership Team represented the collaboration of established academic and applied researchers within two of Northern Ireland’s leading universities - The University of Ulster, Jordanstown and Stranmillis University College, Belfast.

<sup>2</sup> Physical development and movement is one of six areas of learning identified in the Northern Ireland Primary Curriculum for the Foundation Stage. In Key Stage One and Two, the name of this area of learning is physical education.

<sup>3</sup> The discrete locomotor tasks included the standing broad jump and jump-half turn, while the discrete object control tasks included the over-arm throw, kicking a ball, trapping a ball and catching a ball. The rich object control tasks were more complex, being designed to assess the ability of children to apply basic skills to more challenging situations, and included discrete tasks embedded in a simple game, ‘drill’ or sequence of movements. The rich tasks included the catch and throw and trapping and kicking a ball. The discrete and rich body management tasks were the balance on one foot and log roll, respectively.

<sup>4</sup> In June, 2008, the motor and affective components of the assessment tool were pilot-tested with a group of year 3 children in a primary school in County Antrim to ensure the suitability, validity and reliability of the tasks and questions.

<sup>5</sup> The total sample (n=177) was identified by the Research and Statistics Branch of the Department of Education for Northern Ireland (DENI). 107 participants had received a structured PL programme and 70 participants had received a non-structured PL programme.

- 6 The content of the interviews was digitally recorded, transcribed and a thematic analysis of the interview content was performed.
- 7 The schools that achieved the top three rankings for motor competence each had a school hall which was used exclusively for PE and other school events and had separate dining halls.
- 8 That is, some principals may or may not have been involved in sport or regular physical activity but all still demonstrated and maintained a positive view of the importance of children participating in and developing through the subject. This was articulated by their view of the importance of having a PE co-ordinator in the school and supporting the co-ordinator's role.
- 9 The Physical Literacy Task & Finish Group was convened by Sport Northern Ireland in August, 2009, and included representatives from Sports Coach UK (SCUK); Association for Physical Education (AfpE); Coaching Ireland; Education & Training Inspectorate (ETI); Northern Ireland Inter-board Panel for PE & School Sport and Council for Curriculum, Examinations & Assessment (CCEA).
- 10 An independent peer review of the Research Report was also conducted and presented to the group for consideration by Dr Margaret Whitehead in September, 2009.
- 11 The psychomotor indicators will consist of a range of representative fundamental movement skills that can be performed and applied in a variety of settings. Self-esteem, confidence, intrinsic motivation, self-perception and attitudes will be included in the affective indicators. The cognitive indicators will assess knowledge and understanding (Physical Literacy Task & Finish Group, 2009).

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## Physical Literacy in Wales – the Role of Physical Education

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*Paul Rainer & Judith Davies*

### Abstract

Since 2001 the Welsh Government and Sport Wales have articulated that physical literacy is a clear focus of both physical education and physical activity strategy. Physical education (PE) because of its accessibility by young children is well positioned to contribute in establishing environments that contribute to physical literacy as an outcome. However, integral to this will be the need to establish high quality learning opportunities in PE. Indeed PE teachers' pedagogical methods can significantly influence young children's attitudes and disposition to physical activity. Therefore the aim of this paper will explain why, and how, such environments are being created in Wales to ensure that physical literacy is embedded within young children's physical education in the hope that lifelong participation in physical activity be fulfilled.

### Physical Activity in Wales

In spite of the growing evidence highlighting the importance of physical activity to young people's health, there continues to be a growing concern about the activity levels of young people (Fairclough and Stratton 2005). However, although the importance of physical activity to young children has been widely acknowledged, a number of barriers and challenges exist that prevent children actively engaging in the current United Kingdom (UK) recommendation of an hour per day of physical activity on most days of the week (see Department of Health 2004).

Currently in Wales only 35% of girls and 53% of boys meet these recommendations and participate in 60 minutes of physical activity on 5 days or more per week. Furthermore, of the adolescent population, 34% children are recognised as overweight or obese and 19% obese (Welsh Government 2012). Significantly, there is also a drop off in participation with age - fewer young people participating beyond the age of 15 years and girls participating less than boys. (Sport Wales 2010). Of concern, is the belief that physical activity patterns established in childhood continue into adult life. (Telama 2009) This makes the promotion of physical activity in young people an important endeavour. Current statistics with respect to young people are worrying. Indeed, the adult population continues this worrying trend, with 59% of adults overweight or obese, 23% obese and only 29% meeting the recommendations of physical activity on 5 days or more a week (Welsh Government 2012). This bleak picture would suggest that initial experiences and

exposure to environments that provide physical activity opportunities for children are critical; that is if we are to ensure young children are physically active for the lifelong.

## The Role of Physical Education

Therefore, the role of schools in providing an initial opportunity to positively influence levels of physical activity, and in doing so contribute to lifelong physical activity habits is unquestionable, and yet this potential has remained largely untapped (Wechsler and Devereaux 2001). Indeed, Physical Education (PE) is commonly regarded as the major vehicle for the promotion of physical activity in schools, and recent studies have suggested that high quality PE programs can help maintain initial positive positions, thus resulting in increased physical activity (Thompson, Rehman, and Humbert 2005). However, despite the benefits of a high quality PE programme, Kirk (2013) has suggested that PE has become institutionalised to meet the school needs, rather than a child-centred approach, and in doing so, PE teachers *'have never achieved their most cherished aspiration, that young people would as a result of their physical education experience engage in lifelong physical activity'* (p. 2).

Therefore, the future of Physical Education is currently an issue of much contentious discussion and as we move into the 21st century, there is a strong push for a change in both the content and the delivery of the PE curriculum (Green, 2002). As an outcome of this, there may exist an opportunity for PE to be constructed differently and allow the subject to realise both its intrinsic values and also embrace aspects of intellectual endeavour, higher order thinking skills and social interaction. In recognition of this PE *'has the potential to contribute to the achievement of a range of educationally beneficial outcomes for students, across a range of domains'* (Bailey et al 2006). Nevertheless, for PE to realise its potential to achieve beyond just the physical domain, it will need to consider alternative pedagogical models, rather than the *'one-size-fits-all'* form that commonly encompasses traditional PE teaching.

An emerging concept that could be considered as a pedagogical model - Physical Literacy (PL), has the potential to support this re-conceptualisation of PE and *'re-visit the enduring conundrum of physical education's situation in the curriculum'* (Kirk, 2013; p.2) and indeed, promote its status to that afforded the core subject areas. Essentially, the concept promotes the development of movement competence to enable children to develop and apply motor skills to various contexts in order to develop an understanding of the physical self in space, time and direction (Marsden and Weston 2007). The concept encourages an existentialist, monistic perspective in which the body and mind inextricably combine together to effect movement that contrasts sharply with the Cartesian, dualist perspective whereby the body is simply an object to be manipulated for athletic purposes; a perspective so prominent in traditional methods of teaching PE. In considering the idea and importance of PL, this might provide an opportunity to re-think the educational value and structure of physical education and to evaluate how National Curriculum PE can best be implemented or re-conceptualised (Haydyn-Davies

2005).

Currently there exists very little knowledge or application of how physical literacy is to be implemented into school physical education (PE) curricula or sport and physical activity programmes. Significantly, a physical literacy curricula for the Foundation years, Key stage 1 (KS1) and Key stage 2 (KS2) should make a positive contribution to the overall National curriculum goals and prepare young children for the challenges and expectations of lifelong physical activity.

### Physical Literacy and Welsh Policy

In Wales the Climbing Higher National sport and physical activity strategy (Welsh Assembly Government 2006 p. 18) on its inception reported of the need to: *'ensure that, in the process of personal development, the acquisition of physical literacy is as important as the development of literacy and numeracy skills.'* To achieve this, the strategy recognised that creating environments that encouraged 'play' would be critical and highlighted: *'Encouraging play as an essential component for healthy development and a foundation for Physical Literacy'* (WAG 2006; p.16). The most recent Sport and Physical Activity strategy produced by the Welsh Government (Creating an Active Wales 2009) has clearly recognised the crucial role that physical education will contribute in supporting the concept of physical literacy. The strategy reported that: *'The provision of high quality Physical Education and the effective delivery of Physical Literacy is essential for young children to have the skills and confidence for lifelong participation in sport and physical recreation'* (p.34). To achieve this, the Welsh Government emphasised that it would: *'prioritise interventions that encourage the development of physical literacy and participation in physical activity by the least active'* (p.35).

More recently, A Vision for Sport in Wales (Sport Wales 2010, p. 12) reiterated that the Welsh government prioritised young children's physical activity and that: *'every child and young person is provided with the skills and confidence from an early age to be physically literate through high quality, engaging sporting opportunities.'* In addition, the Sports Wales Vision (p.31) articulates of the requirement that: *'Every child and young person is provided with the skills and confidence from an early age to be physically literate through high quality, engaging experience. To achieve this we believe that physical literacy needs to be given the same status in schools as Literacy and Numeracy as outlined in Assembly Government policy.'*

At its core the concept of PL would suggest that the promotion of physical activity throughout the life-course for all, is its prominent message and importantly this should be seen as the clear message that is articulated through Physical Education and school sport in Wales. The Physical Education School Sport participation survey (Sport Wales 2009; p.24) reported that: *'Physical education in schools, delivered through curricular and extracurricular activity, can perform a crucial role in developing physical literacy and*

*sports literacy, as well as allowing access to those who might have become disillusioned about physical activity*'. In doing so the vision articulated by Sport Wales is to ensure that all young children are provided with the *'Skills for a Life in Sport'* and that *'every child and young person is provided with the skills and confidence from an early age to be physically literate through high quality, engaging sporting experiences'* (Sport Wales 2010; p.31). As a result, a number of initiatives implemented through Sport Wales, in particular through the Physical Education and School Sport programme, have clearly recognised the opportunity to embed and encourage a teaching environment that *'fosters'* the development of PL. It is re-assuring to acknowledge that Sport Wales' policy recognises that PL be envisaged through both PE and community sport and although there are some issues with the ambiguous interpretation, a physically literate nation is clearly the intention of the Welsh Government.

### **Physical Literacy and Physical Education and School Sport**

The role of physical education cannot be underestimated and having qualified PE teachers deliver regularly-scheduled classes will increase the chance that a quality program will be delivered and that their students will become physically literate (Mandigo, 2010). In an attempt to encapsulate the very essence of the concept of PL there have been a number of examples of good practice implemented primarily through the Physical Education School Sport (PESS) initiative in Wales. In Wales, the Foundation Phase (Play to Learn, KS1) and Dragon Challenge (Multi-skills, KS2) have encouraged teachers to foster positive learning environments that encourage a child-centred approach and champion student voice. Furthermore initiatives, such as *'keeping learning on track'* and *'the PE talking tool-kit'* have encouraged both staff and pupils to embrace an environment that supports PL. More recently the Sport Physical Activity Task Force has submitted recommendations to Welsh Government regarding a Physical Literacy framework for Wales in an effort to ensure that PL is clearly an integral part of physical education.

### **Physical Education School Sport - Wales**

The introduction of PESS in 2001 was established as a result of a task force report (Welsh Government 2001) outlining the key actions to raise both the standards and high quality of PE in Wales. In an attempt to ensure that the concept of PL is reflected within teachers' PE delivery, the PESS programme has subsequently aligned the outcomes of High Quality Physical Education (Department for Education and Skills, 2005) with that of the concept of PL. In doing so, the intention has not been to propose PL as an alternative to PE, but to recognise PE as a curriculum subject area with PL as the outcome of a high quality PE environment. Therefore, most school PE staff and pupils, as a result of Physical Education and School Sport (PESS) policy in Wales should be able to readily acknowledge the outcomes of high quality PE and therefore if their pedagogy supports this, then PL should always be the outcome of their teaching. Consequently, pedagogy that reflects high quality PE is not necessarily related only to what is taught but also includes creating an environment that supports many of the

outcomes identified as integral to HQPE (Commitment, Knowledge and Understanding, Confidence, Competence, Problem solve, Enjoyment, Positive attitude) (Ref). In aligning work to Whitehead's (2010) current definition of PL being: *'the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical activities throughout the life-course'*, PE teachers need to ensure that appropriate pedagogy is evident in their teaching.

### **Foundation Phase – Play to Learn (Key stage 1)**

Whitehead (2010) has recently argued that physical literacy is not an end-point but should be envisaged through a 'cradle to grave' concept. It is an evolving journey unique to each individual and should therefore be developed throughout the life-course, although its origins are clearly founded within primary school physical education. It is well documented that promoting participation in PE and school sport upon entry to secondary level education is too late (Jess et al., 2007) and that the primary years are the 'skill hungry' years (Seedfeltd, 1980) and children of this age are very receptive to environments that both encourage and support development of physical competence.

Consequently, in recognition of this Sport Wales established a child centred, play-based learning continuum for children aged 3-7 years through the advent of the Foundation Phase (2008) and this has provided much impetus for those who advocate a physical literacy approach. A key aspect of the Foundation phase is a holistic educational approach, which advocates indoor and outdoor learning environments that are child initiated to support and promote discovery and independence (DCELLS 2008). Traditionally PE has been concerned with the development of motor skills and fundamental movement concepts (Doherty and Brennan 2008; Gallahue and Ozmun 2002) and these have been widely acknowledged as integral to high quality PE, although often alarmingly mistaken ambiguously to represent PL. Such an approach contributes little towards self-development and self-realisation of the individual and compartmentalises and de-contextualises their experiences in movement, physical activity and sport. Nonetheless, PE is more than the ability to demonstrate competency in movement; essentially it promotes the notion of 'learning to move and moving to learn' (Doherty and Bailey 2003, Pickup and Price 2007). In other words 'how we learn' and 'what we learn' are both integral to the pedagogy that is employed by PE teachers.

The advent of the 'Play to Learn' programme in Wales has provided much impetus and opportunity for teachers to embed the principles of physical literacy throughout their teaching. Although 'Play to Learn' does not implicitly focus on 'Physical Literacy' the emphasis is focused on creating environments that aid the development of fundamental movement skills, movement competency, problem solving, developing motivation and confidence; such that good teachers create a disposition in children as a result of positive and rewarding experiences in physical activity. Indeed, the role of the teacher as suggested by Maude (2001) is to create 'enabling environments', an opportunity for young children to play and extend their learning beyond recreational involvement.



Physical literacy encourages teachers to use a constructivist approach to their teaching and recognise that learning in physical education is not a linear process and the acquisition of discrete pre-determined skills (Willis, 1994). Crucial to this will be the skill of the teacher in establishing a learning environment where learners are challenged within close proximity to, yet slightly above, their current level of development. According to Von Glasersfeld (1989) sustaining motivation to learn is strongly dependent on the learner's confidence in his or her potential for learning. Furthermore it is argued that responsibility for learning should reside increasingly with the learner (Glasserfield, 1989), an approach very much purported through physical literacy and represented through Play to Learn.

### **Dragon Multi-Skills (KS2)**

More recently the creation of the Dragon Sport multi-skills programme (Sport Wales 2012) has built on the success of the 'Play to Learn' approach promoting physical development in the Foundation phase into a more games focused approach in KS2. The programme was developed to ensure a smooth transition from KS1 into KS2 and ensure that young children have those transferable skills to allow a child to make informed choices and life-long participation. The approach is child-centred and has been disseminated through professional development courses and supported by a comprehensive set of resources created by the PESS team at Sport Wales. The approach is concerned with the 'how' of moving and through a child-centred, personalised learning approach, appropriate to each child's stage of development. It encourages a child to consider what they can do and would like to do, rather than what the teacher would like them to do. The programme encourages the teacher to engage in 'conversation coaching', whereby teachers listen and value a child's contribution, thereby empowering a child to take responsibility and ownership of their physical activity. This has been supported through a set of resources; a tool-kit provided to PE teachers that highlights the 'what' to teach through a comprehensive set of activities and technical skills.

Ensuring that an environment that supports PL is evident from the early years of primary teaching will ensure that young children successfully deal with the transition through to secondary school PE and lifelong physical activity beyond this and this is clearly integral to the implementation of PE policy within Wales.

### **Physical Education School Sport Task Force Wales**

It is acknowledged that the goal of developing physically literate children involves important responsibilities for physical education specialists to develop competence, confidence and creativity across a range of activities (Stanec and Murray Orr, 2011). And yet, it is well referenced that increasingly PE in the primary school within the UK is taught by non specialists, or those with little appropriate training (Morgan and Hansen, 2008). Consequently, this would suggest that young children may not be exposed to

'enabling' environments that subsequently will 'foster' physical literacy. In acknowledgement of this and despite 'pockets' of good work throughout Wales evidenced through the PESS programme highlighting PL, the Welsh Government in July 2012 initiated the creation of a Schools and Physical Activity Task and Finish Group (SPATAF) in an attempt to explicitly ensure that PL is an integral part of a child's PE experience. The group was convened by the Minister for Housing, Regeneration and Heritage (whose responsibilities included Sport), and the Minister for Education and Skills, to provide recommendations to the Welsh Government on how to develop the roles of schools in increasing the levels of physical activity in children and young people. The main purpose of the Task and Finish Group was to operationalize the programme of Government commitment 'to make physical literacy as important a development skill as reading and writing.'

Given the Welsh Government's commitment to making physical literacy as important a development skill as reading and writing, the report has provided recommendations that physical education provides the only credible and secure way of ensuring this. Furthermore, the report also recognised that Physical Education must also be supported by a National Physical Literacy Framework, in a similar way to the national frameworks for numeracy and literacy that currently exist in Wales. Although such a framework currently does not exist for Physical Education, the group strongly proposed that this was necessary to ensure that the outcome of delivering high quality physical education would be physically literate young people.

## Conclusion

Significantly, it is a young child's entitlement to a high quality PE environment that is important and this must clearly be a focus of any school curriculum. Sport Wales through its PESS programme, curriculum delivery and community strategy aims to provide positive and rewarding experiences and empower young children to take ownership and responsibility for their physical activity. As a result, encouraging productive pedagogical approaches through the PESS programme has provided the opportunity for children to connect their learning to their own experiences and enable them to build meaningful connections that are important for deep understanding, authentic learning (Fernandez-Balboa, 1997) and stimulate lifelong participation.

Critically, the nature and significance movement is essential to our understanding of PL and there is a need to ensure that practitioners, in particular PE professionals, have acquired and developed a philosophical, theoretical and empirical understanding about the centrality of movement experiences. This will enable them to critically examine their current practice from the perspective of a range of disciplines and contexts (Brown and Payne, 2008). Moreover, well planned PE curricula should be designed both to provide the opportunity for schools to ensure that PL is demonstrably an outcome of HQPE and to be certain that this is clearly articulated and supported through all forms of physical

activity.

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## Physical Literacy Co-ordinators & Active School Partnerships in Northern Ireland

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*Melanie McKee, Gavin Breslin, Tandy J Haughey, & Paul Donnelly*

### Abstract

This article recognises the importance of the school context in the development of physical literacy by highlighting an examples of good practice, namely, the creation of physical literacy co-ordinators, and the opportunity to embed physical literacy within the school setting through the establishment of a network of Active School Partnerships. A parallel development, that of piloting of an assessment tool for physical literacy in Northern Ireland, is discussed in an earlier paper in the Bulletin within the section Assessment of Physical Literacy. This article concludes with an acknowledgement that this aspiration would require co-ordinated collaboration within and between government departments and non-departmental public bodies, and should be accompanied by sustained funding and support for schools.

### Introduction

Physical inactivity contributes to seventeen non-communicable diseases (Booth et al., 2000), including hypertension, type 2 diabetes, coronary heart disease, stroke, osteoarthritis, cancer and psychological disorders, such as depression, distorted body image, eating disorders and low self-esteem (Kaur et al., 2003; Patel et al., 2004; Ravens-Sieberer et al., 2001; Schwarzenberg, 2005). Conversely, physical activity (PA) during childhood has been shown to be positively associated with gross motor development (Graf et al., 2004), visual motor coordination (Petrolini et al., 1995) and athletic coordination (Taylor et al., 2002). The effect of motor competence on children's psychosocial development has also been shown (Stodden et al., 2008). For example, poor motor coordination has been linked to low self-esteem and poor self-concept (Henderson et al., 1989; Losse et al., 1991; Maeland, 1992; Piek et al., 2000; Schoemaker and Kalverboer, 1994), educational underachievement (Gillberg et al., 1983; O'Dwyer, 1987) and difficulties with peer relations (Schoemaker and Kalverboer, 1994). Stodden et al. (2008) claim that previous research failed to consider the dynamic role that motor skill competence plays in the initiation and maintenance of PA and propose that early development of motor skill competence is a primary underlying mechanism that promotes engagement in PA for health.

It is recognised that lifelong participation in PA depends on an individual's ability to feel

competent and confident in an activity setting, and that this competence and confidence comes from laying the foundations for developing physical literacy (PL) as a child (Sport Northern Ireland, 2009). The range of PA settings offered throughout Northern Ireland (NI), provide children with opportunities to enhance their movement competences and attitudes which can enrich their experiences of being active, empower them to fulfil their potential in exercise and sport, and facilitate access to a range of valuable opportunities that can enhance health throughout life. It is widely accepted that the development of PL is not confined to one setting, therefore, responsibility for its development is not confined to one particular individual or organisation (Whitehead, 2010; Sport Northern Ireland, 2009). Within NI a strong home-school partnership is encouraged as schools can provide regular opportunities for developing PL including play, active travel, physical education (PE) and sport. The following discussion recognises the importance of the school context in the development of PL and will highlight two examples of good practice, namely, the creation of physical literacy co-ordinators (PLCs) and the piloting of an assessment tool for PL. In addition, the opportunity to further promote PL within the school setting through the establishment of a network of Active School Partnerships, as noted in “Sport Matters” - The Northern Ireland Strategy for Sport & Physical Recreation 2009-2019 (Department of Culture, Arts & Leisure, 2009), will be discussed.

### **Physical Literacy Co-ordinators (plcs)**

As a result of funding provided by Sport Northern Ireland in 2006, three<sup>1</sup> of the five Education & Library Boards (ELBs) employed one full-time PLC for a four-year period. These posts were primarily created to offer additional support to the implementation of the Fundamental Movement Skills (FMS) programme which was introduced to assist with the process of fostering PL. The programme was developed by Steps Professional Development in Western Australia, and has been promoted by a curriculum support team of ELB officers since 2004. FMS resources, developed in partnership with the Council for the Curriculum, Examinations and Assessment’s (CCEA), and a two-training FMS course hosted by each ELB were offered to all primary schools. Subject to the actual or future inclusion of PE in the school development plan and attendance at the FMS course, additional support and direction was provided by the PLCs to help selected schools plan and implement the FMS programme within their respective schools, for example, by increasing teachers’ confidence in planning, teaching and assessing PE (McGivern et al, 2011).

Each PLC supported eight-ten schools per term and spent one day per week during a six-week period within a particular school. One hundred and nine schools, twelve hundred and forty four teachers, and over fifteen thousand pupils were supported by the PLCs over their four-year employment period (McGivern et al, 2011). An internal impact evaluation reported a ninety-one per cent increase in teachers’ confidence levels in planning, teaching and assessing PE after receiving support from the PLC (McGivern et al, 2011). An increase of eighty-one per cent in children’s physical ability was also reported. These findings were used to support a number of recommendations including the maintenance of the FMS programme by making the PLCs posts permanent and by creating new PLC posts to support schools<sup>2</sup>. Although there was an initial aspiration at

the start of the funding period that the three posts would be extended by the host organisations after four years, unfortunately, this was not realised due to a review of public administration which prevented the appointment of 'new' posts within the ELBs. Although, there was no continuation of these posts, there is perhaps an opportunity to integrate PLCs, albeit in a modified form, under any proposed strategic framework for Active School Partnerships.

### **Active School Partnerships: a Vision for the Future**

A strategic framework for Active Schools is yet to be developed in NI, however, advocates of PL could view this aspiration as an opportunity to embed PL within the proposed model by advocating that the development of PL should be the overall aim of Active Schools. Furthermore, this commitment should be reinforced within the accompanying objectives and related targets of the strategic document, be reflected in the structure of the proposed model and be integrated into the job specification of the key personnel.

For example, in anticipation of the creation of an Education and Skills Authority<sup>3</sup> the existing expertise of the ELB advisers should be retained through the creation of an Active Schools manager (ASM) posts within each of the new eleven district councils<sup>4</sup>. Each ASM would be supported by a team of Active Schools advisers (ASA) who would perform a similar outreach role to that previously performed by the PLCs. In addition, an Active Schools co-ordinator (ASC) would be appointed within each school in NI. Ideally, and subject to sufficient funding, the ASC would receive a management allowance<sup>5</sup> to recognise the expertise, time and effort associated with this role. Although connected, the ASC role would be distinct from a PE co-ordinator's role to reflect the ethos of PL and the different opportunities for the development of PL within the school setting. Whitehead (2013) observes how PE in school is the only place where every young person is assured of having experiences in purposeful physical pursuits and this unique opportunity puts the onus on PE teachers to use this time to effectively promote PL. Arguably, ownership amongst the other subject areas and educational professionals should be encouraged to promote PL and embed it in the curriculum.

The ASC would be supported by their ASA to foster a whole-school approach to the development of PL. An advantage of a management allowance award would be that conditions could be attached to the role of the ASC and indeed the school. For example, schools could be required to include and express commitment to a whole school approach to the development of PL within the school development plan<sup>6</sup> and to allocate at least one school development day<sup>7</sup> each year for PL training. ASCs could be required to conduct a baseline audit of existing provision of opportunities for the development of PL, and draft a related action plan which is aligned with and integrated into the school development plan; fully supported and resourced; rigorously monitored and evaluated. Finally, schools would be required to develop a school uniform policy<sup>8</sup> which facilitates children's ability to engage in movement before, during and after the school day<sup>9</sup>.

### **Conclusion**

There is evidence to show that countries are progressing research and practice into aspects of PL. In order to avoid duplication, it is critical that forums, for example, the Home Countries PL Forum and Northern Ireland PL Forum<sup>10</sup>, are utilised to share research and good practice. As noted earlier, the development of PL is not confined to the school setting, however, if fully supported, schools are in a unique position to offer many of the opportunities for the development of PL. Advocates should view the creation of Active School Partnerships as an opportunity to embed PL in educational settings and to continue the good practice displayed by the PLCs, and other initiatives, for example, the DENI's Curriculum Sports Programme<sup>11</sup>. This aspiration would require co-ordinated collaboration within and between government departments and non-departmental public bodies, and should be accompanied by sustained funding and support for schools to enable them to contribute towards the development of children and young people's PL skills.

<sup>1</sup> South Eastern Education & Library Board, Southern Education & Library Board and the Northern Education & Library Board.

<sup>2</sup> A funded impact evaluation of the FMS programme on young people and the support offered by the PLCs to primary school teachers was also advised. In addition, new partnerships with strategic agencies to expand the FMS programme to all primary schools in NI should be developed (McGivern et al., 2011)

<sup>3</sup> The Education & Skills Authority (ESA), which will be the single authority for the administration of education and will subsume the functions, assets and liabilities of the five ELBS, is due to be operational by the end of 2013, DENI (2013).

<sup>4</sup> The boundaries of the new councils proposed under the Local Government (Boundaries) Act (Northern Ireland) 2008 should be aligned with DENI's area plans, which should facilitate stronger community links and shared use of the school estate.

<sup>5</sup> With effect from 15 November, 2004, a management allowance may only be awarded for a fixed period not exceeding one year to a classroom teacher who undertakes significant specified management responsibilities beyond those common to the majority of classroom teachers, Increases to teachers' pay and allowances, Circular Number 2004/19, DENI (2004).

<sup>6</sup> Article 13(3) of the 1988 Education Order places a duty on the Boards of Governors to prepare and periodically revise a three-year school development plan. The Education (School Development Planning) Regulations (Northern Ireland) 2010 sets out the detailed requirements relating to the preparation of school development plans and the matters they should include.



7 Schools are permitted to allocate up to 10 days for self-evaluation and continuing professional development in pursuit of school improvement and raising of standards, School Development Days Circular Number 2011/21, DENI (2011).

8 The wearing of a school uniform is not governed by legislation but falls to schools to determine. The day-to-day management of schools, including school uniform policy, is a matter for school principals, subject to any directions that might be given by the Board of Governors. DENI has provided guidance for schools on school uniform policy, however, Circular 2011/04 provides advice only.

9 Paragraph 2.5 of Circular 2011/04 states that school uniforms should not prevent children and young people being physically active before, during and after school e.g. travelling to school, break time, lunchtime and after school activities.

10 Currently chaired by Sport Northern Ireland.

11 The Primary Schools Curriculum Sports' Programme was first introduced in the 2007/2008 school year by DENI in partnership with the Irish Football Association (IFA) and the Gaelic Athletic Association (GAA), to develop children's physical literacy skills.

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## Physical Education in Scotland; BMT (Better Movers and Thinkers) and Physical Literacy

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*Thomas Dowens, Andy Dalziell & John French*

### Abstract

This paper presents both an innovative approach to justifying physical education in the curriculum and clear recommendations concerned with how physical education is taught. Colleagues in Scotland use some aspects of the concept of physical literacy as set out in the second paper in the Bulletin, as an element of their overall approach.

### Introduction

Evidence-based research continually highlights that improvements in health occur as a result of increasing the activity levels of children and young people (1, 2, 3, 4). Research in the expanding field of neuroscience has also indicated that there appears to be a connection between movement, and the development of thinking skills (5, 7) Yet, despite this evidence of the benefits and values of increasing participation in physical education the amount of time being allocated to the subject has been under pressure across the Globe (6), although more recent developments have been encouraging. The Scottish Government has taken a lead in clarifying the position of physical education in Scotland by supporting a commitment of two hours for children age 5-11 and a minimum of two 50 minute periods for children/young people age 12-15 per week. This bold step provides a platform for the development of Physical Education, Physical Activity and Sport (PEPAS), and the role these critical elements play in the development of the whole child (9).

### Development Strategies

Education Scotland working in partnership with sportscotland has established several initiatives aimed at supporting the delivery of the Scottish Government's commitment. Collectively these initiatives come under the umbrella title of 'Raising the Bar in Physical Education'. A key element of the overall programme has been the appointment of a group of Physical Education Lead Officers (PELOs). 29 of Scotland's 32 Local Authorities have appointed a PELO whose responsibility is to support educational establishments in the early years, primary and secondary sectors to deliver the 2 hours/periods for all learners by June 2014. To support their school based interventions the PELOs have undergone a programme of training aimed at improving their

understanding of their role, and been provided with a series of development opportunities in areas like mentoring.

For the past several years Curriculum for Excellence has successfully challenged the value of teacher centred education, instead, placing the learner and learning at the centre of the education process. This challenge clearly extends to the physical education class. The commitment to ensure the entitlement of time allocated to physical education within the curriculum creates a need to examine and challenge the quality of the learning experience within the PE sessions – it's not only 2 hours-2 periods that are important, it is the quality of the experience within this time that counts. How can physical education contribute to and enhance the overall learning experience of the pupils, in addition to the health benefits that arise from being more physically active?

One of the avenues that is being explored in answering these questions is the Better Movers and Thinkers (BMT) programme. BMT is an innovative, exciting and challenging movement and learning programme for physical education that focuses directly on enhancing the links between movement and thinking, critical elements that research has shown to benefit the development of physical performance and learning (1, 2, 3, 4, 7, 8).

### **Better Movers and Thinkers**

BMT is designed to develop the ability to move and think in an integrated way, providing more opportunities to successfully engage with PEPAS. The BMT process focuses on the identification of a series of movement skills that are aimed at developing physical literacy, with the 'layering' of a series of differentiated cognitive tasks, and the enrichment of key personal qualities. Each of the three identified elements are required to create the movement and thinking base for the BMT learning environment.

Physical Literacy; Having a wide range of motor actions that allow the learner to move efficiently, fluently and purposefully without the presence of unwanted actions.

Thinking skills; being able to recognise, reflect on, and respond to relevant information that has been gathered from both intrinsic and extrinsic sources.

Personal qualities; recognising that to learn you must be able to work and persevere past the inevitable difficulties. Building strength of character, motivation, and confidence is crucial to the learning experience.

The BMT approach to learning is designed to support and encourage the learner's active engagement in their own learning process within the physical education class. One of the ways in which this is achieved is the continued use and development of Executive Function (EF) skills (10, 11). Described as *".....skills essential for mental and physical health; success in school and in life; and cognitive, social, and psychological development"* by Adele Diamond (10), EF skills are readily incorporated into the physical education class. Researchers agree that while there are various ways to describe the

range of EF skills that exist the key ones are;

- Working memory – the ability to hold information in your mind while taking in other information.
- Cognitive flexibility – the ability to take in the perspective of others, and to adapt tasks or planning as developments take place.
- Inhibition control – attentional control, the ability to retain focus and not get distracted, the ability to demonstrate self control

In keeping with Curriculum for Excellence the BMT approach to teaching physical education champions a pedagogical approach that acknowledges that the responsibility for learning belongs to the learner, and that the role of the teacher is to facilitate the activities and processes of the learner. *“A Curriculum for Excellence challenges us to think differently about the curriculum and it permits professionals to plan and act in new ways: it poses challenges for learning and teaching, and the purposes and structures of programmes of study”.* (12) Whilst this will challenge some and encourage others within the teaching profession, it will also support and develop a more personalised experience for the learner within the physical education class.

The central focus of the BMT approach is prioritising the development of movement and thinking skills that can be used across the curriculum. BMT contends that if children and young people have a better level of deliberate control over their balance and the quality and range of their movements, and can link this to the development of their cognitive processes, that they will choose to remain engaged in the learning process for longer. It also suggests that the success generated by the BMT approach will lead to the learners having a more positive experience of PEPAS, which in turn could encourage their continued involvement throughout their school life and beyond. BMT does not assume that learning a sport specific action will help the individual to successfully navigate their educational journey, or remain involved in PEPAS throughout their school careers and beyond.

The introduction of the BMT approach challenges teachers and can help narrow the gap between past, present and future pedagogies as teachers become better able to recognise the responses from the learners, and to plan according to learners' needs.

## Physical Literacy

A key element of the BMT programme is the development of physical literacy. Discussions on this term are receiving a higher prominence internationally, with the debate focusing around the definition of the physical literacy, and the scope of its influence on the individual. Many make a case for the perception that being physically literate results in an increased life-long engagement in sports and activity. However an alternative position would contend that being able to move well simply provides increased access to PEPAS. Our definition of physical literacy is;

*The acquisition and development of a range of movement attributes and qualities that support the child to move with competence and confidence in a wide variety of physical activities that will benefit the physical, cognitive, social and emotional development of the whole child.* (Dowens, T., Dalziell, A., & French, J., 2013)

The roll-out of the BMT Programme started in June 2013 with a four day in-service course for PELOs, representatives from the Scottish Universities with responsibility for Initial Teacher Education (ITE), and physical education specialists. The course examined the philosophy and principles that underpin the BMT approach, as well as detailing some of the content and essential progressions. The next phase will focus on a 2 day training course for individuals who have been identified as 'Cluster Champions'. With the active involvement of, and help from the PELOs, Cluster Champions have been identified through a process of discussion and negotiation. The Cluster Champions will be responsible for incorporating BMT methodologies and content into their schools' physical education programmes. They will be helped in this endeavour by a support and mentoring programme featuring both the PELOs and staff from Education Scotland. The support and mentoring programme will take place in the Cluster Champion's School, with their pupils, and deal with their issues, concerns and successes. *".....the biggest effect on student learning occurs when teachers become learners of their own teaching"* (13)

A link has been made with the General Teaching Council for Scotland (GTCS) to enable those who participate in the BMT roll-out programme to structure their involvement around an 'Action Research' project, and therefore apply for Professional Recognition in line with the new Career Long Professional Learning standards (CLPL).

## Academic Research

A rigorous academic study to fully evaluate the merits of BMT as an effective approach in the delivery of physical education will be conducted. The first phase of this research involved a pilot study conducted by PhD research student Andy Dalziell from the University of Edinburgh. The early results are very promising and a larger-scaled study will commence in October 2013 taking into account the influence that BMT has on performance (physical literacy), academic achievement, and physical activity habits. The experiences of the learners and teachers will be captured by conducting focus groups and interviews before being analysed using the method of grounded theory. The addition of this academic study will provide results that outline the exact benefits that BMT can claim and, depending on results, will help shape the future of physical education lessons, and teaching in other learning environments.

## Conclusion

The Scottish Government has made a clear statement on the value they place on the subject through its commitment to, and investment in physical education. Their support offers teachers time, and a strong support infrastructure, to make the changes to be able

to face the challenges that are ahead. This commitment from the Scottish Government provides an outstanding opportunity for Physical Education, Physical Activity and Sport (PEPAS) in Scotland to work with and help evolve current good practice, cement its position and value within the curriculum, and provide a successful and rewarding experience for learners.

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## A critical Consideration of the Use of Physical Literacy in the Netherlands

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### Abstract

In the Netherlands, *physical literacy* is used by the national sport federation and different sport associations as a synonym for *fundamental movement skills*, with the aim of increasing sport participation and detecting talents. In this paper, this use of physical literacy is discussed. First, based on the philosophical foundations of physical literacy, it can be argued that movements have a different meaning in different contexts. Second, the idea that learning fundamental movements will lead to sport participation is sociologically problematic. Third, the focus on elite athleticism does not seem to be in line with the basic principles of physical literacy.

### Introduction

As in many other countries, recent policies on sport and physical activity in the Netherlands put a great emphasis on health (e.g., Ministry of Sports, 2008, 2011a, 2011b, 2012). In these policies, physical activity is explicitly linked to a healthy lifestyle and seen as part of a solution to different health problems, such as obesity and cardiovascular diseases. In order to get a proper 'dose' of physical activity on a regular basis, stimulating sport participation is considered an important goal. For instance, in the Dutch bid plan for the Summer Olympics 2028 (NOC\*NSF, 2009), one of the goals was to increase regular sport participation among the Dutch from 65% to 75% (regular participation was operationalized as at least 12 times a year participating in a sport event). Although sport participation among Dutch children is already above that target (81% for children up to 17 years of age) (Collard & Hoekman, 2012), sport stimulation projects often focus on children.

The Dutch sport federation (NOC\*NSF) and different sport associations have an important role in the process of increasing the sport participation levels. With the aim of increasing the number of sport participants, they adopted the Long Term Athlete Development Model (LTAD) as a guideline for the journey of young persons in a sport. The development during the first three stages of this model (active start, FUNdamentals and Learning to train) are summarized as 'physical literacy' (Balyi, 2004; Canadian Sport for Life, n.d.).

Physical literacy was originally defined as “the motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the life course” (Whitehead, 2010, p. 5), and is used as a pedagogical framework for physical education (PE) in different countries (Whitehead, 2010). The philosophical foundation of physical literacy lies in the existentialistic and phenomenological tradition in which the interaction between the human being and the environment is central to human existence (e.g., Merleau-Ponty, 1962). The idea behind physical literacy is that when children learn to move in a wide variety of contexts and circumstances, chances are higher that they will maintain different physical pursuits throughout their life, are more confident in doing so and are better able to realize their human potential (Whitehead, 2001, 2007). Therefore, not just the skills in itself, but a skilful interaction with a certain context is considered important in the framework of physical literacy. In other words, movement skills are a means to interact with a variety of environments at the children’s own pace and level and not as norms on which children can be judged. Consequently, physical literacy should not be confused with *fundamental movement skills* (FMS). In FMS, the skills are at the forefront, irrelevant of the context. Whereas in physical literacy, the focus is on the interaction in a certain context by means of those skills. For instance, just throwing a ball (a fundamental movement skill) is different from throwing a ball during a game of baseball. In addition, the interaction between the skills and the environment fosters a pedagogical climate in which the purpose and effects of learning these skills can be appreciated. Learning just FMS without a reference to the way in which these become meaningful in a specific context can have a negative effect on the motivation and confidence of participants. Indeed over emphasis on FMS alone, perhaps delivered in very directed fashion, can damage motivation and confidence - preventing the development of physical literacy itself.

Within the concept of physical literacy, little emphasis is put on sport, as the physical activity engagement that is a central goal of physical literacy extends far beyond the sport context (Whitehead, 2010). In addition, sport is often associated with a competitive way of comparing between children, whereas physical literacy is aimed at personal development and realizing the individual potential (Whitehead, 2010).

### How is Physical Literacy used in the Netherlands?

In the Netherlands, physical literacy is not explicitly used as a framework for PE. The use of physical literacy is most noticeable in the policies of the national sport federation (NOC\*NSF) and different sport associations. These sport associations (e.g., swimming, volleyball, track and field) mention physical literacy in their plans to engage children in their sport. In these plans, physical literacy is used interchangeably with fundamental movement skills (FMS) within the LTAD model. The idea behind this is that children with an extensive movement repertoire will be more skilful in their sport. It seems to be expected that this will lead to less drop-out due to the feeling of incompetence.

The Dutch sport federation endorses the use of the LTAD model. Even though it seems widely accepted that the first three stages of this model can be summarized as *physical*

*literacy* (Balyi, 2004; Canadian Sport for Life, n.d.), the Dutch sport federation uses the derivative term 'physical alphabet' to describe the FUNdamentals stage (NOC\*NSF, 2011). What is meant with physical alphabet are basic movement skills, such as kicking, jumping, skating, hitting, etc. In contrast to physical literacy, as it is conceptualized by Whitehead and others, the emphasis of the physical alphabet is on fundamental movement skills. The idea seems to be that a better understanding and control of the physical alphabet will lead to less drop-out of sport and therefore a higher number of sport participants.

Moreover, these policies are not only aimed at increasing the number of children engaged in sports. Physical literacy is also seen as a prerequisite of becoming an elite level athlete and is being used for talent detection. This idea is illustrated by the fact that in the research agenda of the Dutch sport federation, the concept of physical literacy is mentioned under the heading 'elite sports' (NOC\*NSF, 2012a). It is expected that by testing whether a child mastered certain 'letters' of the physical alphabet, his or her chances of becoming an elite athlete (or at least be qualified as a talent) can be estimated.

### **Discussing the Use of Physical Literacy**

The use of physical literacy in the Netherlands can be questioned for three reasons. First, based on the philosophical foundations of physical literacy, it can be argued that de-contextualized movements (FMS) are different and differently learned than movements in a sports context (Standal & Moe, 2011). Second, the idea that learning the alphabet of movement will lead to sport participation is sociologically problematic. And third, the focus on elite athleticism does not seem to be in line with the basic principles of physical literacy. These three discussion points will be addressed in this paragraph.

### ***Intentionality of Movement Actions***

Central to the phenomenological basis of physical literacy is the concept of *intentionality* (Martínková & Parry, 2011). Motor intentionality can be described as "an embodied and concrete way of understanding or being meaningfully directed at 'things' in the surroundings." (Standal & Moe, 2011, p. 267). This means that the context in which an action is performed influences the meaning of that action, which has major consequences for learning and understanding motor actions. For instance, throwing a brick with the aim of damaging a window is a different action from throwing a ball in a game of handball, although the biomechanics may be similar (Standal & Moe, 2011). It can therefore be argued that learning fundamental movement skills, such as throwing, kicking, running and jumping is meaningless, unless it is related to a certain (sport or physical activity) context. Because of the absence of meaningful interaction with the environment, FMS may be of limited value when discussing sport participation. In addition, this de-contextualized way of considering movement is not in line with the

philosophical base of physical literacy. In the concept of physical literacy, the relation between the mover and the context is clearly documented, although there is some discussion about the possible incongruence between the philosophical foundation and the application of physical literacy (e.g., Lloyd, 2011). It can therefore be concluded that physical literacy and FMS are not the same and should not be used interchangeably, as is done by several sport associations in the Netherlands. In addition, drawing on the phenomenological tradition, it can be argued that learning these fundamental movements with a different intentionality than in a sport context, limits the usefulness of these movements for sport participation and talent detection. For example, being able to throw a ball in a basket does not mean that you will be able to throw a ball in the heat of a basketball game.

### ***Building Blocks of Sports***

One of the assumptions behind the sport policies aimed at increasing sport participation, is that learning the building blocks of movement (referred to as physical literacy or FMS) will lead to sport participation. Likening the concept of physical literacy to literacy as more generally understood in relation to the spoken and written word, it is assumed that learning the letters and words (FMS) will lead to autonomous reading and writing (effective participation in a range of physical activities, including sports). This assumption is illustrated by the fact that the Dutch sport federation not only uses physical literacy to conceptualize the foundation of sport participation, but also the term 'physical alphabet' to describe the skills learned in the FUNdamentals stage of the LTAD. From a sociological perspective, this assumption is naïve, as it has been demonstrated that the social context of parents and peers have a strong influence on actual sport participation (e.g., Birchwood, Roberts, & Pollock, 2008; Kraaykamp, Oldenkamp, & Breedveld, 2013; Wheeler, 2011). For example, underprivileged children from a country without mountains may be introduced to the basic movements of snowboarding, by means of a virtual reality simulation offered during PE (this is actually done in the Netherlands). Through this instruction, they will learn the 'alphabet' or even the 'words' of snowboarding. According to the logic of the Dutch sport federation and associations, chances are that they will start participating in snowboarding frequently, as they became literate in that sport. However, the reality is that the country in which they live does not have natural mountains to practice snowboarding. In addition, many parents do not have the money or time to go on winter holidays. Therefore, the social circumstances do not afford them to use the 'movement vocabulary' that is being learned in an educational context. Although this example may be quite extreme, sociological research clearly indicated that sport participation, but also the type of sport that is participated in, is strongly influenced by the social background (e.g., Bourdieu, 1978; Bourdieu, 1984). It is therefore not expected that just becoming physical literate will lead to sport participation, although being physical literate is of importance when the social circumstances afford to put that literacy to practice.

### ***Active Lifestyle for All vs. Elite sports***

The third discussion point about the use of physical literacy in the Netherlands is the fact that in the Netherlands, physical literacy is often used in relation to elite level sports. Also in this context, physical literacy is used as a framework for FMS, as it is conceived that a broad range of movement skills at a young age is a good basis for elite performance. In addition, it is believed that possessing certain FMS (or letters of the physical alphabet) can predict talent for a sport (NOC\*NSF, 2012b). However, one of the reasons for introducing physical literacy was to broaden the movement education of children and not confine them too early to a specific sport. This even might be helpful in becoming an elite athlete, as some studies found a relation between elite performance and late specialization in certain sports (e.g., Moesch, Elbe, Hauge, & Wikman, 2011). However, it seems to go against one of the key characteristics of physical literacy. This key feature would be that physical literacy is aimed at participation for all in different kinds of physical activity pursuits, in which everybody can reach his or her own potential, regardless of their level compared to others. When the focus is too early on elite performance, physical literacy loses its potential to involve a large group of children in physical pursuits. Physical literacy is not developed as a talent selection tool, nor does it seem appropriate to develop tests for physical literacy, like the test Tremblay and Lloyd (2010) suggest. Using physical literacy as a means to select, develop or test for elite sports is not in line with the aim of physical literacy to develop “a lifelong habit of taking up options in one or more areas of physical activity” (Whitehead, 2007, p. 295) for a large group of children. Being active does not necessarily have to mean being competitive. Moreover, being too focussed on norms, testing and comparing, might have detrimental effects on the pleasure and motivation for physical activity.

## Conclusion

In the Netherlands, physical literacy is not explicitly used as a pedagogical concept in PE. However, physical literacy and the derivate concept ‘physical alphabet’ are being used by the Dutch sport federation and several sport associations, as part of the LTAD and mostly as a synonym for FMS. In contrast to the philosophical framework of physical literacy, FMS are not formulated in relation to the environment in which they are performed, which limits the relevance of these FMS for learning sport skills and for actual sport participation. In addition, from a sociological perspective, it is naive to ignore social influences when discussing sport participation. Learning the building blocks of sports or movements will not automatically lead to sport participation. Third, one of the key goals of physical literacy, to involve a large group of children in life-long physical activity pursuits, is not in line with the use of physical literacy in the context of elite sports, which is characterized by selection and exclusion.

We can only speculate about the reasons for the different approach to physical literacy in the Netherlands. These might be twofold. First, there seems to be a pressure to substantiate sport policy with scientific evidence in the Netherlands (Pot & van Hilvoorde, 2013). The term ‘literacy’ is therefore used as a ‘scientific framework’ for the importance of FMS, since it is associated with ‘important’ cognitive functions in many other

educational areas (Higgs, 2010). A second reason for the way physical literacy is used in the Netherlands, might be the rather abstract formulation of the concept of physical literacy. Although this is recognized by the scholars developing the concept (e.g., Whitehead, 2010), hitherto there is a dearth of practical guidelines of how to use physical literacy as a framework without falling in the trap of reducing it to FMS.

The aim of the Dutch government is to increase health by endorsing an active lifestyle. Sport is seen as an important way of getting the right 'dose' of movement, and physical literacy is considered as an important basis for sport participation. Although possessing certain fundamental skills is definitely a component of sport participation, these skills have to be related to a meaningful (sport or physical activity) context. Why people participate in sports and physical activity is influenced by multiple factors (Green, Thurston, Vaage, & Roberts, 2013) and can not simply be reduced to possessing the right movement skills.

As argued in this paper, physical literacy is used in the context of sport participation in the Netherlands. Although physical literacy may be an aspect of sport participation, it does appear to be more useful to describe an active and healthy lifestyle in general without a specific reference to sports (Whitehead, 2010). Therefore, the context of PE would be more suitable to introduce physical literacy. Although PE policies in the Netherlands do not refer to physical literacy directly, PE is often mentioned by sport organizations to have an important job in learning basic movements and introducing children to the movement culture.

Ironically, until now, physical literacy is in the Netherlands being used for exactly what it was trying to avoid in the first place: describing movements of the objective (elite) body, irrespective of the context and the meaning or pleasure of performing those movements.

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## Physical Literacy from the Perspective of Czech Pupils and Teachers: Results from a Pilot Study

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*Jana Vašíčková & Marek Hříbňák*

### Abstract

This paper outlines the current understanding of physical literacy in the Czech Republic. The information was obtained through a questionnaire completed by pupils and a questionnaire completed by teachers. The answers show an appreciation of some of the aspects of physical literacy but highlight the need for further understanding of the concept.

### Background

Physical literacy is quite a new term in the Czech scientific and education society. Surely there are other new terms connected with literacy that came to the public's attention quickly. These are for example "reading" literacy, numeracy, science literacy, financial literacy and computer literacy. To develop skills in these branches, new methodological textbooks in Czech language have been published. Unfortunately, the new term in the Kinanthropology field – physical literacy (PL) – has a quite complicated journey to awareness. Sometimes even scientist may discuss the content of this term in our conditions and especially what it brings to physical education (PE) teachers in the school setting.

One of the articles that was published in the Czech journal for PE teachers called "Physical Education and sport for youth" provided some ideas how to understand the term "physical literacy" (Čechovská & Dobrý, 2010). There are also attempts to clarify the term and concept from various viewpoints (Čechovská, Chrudimský, Novotná, & Vindušková, 2011; Vašíčková, 2011; Vašíčková, Frömel, & Svozil, 2011). The most important point is to understand the difference between PE and PL. As Whitehead and Murdoch (2006, 6) stated: "...physical literacy is a personal attribute that has life-long significance, while physical education describes school based experiences during compulsory education."

### Research

The aim of our research, which was a part of a master thesis, was to find out the understanding of the physical literacy term among PE teachers and pupils at selected primary and high schools in one Moravian city.

We created our own questionnaire for obtaining information about PL, about motivation for performing physical activity, about technologies for helping to increase physical activity, and about willingness of PE teachers to apply the concept of physical literacy into their PE lessons. The pupils' questionnaire contained 7 open questions; the teachers' questionnaire contained 11 open questions. 87 pupils (49 boys and 38 girls) from the 6th and 9th grade of elementary school and from the 1st, 3rd and 4th grade of high school and 12 teachers (7 males and 5 females) participated in this survey. In the beginning of a PE lesson pupils completed the questionnaire that took approximately 15 minutes.

Answers to given questions were analysed with the use of qualitative coding. The most frequent terms were chosen and were divided into several categories. These categories were described with the use of descriptive statistics and discussed.

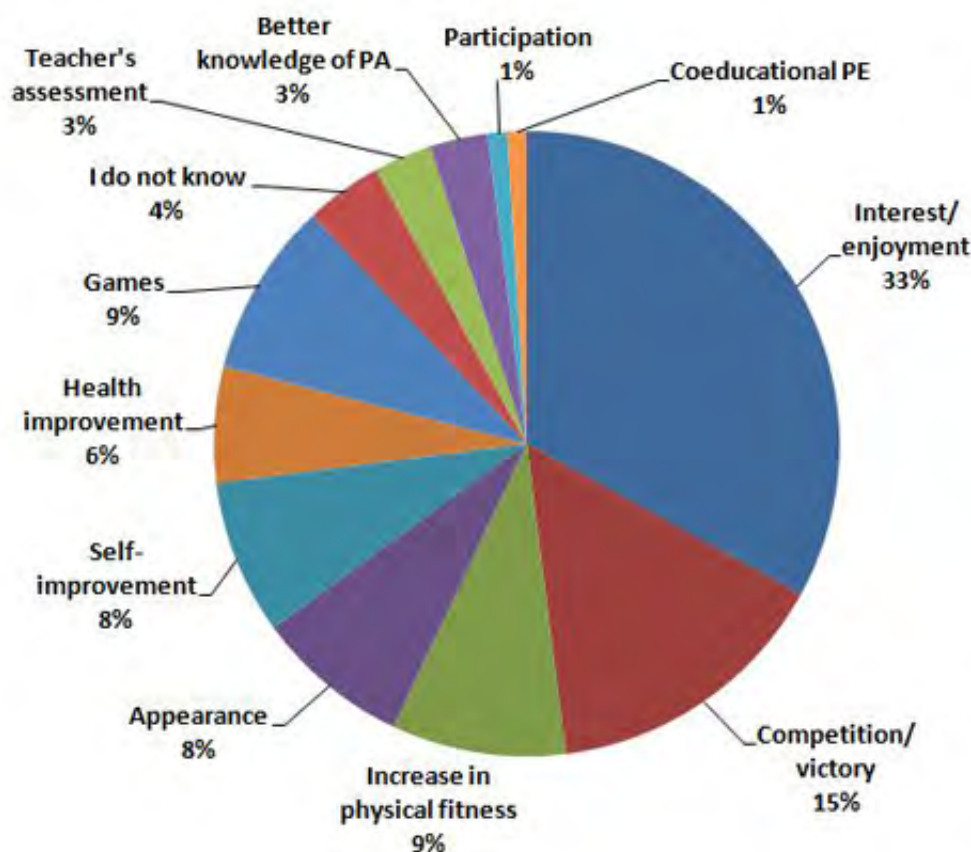
## Results

### Pupils' answers

Pupils answered that under the term of PL they most often imagine "human movement" (37%), the second most frequent category was "managing of sports" (24%) and the third most often mentioned category was "fundamental movement skills" (13%). Ten per cent of pupils do not know what to imagine when hearing the term "physical literacy".

The second question asked the pupils "What do you think you should know to be said you are physically literate? (What sports, games, and knowledge you should master?)". The most often they mentioned "fundamental movement skills", the second most often mentioned term was "games" and the third was "knowledge of the movement". Some of them mentioned particular sports like gymnastics, swimming, dance or athletics.

Question about motivation revealed that pupils like enjoyment in the PE lessons; they often mentioned mental well-being, relaxation or having a rest from learning. The second most often mentioned motive was competition and victory; they often mentioned victory over a mate. The third one was described as the increase in physical fitness, mostly mentioned by girls (Picture 1).



Picture 1. What motivates you in Physical Education lessons?

The next question was about enhancement of physical activity not only in PE lessons. Pupils feel the need of a wider offer of physically oriented activities (in clubs), easily accessible sport equipment in corridors and gymnasiums, trips (cycling trips), sport events in schools, possibility to spend breaks outdoors and discounts for students in sport facilities (47 %). The second most frequent answer was that there are plenty of possibilities to be active but pupils must want to exercise (21 %).

Surveyed pupils answered the question about acquaintance with PC games (or consoles) where one has to move. 24 % know some of them but cannot give us a name; 28 % know Nintendo Wii, 17 % know X-Box 360 Kinect, 12 % know some other games and 18 % do not know any of these sorts of games.

The most frequent answer to the question "Which physical activity you would like to try in PE lessons?" was the games (54 %) followed by martial arts and fitness training (both 8 %). Girls also mentioned dance.

The last question was about the benefits that physical activity has for them. The most important benefit is the increase in physical fitness (26 %) followed by active relaxation (21 %). The next two mentioned benefits were maintaining weight (appearance) and health improvement (both 16 %).

## Teachers' answers

Teachers answered that Physical Literacy is for them connected with fundamental movement skills like jogging, jumping, throwing and manipulation with objects (58 %), movement abilities (fitness) (21 %) and thirdly with theoretical knowledge (11 %). Physically literate person, according to Czech teachers, must have fundamental movement skills (walking, jogging, climbing, swimming, cycling, skiing etc.) (50 %), basic theoretical knowledge (why to exercise) (27 %), physical abilities (18 %), and also inner motivation (5 %).

92 % of the questioned teachers agreed that the concept of PL should be applied into the school physical education, however based on legal status. Dissemination of the PL concept should be carried out in schools through extended offer of leisure-time physical activities, sport events, tournaments or theoretical lectures (41 %), through mass media (internet, documents on TV, discussion with professionals etc.) (35 %), and through involvement of parents (12 %).

Implementation of PL into practise on a general level would be helpful through a theoretical part within PE lessons (31 %), through mass media (14 %) and through better accessibility of sport facilities (adequate price or discounts), together with support of leisure time physical activities by the national institutions (funding, media promotion of physical activity, organising of sport events etc.) (25 %). Implementation of PL into practise on a school level would be good through better accessibility of school managed facilities (44 %) and a theoretical part in PE lessons or parents' involvement (both 19 %).

92 % of teachers think that two PE lesson a week is not enough for the development of PL; they would prefer 3-4 PE lessons per week. All teachers would be willing to apply PL concept into their PE lesson after better familiarisation with its content. 42 % of teachers are also willing to further educate themselves. Teachers also think that some elements of PL concept should be implemented into various leisure-time physical activities. 75 % of the questioned teachers feel that PL concept may become the aim or target for school Physical Education, the rest of them claim that PL may be one of the outcomes of PE or the objective of PE.

The strength of the study is in the connection of the answers obtained both from pupils and their teachers. The new term "physical literacy" is quite unique and this was also one of the ways how they could familiarise with it. The limitation of the study is in small sample questioned and that it was distributed only in one city.

## Conclusions

For the most of the pupils "physical literacy" is connected with human movement, sport activities and fundamental physical skills. Teachers describe PL in details as fundamental movement skills, abilities and theoretical knowledge of the benefits of movement. According to the pupils the physically literate person should have fundamental movement and sport skills; they do not think about the cognitive part of PL, e.g., knowledge and importance of right information for implementation of physical activity into healthy lifestyle. For pupils, the main motivation in PE is enjoyment and

relaxation, which is also the most often mentioned benefit together with the increase of physical fitness. Physical literacy from the teachers' point of view should be applied into school PE; it should be disseminated through the theoretical part of the lessons, via mass media and also by greater offer of sport facilities. The big challenge for researchers and physical activity professionals is to prepare information brochures, websites or organise lectures to spread out knowledge of the PL concept.

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## Assessing embodied Knowledge in Swedish PEH—the Influence of Physical Literacy

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*Suzanne Lundvall & Anna Tidén*

### Abstract

There is internationally a growing interest in the concept physical literacy and how it can be used in educational contexts. The aim of this contribution is to illustrate and describe how and in which way Swedish PEH has been influenced by physical literacy in the context of learning outcomes and assessment. The empirical material consists of the PEH curricula and the official supplementary material for qualitative assessment. Tensions between curricula, pedagogy, and assessment are discussed as physical literacy is linked to an individual's potential and being in the world and not related to assessment of what separates people.

### Introduction

For more than a decade there has been an ongoing discussion about ability and educability within the field of physical education and health (PEH) (Evans, 2004, 2013; Evans & Davies, 2004; Evans & Penney, 2008; Hay & Macdonald, 2013; Wright & Burrows, 2006; Wellard, 2006; Larsson & Quennerstedt, 2012). Even though physical literacy was quite loosely applied to PEH when the former started to be developed, there has been a growing interest in what the concept stands for and how it can be used in educational contexts.

Physical literacy focuses on the lived body and the embodied dimension of human existence. It seeks to describe embodied experiences in order to enhance or improve physical performance and enhance or identify aspects of movements that enable a particular aim to be achieved or elements that need attention (Whitehead, 2001). The concept highlights “the developing and maintaining of all-round embodied competence, together with positive attitudes towards this sphere of human activity” (Whitehead, 2007, p. 287). The individual's ability to develop a capacity to reflect over the nature of his or her performances and bodily intentionality is part of what the concept embraces. A departure point is therefore the concept's intimate relationship between perception and movement in relation to bodily intentionality (Whitehead, 2001).

The notions of physical ability and/or physical literacy are often taken for granted as simply a measurable and observable capacity. Consequently, there is a number of assessment batteries developed for the evaluation of children's and students' abilities. However, many scholars have suggested that physical literacy is far from a neutral or

simple concept. Hence, questions arise regarding what happens when a concept striving to make a meaningful whole is put into an educational context and the assessment of physical performances.

The aim of our contribution is to illustrate and describe how and in which way Swedish PEH has been influenced by physical literacy in the context of learning outcomes and assessment. The empirical material consists of the Swedish PEH curricula for compulsory schools (for children aged 7 to 16) and the official supplementary material for qualitative assessment ([www.skolverket.se/bedomningsstod](http://www.skolverket.se/bedomningsstod); Lgr 11 [Curriculum for the Compulsory School, Preschool and the Recreation Centre, 2011]).

### ***Physical Literacy and Swedish PEH***

In Sweden, physical literacy was introduced in research reports and textbooks to describe and support the understanding of children's physical competence in relation to teaching and learning in PEH (Ekberg & Erberth, 2000; Lundvall & Meckbach, 2004, 2007; Larsson, 2007) and studies seeking to qualitatively assess schoolchildren's movement repertoire (Nyberg & Tidén, 2002, 2004, 2006, 2008; Tidén, Nyberg, & Lundquist, submitted). Furthermore, aspects of the concept have been used as a departure point for creating supplementary material designed to help PEH teachers in compulsory schools be able to perform valid assessments of their students (SNAE, 2012).<sup>i</sup>

Among the reasons for the interest in introducing physical literacy in Sweden was studies reporting a surprisingly large number of schoolchildren that had not reached the standards for basic skills and movement competence (Nyberg & Tidén, 2002, 2004, 2008). The growing interest in children's embodied capacity was also linked to new physical inactivity patterns and calculated health risks among groups of young people. An interest in embodied competence and physical ability was expressed in statements made by scholars stressing that being "able" is crucial to wanting to take part in physical activities (Okley, Booth, & Patterson, 2001; Nyberg & Tidén, 2004; Wrotniak, Epstein, Dorn, Jones, & Kondilis, 2006; Barnett, van Beurden, Morgan, Brooks, & Beard, 2009; Stodden, Langendorfer, & Robertson, 2009).

School authorities and researchers in Sweden started to call for a clarification of learning outcomes in PEH. The traditional "doing" of activities in PEH had, so to speak, to go more hand in hand with "the learning" of defined knowledge qualities (Skolinspektionen, 2010). In order to clarify and support certain learning outcomes that encompassed learning in, through, and by movement, the Swedish PEH curricula were rewritten in 2011 as part of the latest school reform.

The new curriculum for upper secondary school emphasizes *bodily capacity*. The curriculum for compulsory school underlines *all-round movement capacity*, as one of five key competencies to be attained by students aged between 7 and 16 (Lgr 11):

Teaching in sports and health should essentially give pupils the opportunities to develop their ability to:

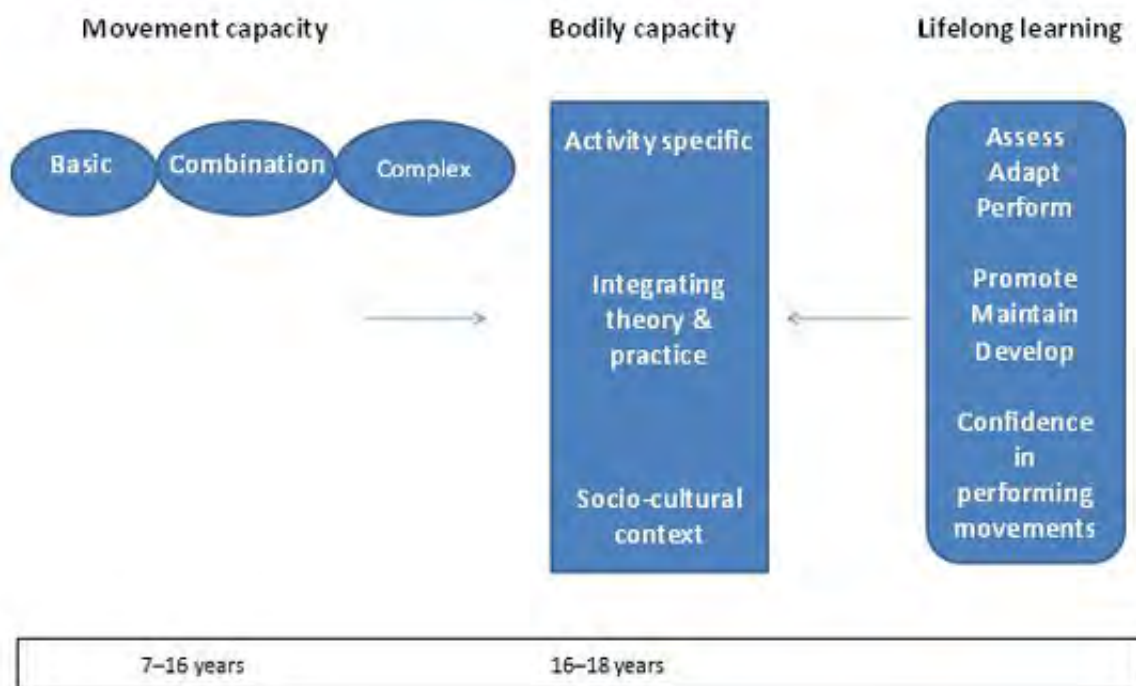
- move without restriction in different physical contexts,

- plan, implement and evaluate sports and other physical activities based on different views of health, movement and lifestyle,
- carry out and adapt time recreational and outdoor life to different conditions and environments, and
- prevent risks during physical activities, and manage emergency situations on land and in water. ([Lgr11](#), pp. 50–58)

The compulsory school curriculum is based on three content knowledge areas: *Movement*, *Health and lifestyle*, and *Outdoor life and activities*. The overall aim of developing students' "all-round movement capacity" is founded on the idea of a progression throughout the school years, starting with acquiring basic and combined movement skills in the early school years, then establishing more complex movement patterns, and ending with endeavoring to achieve a competence in bodily capacity (see Figure 1). In upper secondary schools, the learning outcome "with good quality of movement perform a range of activities that improve physical ability" involves aspects of an advanced reflective approach to physical activity and embodied experiences, including aspects of with whom, where, and why (GY 2011 [Curriculum for the Upper Secondary School], Swedish commentary material, see also Figure 2).

Figure 1. The idea of a progression from (basic) movement capacity to the establishing of more complex movement patterns, ending with a competence of bodily capacity (Lgr 11, GY 2011).

### Progression in steering documents (Compulsory & Upper secondary school)



Several PE teachers and Physical Education Teacher Educators have indicated that the definitions of the concepts used in the curricula, such as “all-round movement capacity” and “bodily capacity” are unclear, and therefore problematic to implement and assess. The new curricula led to a need to define what these concepts mean in practice and how to measure or assess desired learning outcomes of embodied knowledge qualities. In response to this criticism, the SNAE took the initiative to compile the aforementioned supplementary material for Year 9 of the compulsory school in order to help PEH teachers in their work with assessment criteria ([www.skolverket/bedomningsstod](http://www.skolverket/bedomningsstod)).

### **Assessment of embodied Knowledge**

The supplementary material was designed to describe different quality levels in relation to defined knowledge requirements for Year 9. It was crucial to help teachers assess students’ learning outcomes in a valid and fair way. In the curricula, the quality of the knowledge attained is expressed using the words “to some extent,” “quite well,” and “well”; these are supposed to correspond to a five-grade scale (A–E). The knowledge requirement needed for a “C” in Movement reads as follows:

Pupils can participate in games and sports involving complex movements in different settings, and vary and adapt their movements to some extent to activities and context . . . (SNAE, 2011, p. 53)

Below is an example of a matrix in which *aspects of quality* and *variations in qualities* are described in relation to the knowledge requirement: “to participate in” with “complex movements” and “to be able to vary and adapt movements to activities and context” (see Figures 2 and 3).

	To some extent	Quite well	Well
	The pupil is not very rhythmical and has a lack of balance	The pupil has relatively good rhythm and balance	The pupil has good rhythm, precision, and balance
	The pupil's movements are slow and rigid, with not very consistent movement transitions	The pupil's movements are quite well established and consistent, with stable movement transitions	The pupil's movements are established, relaxed, and consistent, with smooth and stable movement transitions
	The pupil is not very decisive and might need several attempts to perform the movement	The pupil is, for the most part, decisive and the movement can be repeated with similar results	The pupil is rather decisive and the movement can be repeated with the same good results
	The pupil's movements are not very economical; a movement pattern involving a somewhat balanced effort	The pupil's movements are predominantly economical; a movement pattern involving a balanced effort	The pupil's movements are economical; a movement pattern involving a minimum of effort

Figure 2. An example of the matrix for the knowledge requirements “to participate in” with “complex movements” (Year 9) describing the criteria for the quality levels expressed by the words “to some extent,” “quite well,” and “well” (SNAE, 2012).

	To some extent	Quite well	Well
The pupil...	participates and contributes to some extent to achieving the aim of the game/activity	participates and chooses strategies/methods that contribute to achieving the aim of the game/activity	participates in the main phases of the game/activity and chooses effective strategies/methods that greatly contribute to achieving the aim of the game/activity
	interacts to a limited extent with other people, music, and stationary or loose equipment	interacts satisfactorily with other people, music, and stationary or loose equipment	interacts skillfully with other people, music, and stationary or loose equipment

Figure 3. An example of the matrix in the supplementary material describing the criteria for the quality levels for “to be able to participate in” and to “vary and adapt” movements to activities and context (Year 9).

In the supplementary material, a text accompanies the matrixes, explaining what teaching conditions must be available to support and promote the individual student's enhanced mastery of physical disciplines. Examples of learning tasks are also presented



in the material.

Several of the knowledge requirements in the above matrix can be related to physical literacy: to gain access to and acquire an embodied physical competence, which includes the ability to read, understand, and critically reflect upon embodied experiences in relation to self and others. However, the stated levels of knowledge qualities have a wider aim than supporting a student's development; they are also linked to a summative assessment of certain definite knowledge requirements.

## Conflicts and Tensions

When taking the supplementary material as the departure point for describing the influence of physical literacy, some problematic aspects emerge that touch on the relation between knowledge requirements and the assessment of embodied knowledge. How is quality expressed in an educational context of learning outcomes and assessment and what forms of quality are the focal point?

The concept literacy derives from ideas of how to empower people with valuable competences for developing identity, social relations, and beliefs (St Leger, 2000; Nutbeam, 2000, 2008; Paakkari et al., 2012; Whitehead, 2001, 2007, 2010). It encompasses a person's ability to read, understand, act, and react, where dimensions of literacy can add quality to life and contribute to the sense of self. Self-awareness is included in the concept as an aspect that involves both the sense of being able to self-reflect and a form of self-reflection that focuses on oneself as a learner. The latter deals with the construction of meaning making. What the different uses of the literacy concept have in common, at a macrolevel, is that literacy is founded on the ideas of a broader competence than the acquiring of single, isolated skills.

The presented material draws attention to the abstract wording of the PEH curricula and the need for a language expressing nuances and dimensions of quality (to be able to read, act, and react in an embodied way). The existing descriptions of physical literacy greatly support the development of a language of how to express and communicate embodied qualities, but it is not used in the current curricula. Whitehead (2007) describes physical literacy in the following words: "A person who is physically literate moves with poise, economy and confidence in a wide variety of physically challenging situations. Furthermore, the individual is perceptive in 'reading' all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these, with intelligence and imagination" (Whitehead, 2007, p. 287). This described competence encompasses motile capacities, such as balance, coordination, flexibility, agility, control, precision, strength, endurance, and the ability to go at different speeds, from explosive to maintaining a movement over a long period (Whitehead, 2007, p. 287). The differences between how to define embodied competence and all-round movement capacity in relation to already-existing concepts like physical literacy create problems and leave the individual PEH teacher with a difficult job to do.

Another problematic aspect that emerges is what quality level of embodied knowledge students are supposed to demonstrate. What reference points within a variety of performed bodily movements are at hand when PEH teachers are to communicate

quality to their students? Are we talking about the perfectionist quality associated with elite sports, or the ability to perform complex movement patterns to support students' critical reflective learning in, of, and by movement, with a somewhat different demand for functionality and poise?

These different reference points draw attention to PEH teachers' preparation for these types of learning outcomes of embodied knowledge qualities. As embodied experiences are culturally embedded, teachers need to consider how to support their students' reflective approach to "their own mastery" and the meaning of movements (see, for example, Whitehead, 2001, 2007; Quennerstedt & Larsson, 2012). This includes being conscious of the body in motion, how it feels, and what it means. At best, PETE educators and PEH teachers work to create inclusive learning objectives and tasks that promote the intertwining of desired theoretical and practical knowledge skills, involving self-awareness and the qualities thereof. By continuously involving students in ipsative assessment<sup>ii</sup> it may be possible to make the student conscious of their own individual journey towards embodied knowledge. At worst, this perspective on embodied knowledge receives no attention.

The contact we have had with the reference group of PEH teachers shows that several teachers are already working towards creating a formative assessment based on a broad conception of what all-round movement capacity means and how *quality* in terms of poise, form, and characteristics can be displayed. Crucial aspects that have been mentioned are the creation of learning objectives and tasks. Other PEH teachers in the reference group have found arguments to support continuing to measure quantitatively to show how fast, high, or strong a student's separate movement skill is. Examples given have been the assessment of a cartwheel, the techniques for hitting a clear in badminton, the running time of a Cooper test, etc. This kind of measuring doesn't include, or accept, the idea of qualitatively assessing learning outcomes. What is still favored is a quantitative, traditional way of judging/measuring sports performances.

This risks a maltreatment or misuse of the concept literacy in a goal-oriented and assessment-driven school system. From a Bernsteinian viewpoint, literacy represents the promoting of a competence code; what people have in common, driven by a pedagogical device that allows learning situations based on desires, experiences, and intrinsic values and the building of relations to PEH subject matter content (Bernstein, 2000, 2003; Evans & Penney, 2008; Hay & Macdonald, 2013). The contrasting code, the performance code, is based on the social logic of performance: what sets people apart. And as several researchers have pointed out, being able in a culture of performativity mainly focuses on measurable performances, i.e., that which separates people, and on hierarchies (Ball, 2003; Evans & Davies, 2004; Evans & Penney, 2008).

In a school culture dominated by a performance code, it appears difficult to remain true to the broad and inclusive definition of physical literacy as literacy is linked to an individual's potential and being in the world, and not related to measuring what separates people. Used in accordance with its definition, learning outcomes of physical



literacy can act to “open doors” to a lifelong learning journey of being in the world (Whitehead, 2007), but thus not as a device for quantitatively measuring isolated skills without any context.

## Final Thoughts

These first years using this supplementary material has resulted in questions of definitions, what the meaning of all-round movement competence and bodily capacity is, what level of competence that PEH teachers have, as well as the absence of models for literacy learning outcomes. As curricula are political documents, power relations are encoded in the former. Therefore, the presented supplementary material risks being misused. This latter aspect points to the tensions between curricula, pedagogy, and assessment, where a goal-oriented assessment system can withstand the move away from a dualistic approach to an embodied capacity. This also touches on the relevance of what education is for and the work that still has to be done regarding the interrelatedness of curricula, pedagogy, and assessment. To become a learner in PEH is a challenge in itself and highlights the need for comprehensible and engaging learning objectives and tasks that support physical literacy in a lifelong perspective.

i The supplementary material was produced by a group of researchers, PhD students, and a reference group of PEH teachers and the authors were part of this group. Similar supplementary material is now being produced for school year 6 and upper secondary schools.

ii Ipsative assessment; measuring yourself against yourself, which means using yourself as the norm against which to measure something, e.g. your present performance against your past performance rather than the performance of others.

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## Physical Literacy: The Maltese Perspective

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### Abstract

The state of play on the influence, acceptance and application of physical literacy (PL) in Malta is in its infant stage. The perspective of six Maltese physical educators was explored and together with an insight on related documents is reported. Despite the teacher training, there is more that can be done in order to promote PL as an underpinning the philosophical process of PE. The article recommends in-depth local research on PL using an advocacy approach in order to challenge the misconceptions and promote PL as a way forward.

### Article

Physical literacy (PL) seems to be a new buzz word being used within the physical educator's vocabulary, and it is indeed an issue that is deemed by scholars to be important for Physical Education (PE). Why Physical literacy? What role does it play in curricular PE and sport?

Reading through various literature on the subject, one comes across various definitions yet Whitehead (2010) presents it within the nature of an individual who in order to be physically literate must have the "motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical pursuits/activities throughout the lifecourse". These components as presented by Whitehead are essential for the individual to embark on this lifelong journey.

The purpose of this paper is to examine the situation in which PL is being adopted and interpreted in the physical educator's realm in the Maltese context. Unfortunately, there is a lack of local research in the field, thus for the sake of this article, I have taken a "helicopter view" approach as I wanted to investigate and understand the issue of PL from the Maltese point of view. I have looked into the available sources such as the National Curriculum Framework (NCF) published in 2012 and also the new Physical Education Curriculum – The Primary Years (DQSE, 2013) updated earlier this year. The study units offered by the Institute for Physical Education and Sport (IPES) were also analysed in order to examine how PL is being offered to students at undergraduate level. In order to gain a further insight of the topic, a set of questions were put to few local PE

Teachers, Student PE Teachers and newly graduated Physical Educators who are about to start their teaching career. Various comments were elicited and included in this report.

In 2010, the National Audit Office (NAO) published a report on Physical Education (PE) and Sport in State primary and secondary schools in Malta. Despite the advancements that have occurred in the last years within this field, there are a number of recommendations notably focusing on the practical aspect of the subject. As an academic within the PE world, I feel that a long term vision for the subject is somewhat lacking. On a small island like Malta, with a population of approximately 410,000 it is very important that all those involved in the delivery of physical activity, being educators, coaches, administrators and academics, have to work together and be tuned on the same wavelength in order to make an impact on the delivery of PE in our schools. Having made these claims about the lack of coherence on the vision of PE, I would also like to add that the education system is very much examination oriented and this has had an impact on PE even though it is a basic subject followed in all school levels. In relation to the notion of PL, there is no reference to it in the document.

In the last few years, the Maltese Education System has been through various reforms and in 2012 the “National Curriculum Framework for All, 2012” was finalised and presented after a consultation process with various stakeholders. Alongside this policy instrument which reflects and is “a response to the changing demands of individuals and society” (Ministry of Education and Employment, 2012, p.iii), new curricula for every subject are also being introduced. This new NCF indicates that the educational journey should be innovative and “the range of experiences in compulsory education provides students with key competences necessary for lifelong learning” (ibid, 2012 p,x). This bodes well for the notion of literacy which is an important element in education and lifelong education. Unfortunately in the NCF the only reference there is to literacy is digital literacy. In the new PE Curriculum launched in April 2013, in its introductory paragraph to this document, it is emphasized that “in using this PE Curriculum, the following need to be considered: Enhancing each student to acquire the required physical literacy with particular reference to the main characteristics within each window of opportunity.” (DQSE, 2013, p.2). However, the question arises as to what is meant by enhancing each student to acquire the required physical literacy? What is the required physical literacy? Despite the importance that PL is given in this new curriculum, there is no explanation or even a glossary of terms in order to make reference to what is understood by the “required PL”.

This curriculum will be followed by PE Teachers who are expected to understand the notion of physical literacy amongst other key terms. The majority of PE Teachers in Malta go through formal teacher training at the University of Malta and are supported in their teaching career by the Directorate for Quality and Standards in Education for the State School teachers, whilst the Church School Teachers are supported by the Head of Departments within the Christian Education Secretariat. Students wanting to become PE

Teachers follow a four year Bachelor of Education Honours Degree at the University of Malta. The course is offered by IPES and students go through initial teacher training in PE and Sports.

Amongst the various study units offered by IPES, there is one unit which specifies “Physical Literacy” in the title. This is MSY 1107: *Teaching Physical Literacy through Mini Games*. It is also worth mentioning that in another degree offered by IPES, a Bachelors Degree in Sport and Active lifestyles, there is a study unit PHE 1210: *Physical Literacy and Movement*. The module MSY 1107 is based upon the mini-games philosophy and it introduces the first year students to the fundamental motor skills and movement concepts related to body awareness, space, effort and relations, which according to the study unit description are “the basics for developing physical literacy”. The other module, entitled *Physical Literacy and Movement* has as one of its aims to “have a better understanding of the concept of physical literacy”. As a matter of reflection and in the wake of so many developments in the concept of PL, one might ponder and reflect whether these two study units do justice to the philosophical underpinning of PL and it’s relevance within the PE programmes. One must ask, since PL can also be described as “a way to become educated and knowledgeable about movement” (PHE Canada, nd) how do we interpret PL within our programmes? Do we have a clear understanding of what the schools of thought are trying to make us understand about the notion of PL in order to be able to make the connection between physical education, physical literacy and other sport participation? What do the key stakeholders make of this concept? Teachers, coaches and school administrators have an important role to play in supporting PL.

In order to gather some data for this report, I set a few questions to six individuals who are either still PE Student Teachers, others who are just graduating and another two who have been teaching for a couple of years. These questions reflected my curiosity in investigating the position of PL in our education system in order to complement the documents and courses discussed above. The main issues that the questions reflected were: the PL concept; PL within the curriculum; the adoption of the PL philosophy in relation to the teacher training undertaken; children being physically educated; active or literate?; frequency of lessons in supporting development of PL; and PL from the teacher training and teaching standpoint.

When sharing their understanding of the term PL, all the respondents made reference to the fundamental movement skills and that a person is physically literate when she/he can have these basic skills and can transfer them to all kinds of sports. Respondent 5 went a bit deeper in the answer and stated that “in achieving physical literacy you achieve the key to be active for life because you understand the importance of being physically active and all the benefits”.



As educators making the connection and adopting a PL philosophy within their PE programme is important since it plays an important role in educating children in order to be considered physically literate. Whitehead (2010) highlights six attributes which should be evident in a physically literate individual. These attributes are developed and the teacher plays an important role in motivating students to participate; educating children through embodiment; understanding and interacting with the environment; developing their self confidence and self esteem; expressing themselves as a result of “embodied capability”; and having the ability to connect and convey with their movement experience. In order for physical educators to fully understand these attributes, it is important that the PL concept is given more importance in our studies and within the implementation of the programmes. According to the data collected for the purpose of this article, there is a lacuna on what actually is happening in the curriculum and what the theory states. Most of the respondents associated PL with the primary years of schooling, thus the relation with the fundamental movement skills. It was also highlighted that unfortunately our system is moving towards a more game based approach (Respondent 5). Respondent 4 believes that “the real focus should be the physical education and not sport coaching!”. Despite the challenges, most believe that “we as teachers need to make sure that all the students are challenged physically and make sure that all of our children are physical literate” as highlighted by Respondent 6.

Teacher training plays an important role in adopting such a concept within the aims of PE. All the respondents passed through the university course and all commented that PL is tackled in some way or another within the study units. Though one of the respondents felt that it was not yet enough to enable “one to adopt this philosophy. I think that PE teachers are more knowledgeable on the practical and motor aspects of the subject however others like teachers and parents can help form attitudes about being active and healthy and how physical literacy can help the social and emotional well being too” (Respondent 5). It is also worth highlighting that another respondent who has been teaching for some years stated that “experience and intrinsic motivation has made me want to nurture this philosophy but along my teaching career I have been struggling with a lot of barriers such as the educational system.”

Having just two lessons a week or no PE lesson at all might be considered as another barrier. Young people are not exposed to enough physical activity and this is creating challenges both on the individual and for the educator.

“There is too little time for PE in ALL Maltese schools.

Pupils especially in Early Years need to move about naturally.

I feel that they are like monkeys locked in cages (classrooms)

for most of the day”

(Respondent 5)

Another important issue is that in Malta we need to promote participation beyond the school hours. Two PE lessons per week are not enough and thus we must emulate other countries where students are physically active through different activities every day even though most of them cycle from home to school or university. Respondent 1 strongly believes that “a cultural change is the key”.

Changing the culture is fundamental in order to adopt the PL concept within our realities. This is a challenge that can be surmounted. In this article, prominence was given to the role of education, specifically through the physical educator’s point of view. Most of the participants support and accept the concept of physical literacy and most of them believe that although they endorse it they still needed more input from the theoretical perspective of this theory. Some suggestions made by the respondents are highlighted hereunder:

- i. The concept of physical literacy is introduced at the start of the course. This makes the teacher in training aware of the utmost importance of this concept and furthermore it gives the teacher in training a period of four years to develop an understanding of this concept and that it should be included in his/her philosophy of teaching. (Respondent 1)
- ii. From the teacher training perspective, maybe we could have worked more on the philosophical part of the theory. It would have been good to have a credit which directly focuses on physical literacy. This would have been helpful. For example, having a credit focusing on the theoretical part of the philosophy (the aims, the idea behind it, its importance) and then practising ways by which this theory can be put into practice during the lessons. (Respondent 3)
- iii. By increasing the number of PE lessons and also having in-service courses focusing on physical literacy, would keep teachers up to date so as to be sure to create lessons which give students a beneficial learning experience. (Respondent 2)
- iv. Quality PE is extremely important to achieve PL. Also teachers must strive to make students realise how important it is for their bodies and their health but most of all what is important is that each and every student enjoy him/herself. (Respondent 5)

After getting and feeling the groundswell of interest in PL and having a brief overview of PL from the educator’s lens, I would like to take the liberty to put forward some suggestions in order to further develop the concept of PL in Malta. This is not a scientific paper, but a brief report on the state of play of PL. I stand to be corrected or challenged

on various issues, though I must take the opportunity to state that this is also a journey of knowledge on the concept of PL that I myself am experiencing.

In conclusion, I feel that there are various misconceptions and there is a need to have more clarity in order to remove this lacuna. If we want our educators to accept and adopt the concept of PL, we need to endorse that this is a concept that is gaining acceptance not only within the educator's reality but also a concept relevant throughout the lifecourse by other professionals besides educators (Whitehead, 2010).

By making PL measurable is another way forward since our educational system is very much examination oriented. People need to see results, thus as stated by Tremblay & Lloyd (2010, p.26) "in order for physical education or physical literacy to gain prominence within the greater education context, it must be measured". We need to consider what suits the local needs but the model suggested by Tremblay & Lloyd (2010), which includes the core domains of physical fitness, motor behaviour, physical activity behaviours and psycho-social/cognitive factors should be considered.

Local research should be first on the list. It is vital to investigate to what extent this concept is being adopted. This will help both academics and policy makers within the PE field to plan their policies and programmes. A position paper should be written in order to help create awareness to all those involved. Also, I suggest that keynote speakers and experts in the field of Physical Literacy should be invited to give their input in the various seminars and conferences that are organised.

Another approach is advocacy and this should be the way forward. It can be simply defined as to "influence people to take decisions that will improve our lives and the lives of others" and "it is about taking a stand and working for a positive change" (WAGGGS, 2010, p. 9 & p.16). The fundamental question is how the concept of PL can be adopted and implemented, do the stakeholders really believe that it can make a real difference in the lifecourse of an individual through the experiences one encounters. Are we ready to take up this challenge? Are we ready to *speak out* on the importance of PL; are we willing to *do projects* to address the topic; and are we prepared to *educate* in order to influence educators to accept and implement such philosophy in their teaching? The choice is ours. My final question is are we really ready to take up the challenge?

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## **African Body Consciousness as a Context for promoting Physical Literacy: interrogating Perspectives and Experiences**

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*Jepkorir Rose Chepyator-Thomso*

### **Abstract**

This paper provides a brief overview of the ways in which the body has been viewed through pre colonial, colonial and post colonial periods in Africa and opens the debate as to how far physical literacy might find resonance in the current context .

The concept of body consciousness and an understanding of what it entails is encapsulated in the cultural fabric of African societies, where human movement was revered for celebratory functions—wedding, initiation, and naming ceremonies— and for health purposes—diagnosis of body problems and signaling a healthy body—that characterized pre-colonial indigenous Africa. Ideas about the body changed considerably with the advent of colonialism, where human movement was valued and practiced differently across many colonial and post-colonial African environments. In contemporary Africa, human movement is expressed in form of competitive sports and as content in physical education, with considerable variations depending on government policy on education, predicaments associated with instruction and curricular implementation, and availability of human and material resources, as well as on problems of disruption or discontinuation of indigenous games and sports. The arguments set forward in this paper are along the concepts of human movement that cross many eras—indigenous, colonial and post-colonial African contexts—and within the arguments is an articulation of the nature of physical education and sport as expressions of physicality and physical literacy in the contemporary period. The paper concludes with suggestions for reform.

Many African children, like their counterparts elsewhere in global environments, participate in a variety of human movement patterns in form of play, game, and sport—grounded in a multitude of cultures—that correspond to diverse ethnic groups.

Human movement was part and parcel of cultural ways of life in indigenous African contexts, and fulfilled several functions: It was used to harmonize communities, challenge people's prowess, settle disputes, preserve elements of culture, or bring about social change, whether politically or culturally. It was also used to demonstrate strength and vitality of individuals and as a diagnostic tool for understanding human illness. In terms of involvement in play and games, everyone had a right to play or compete in a variety of physical activities, albeit there was a separation at times by gender or by

mixed gender and age groupings. The practice or involvement in human movement forms was imbedded in diversity characteristic of diverse ethnic communities, and was often formed an integral part of the traditional processes associated with practices of food gathering hunting and pastoral activities (Amusa & Toriola, 2010).

Indigenous Africa, in succinct terms, had play forms and sports that provided much exhilaration to the children and youth, and allowed for cross-cultural interactions. Engagement in physical activities enhanced development of cognitive and psychomotor skills, encouraged preservation of culture, promoted trans-generational understanding of age-grouping and social changes, and underscored the formation of identity among the children and the youth. From a young age children were active in generation of new knowledge that responded to social and cultural changes, and through their involvement in play game and sport forms, they commented on evolutionary changes in society. Furthermore participation in human movement activities helped punctuate cultural and social activities, unified people from differing communities, and facilitated travel beyond home environments, which helped expand minds of sport players and brought about an all around happiness and opportunities for learning.

Having enjoyed participation in indigenous play, games and sports in culture, lived through western formal schooling enforced through a mission school as informed by public educational policy, and witnessing the convoluted nature of contemporary education practiced in schools, I can certainly point out that the winds of change impacted my village community and the nation at large, a scenario that could be said of other African communities or contexts. Drastic winds of change came with colonialism, which impacted Africa economically, culturally, politically and socially. Broadly, colonialism occurred due to dire changes in the means of production in Europe, such as the industrial revolution and the end of slave-based economy, with Africa presenting opportunities for production of raw materials, and at the same time becoming a ready market for disposal of new manufactured goods from Europe (Ocheni & Nwankwo, 2012).

Colonialism by definition was embedded in conflict, with one society, one nation, or one group of people overtaking another, resulting in dire consequences as noted in historical literatures. Colonial period, which lasted between 1800s-1960s (Oncheni & Nwankwo, 2012), saw European countries carve out Africa into many territories, dividing communities and ethnic groups, and separating families along religious and social class lines. Whilst some of the European nations practiced direct rule, like France, and others used indirect rule, like Britain, all bringing significant changes to the African continent, with the defining moment being the Berlin Conference in 1884-1885, which altered the geopolitics of the entire African region (Candido, 2011). In French Africa, for instance, the form of colonialism practiced centered on assimilation and integration of values that were a prerequisite for one to become part and parcel of the French nation (Combeau-Mari, 2011b).

The European superpowers engineered new social relations to form a new work force in the colonies and they needed the institution of schooling, which worked to promote educational objectives and assimilatory practices that resulted in formation of new identities. The hallmarks of change were mission and colonial government schools, where most of the African children and youth got exposure to the outside world. Missionaries paved the way for Western culture (Ndee, 2010); they used schools as the instrument of assimilation, serving as the first-testing ground for the strategy of integration in the development of education and sport (Combeau-Mari, 2011b, p. 1696). Colonial use of sport was about change to bring out identity formation responsive to the needs of European nations, be it British, French or German. In Pierre de Coubertin's perspective, "sport is a vigorous instrument of discipline [because] it engenders all kinds of good social qualities such as hygiene, cleanliness, order and self-control" (Combeau-Mari, 2011a, p. 1558). The European sporting traditions influenced indigenous sports cultures through the concepts of replacement or substitution. The members of the colonial service and missionaries advocated for the spread of European sports such as field hockey, cricket and football, all providing a means of inculcating "respect for the values of time, discipline and authority within the minds and spirits of the colonized" (Fair, 1997, p. 224). According to Ndee (2010), Western sports were introduced into Tanzania around 1890s, when Germany and British replaced indigenous sports activities with sports such as football and gymnastics. In particular, German gymnastics were introduced in German East African society through school institutions such as Tanga and Mwapwa, the oldest schools in Tanzania (Ndee, 2010).

Situating colonialism within an East African country, Kenya, former British colony, evidence points to impact on family dynamics and relationships. Using my family as an example, one form of colonialism happened through forced labor. For my case, there was the hut tax that was imposed on every family in my village, which had to be paid in coin currency-the Kenyan shilling-and the only way my father could pay the hut tax money was to work for Mr. Wright, who owned large parcel of land on the then White Highlands located on the Western region of Kenya. Members of the village community had been chased to what were then called 'native reserves,' leaving the large stretch of land for British colonials. Only men were allowed to work, leaving their families behind in the reserves. My father came home one-day a month, bringing a bag of maize (corn) flour for the family. Men who left for work in the white farmlands or the mines remains a defining characteristic of colonial Africa and continued to the postcolonial era in some parts of Africa. This impacted my involvement in indigenous games and sports because I had to help my mother with all of the household activities, as well as do my dad's work. The consciousness of the body came to be valued based economic production, which resulted in the idea of physicality in form of games and sporting activities being considered to be of lesser value as physical work-crop and livestock production became associated with social class mobility and education in the village community.

What was the role of colonial education and physical education and sport in particular? Missionaries, both Catholics and Protestants, sought to evangelize the African



population and promote academics to enable the Africans to read the bible, focusing on educating the whole child. Physical education and sport were considered essential “to the spiritual and intellectual formation of the children; they added physical culture and sport, a powerful means of implementing moral edification and instilling initiative” (Combeau-Mari, 2011a, p. 1562). Generally sport in the colonial environment fulfilled a social function, it served as an “instrument of colonization (of education and assimilation)” (Combeau-Mari, 2011a, p. 1557) and also served as a mechanism of social control, as well as socialization into European sporting codes. Specifically sport was used to inculcate “respect and obedience for established rules” (Combeau-Mari, 2011a, p. 1557) as it happened in French ruled Madagascar, and was also used to meet military goals, as it happened in French Africa, where sport, gymnastics in particular, was used to recruit and train military men to defend the French nation. The Commission for sports in French Africa controlled physical education in schools and trained instructors to teach physical training in elementary and secondary schools and even expanded to cover extra-curricular activities, which were thought to “enrich and control sport associations” (Combeau-Mari, 2011, p. 1690). In German Africa, German gymnastics were used to teach the habitus of obedience and loyalty among the Africa children and youth, as well as to prepare them to be “physically strong, mentally subordinate and morally subversive youth, and using the military regime of gymnastics to mold Africans into useful soldiers” (Ndee, 2010, p. 836).

Sport, particularly the club system in South Africa, was used to promote solidarity through schools, with sporting codes of cricket, rugby football and athletics being targeted for “imperial proselytizing” by the conclusion of the end of the nineteenth century (Merritt, 2011, p. 2009). These sporting activities were for the whites only in South Africa, with blacks having access to sport through mission schools, as for instance the mission of Bishopstowe located in Pietermaritzburg, or as a result of contact with British soldiers, which occurred around 1930s (Merritt, 2011). As a product of a catholic missionary school, I attest to what I learned in terms of understanding the human body. The body consciousness valued rested squarely on western sports and dances in the school curriculum. At the time, I accepted this as a prerequisite for acceptance into the new and rapidly changing Kenyan society. I actually loved learning the activities and accepted them for comparative reasons-and to this day I can, if asked, teach highland Scottish dances and Irish jig. Thus lacking in the school curriculum were ethnic groups dances and sports to balance the curriculum, a scenario that characterizes the period immediately following independence –1963.

Contemporary Africa is both indigenous and post-colonial, with majority of the communities characterizing post-independent period, where many European remnants in culture and education remain. Witnessing contemporary African contexts through a variety of literatures, and experiencing Western education during what others may consider roaring 1960s, where many African countries received independence from their colonizers, I can argue that there is much complexity that is unbecoming for one to articulate completely the nature of human movements as grounded in teachings of

physical education and sporting activities. On the one hand, one form of complexity deals with beneficial aspects of the introduction of western sports—allowed Africans to unify and resist Western domination—and on the other hand, it deals with the creation of a hybrid cultures that have been actually empowering, and have allowed, however small, retention of indigenous activities that include games and sports—such board games and running, jumping and throwing activities that characterize the sport of track and field. What also remains, albeit in rare cases, is the use of human movement as a diagnostic instrument for illnesses and as a tool of recognition as one's movement repertoires are considered unique individual signature. What follows next are broad understandings that underscore the status of school physical education and afterschool sport in post-colonial African contexts following reception of independence.

In post-colonial Africa socio-national development took center stage immediately following independence. Many governments used social institutions to bring about ethnic integration and national development. Former President of South Africa, Nelson Mandela used the sport of rugby to mobilize black and white South Africans to come together as a nation, expressing that sport possesses a language that reaches widely in society, places a president or a politician cannot reach (Evans, 2010). The system of schooling with its integrative elements embedded in school curriculum was used to promote “national unity and mitigate territorial ethnic fragmentation” (Kpessa, Beland, Lecours, 2011, p. 2117) in the newly independent African nations, particularly given the arbitrariness of demarcation of boundaries associated with each territory or nation (Kpessa, Beland, Lecours, 2011). In decolonizing African contexts, ways to incorporate diversity from all angles, including indigenous and postcolonial situations, and consistent with Tuhiwai Smith's (1999) understanding of colonialism, is about “centering our concerns and world views and then coming to know and understand theory and research from our own perspectives and for our own purposes” (p. 39). Along this frame of thought, the African body consciousness ought to be central in the school curriculum to encourage preservation and documentation of cultural changes in society, with introduced western sports and dance activities used comparatively to expand students' horizons and exercise their competitive advantage in global sports competitions—such is the case with track running Kenya.

In the newly independent nations, education and sport were essentially used to unify communities or diverse ethnic groups and to promote identity formation among the youth. “For example in the country of Benin, West Africa, “sports are a political power,” very critical in the formation of new identities, with sport spaces allowing young people to “watch each other and manifest in themselves the phenomena of identification and identity” (Dakpo, Massiera, Gaglozoun, Niculescu, 2011, p. 320). Sport as space became central to social experiences of the people and also served as a way to gather thoughts and make plans to resist European occupation in Africa, particularly the sport of football. “Sport in Zanzibar, as elsewhere in the empire, often carried undertones of conflict and at times became overtly political. Yet football represented much more than a political battlefield to the players and spectators. For men in colonial Zanzibar, playing

and watching football were often central social experiences” (Fair, 1997, p. 224). Human movement as sport has become prominent in postcolonial Africa because of its usefulness in meeting national development goals, which physical education as an end-in-itself struggled to get legitimacy on the schooling of the children and the youth.

Children and the youth ought to be entitled to learn and enjoy physical activity involvement both within and outside school environments. Human movement, regardless of its indigeneness or contemporariness, location or environment practiced, should be considered a human right in schools. Skillful movers often reap a lot of benefits from involvement in physical education and sport activities. In contemporary Africa, however, there are drawbacks in policy and practice that make school physical education to be at loggerheads with school administration and other subject teachers, as well as with some community leaders and members, who see physical education as non-consequential and sport as useful to the nation. Why? Physical activity as content in physical education is marginalized because it is perceived to be of a lesser value (non-examinable subject) in comparison to afterschool sporting activities as the case with Ghana, Nigeria and Kenya (Chepyator-Thomson & M’mbaha, 2013, Mgbor & Adodo, 2013; Ocansey, Sofo & Baba, 2013). Government leaders, teachers, parents, and students see physical education as lacking instrumental value, while sport values are visible to all in society (Chepyator-Thomson, 2013 in press)—Olympic and commonwealth performances, hence enhance nations’ international prestige. Sport is considered to provide a way to nurture and develop next Olympic level performers (Houlihan, 2002), with physical education being located on the margins of school realities, despite public policy that legalize its existence in the school curriculum. Consequently physical education is not taught as seriously as mathematics or biology.

Suggestions for reform to quell this happening partly rest on schools and communities and partly on government policy on education to require the creation of a new physical education program replete with movements as consistent with geography and diversity of the human population. While schools can become arenas for negotiating new ways of developing and implementing human movement patterns that engender fruitful connectivity among ethnic groups as consistent with tenets of democracy and promoting curricular diversity as responsive to culture and geography, the government should institutionalize particular systems of understanding body consciousness considered as content in physical education and grounding in public policy on education. The language of negotiation can embrace principles of pan-Africanism, incorporating them in the development of human movement in schools and society. Pan-Africanism is rooted in tenets of unification, particularly in reference to diverse people in Africa. A worldview often used in this instance is the concept of Afrocentricity, where “phenomena are viewed from the perspective of the African people” (Asante, 1991, p. 171). When ideas on Afrocentricity are utilized in teaching, development and implementation of school physical education, realization of indigenous outlook on physical education and sports activities help lessen the stigma associated with colonialism. Essentially schools and communities should serve as sites of empowerment, where the children and the youth

get to engage in playful forms of movement, as well as participating in a variety of sporting activities, making human movement a human right, as echoed in writings about physical literacy where all are accorded opportunities for formation of positive social and ethnic relations and development of skills useful in individual health and society. Reflecting of indigenous Africa, in particular my cultural experience, human movement as a diagnostic tool for health purposes needs to be considered in the school curriculum, a tool that we can all use regardless of locality or national origin, or as a signature of individuality, helping empower the children and the youth in life endeavors.

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## Physical Literacy and the Australian Health and Physical Education Curriculum

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*Doune Macdonald & Eimear Enright*

### Abstract

In 2014 the first Australia-wide curriculum for the learning area Health and Physical Education (HPE) is due for release to Australia's state and territories and their respective education systems. The HPE curriculum does not make explicit reference to the concept of physical literacy for reasons that shall be outlined in this paper. There are, however, strong alignments between particular interpretations of physical literacy and the HPE curriculum. In future iterations of HPE we see possibilities for physical literacy to be included as a "general capability" reflecting the interpretations of physical literacy that describe it as a human or embodied capability.

### Key Words

Physical literacy, Health and physical education, Australia

### Introduction

In 2014 the first Australia-wide curriculum for the learning area Health and Physical Education (HPE) is due for release to Australia's state and territories and their respective education systems. Despite some advocacy during the two year consultation process for the concept of physical literacy to have a framing role in the HPE curriculum, the HPE documents do not make explicit reference to physical literacy for reasons that shall be introduced in this paper. There are, however, strong alignments between particular interpretations of physical literacy and aspects of HPE curriculum. In future iterations of the HPE curriculum we see possibilities for physical literacy to be included as a "capability" reflecting interpretations of physical literacy by scholars such as Mandigo and colleagues (2009) as well as Margaret Whitehead herself (e.g. 2010).

### Shaping Australian Health and Physical Education

Across 2011 to 2013 Australia has created a new, national curriculum for HPE in the compulsory years of schooling. HPE is one of several other curricula that have been written at the national level with the goal of "improving the quality, equity and transparency of Australia's education system" (Australian Curriculum, Assessment and Reporting Authority, ACARA, 2012a, p. 5). Under the auspices of ACARA, HPE has

been written in a cycle of initial Shape Paper phases (draft, national consultation, finalisation in 2012) and a subsequent, more detailed curriculum document (draft, national consultation, finalisation in late 2013). The Shape Paper outlines the broad direction for the learning area, including big ideas that should frame the learning area for the 21st century. As with all the Shape Papers, HPE had a commissioned Lead Writer (first author of this paper) and significant input from advisory panels and key stakeholders across the drafting process.

The Shape Paper was informed by a broad literature base that included a review of international practices/curricula in HPE (or equivalent), significant national and international reports (primarily health and sport-related), contemporary reading across the biophysical, sociocultural and behavioural sub-disciplines informing the learning area, and a synthesis of “futures” literature. This literature, together with the aspirations and priorities outlined by ACARA for all curricula, was synthesised into five “propositions”, as outlined below around which the HPE curriculum was to be shaped.

### ***Focus on educative Purposes***

This overarching proposition suggests that the intent of the curriculum is to focus on educative purposes; the knowledge, understanding and skills required by students to make informed decisions that enrich their own and others’ health and well-being. It is acknowledged that the curriculum may contribute to a range of other outcomes, such as increasing Australia’s rates of physical activity participation or decreasing mental illness (ostensibly instrumental outcomes). However, it is the education of students in personal, social and community health, movement and physical activity and the assessment of this learning that is core to the HPE curriculum.

### ***Take a strengths-based approach***

A strengths-based approach to health is of growing international interest. In health promotion its genesis often refers to Antonovsky’s (1996) salutogenic model of health but it is also consistent with broader interests in, for example, positive psychology, positive education and Indigenous health strategies. Salutogenesis is defined as the process of movement towards the health end of a health-ease/dis-ease continuum; prioritising “what keeps people healthy?” rather than taking a pathogenic-curative approach (Bengel, Strittmatter, & Willmann, 1999). It focuses on the learner embedded within a communities’ structural facilitators, constraints, assets and resources (Lindstrom & Erikson, 2010; Quennerstedt, 2008; Thorburn & Horrell, 2012).

### ***Value Movement***

At one level, to have included a proposition that reminds educators of the centrality of movement to a HPE curriculum seems redundant. However, by drawing attention to the significance of movement to human physical, social, emotional, cultural and intellectual



identities and endeavours, it emphasises the physical and experiential core of HPE and the importance of engaging in movement across the lifespan. Early thinking in relation to this proposition was informed by Arnold's (1988) rubric for Physical Education (PE) of learning in, about and through movement, with learning in and about movement providing educationally sound justifications for PE.

### *Develop Health Literacy*

Australian and international research into the future of health is unequivocal about the importance of health literacy as an investment through schooling in health promotion and thereby public health. Operationalising the concept with an educative intent, Nutbeam (2008) outlined three inter-related dimensions:

- Functional – acquisition of information relating to knowledge and services
- Interactive – acquisition of more advanced knowledge, understanding and skills to actively and independently engage with a health issue and to apply new information to changing circumstances, and
- Critical – access to and critical analysis of health information in order to take action to promote personal health and wellbeing or that of others (ACARA, 2013).

As an aside, ACARA was reluctant to introduce another “literacy” into the Australian curriculum but was persuaded of the national, multi-sectoral support for health literacy's inclusion, support that was not forthcoming for physical literacy.

### *Include a critical Inquiry Approach*

As explained elsewhere (Macdonald, 2013) there were several drivers for referring to “critical” related to both content and pedagogy. One driver was the large body of literature that suggests HPE has a history of exclusion of those with less motor skill confidence, many girls, the overweight, cultural minorities (e.g., Enright & O'Sullivan, 2010; Sykes, 2011; Wright & Macdonald, 2010). A curriculum that can positively engage all students, through an inclusion orientation, is consistent with Australia's aspirations for healthy, active communities. A critical approach can also complement what some scholars of strength-based approaches (e.g., McCuaig, Quennerstedt & Macdonald, 2013) see as their potentially individualistic focus. Further, the futures literature, reinforces that students will need to be equipped with the skills and dispositions as lifelong problem-solvers, critically appraising information (see “health literacy” above) and making informed decisions from an ever-changing knowledge base (e.g. Broadbear & Keyser, 2000; Cliff, 2012; White & Wyn, 2008).

### *HPE structure*

The curriculum is structured in two inter-related strands: *Personal, social and community health* and *Movement and physical activity* with each strand having a number of focus areas. In the Movement and physical activity strand, the focus areas are:

- Active play and minor games
- Challenge and adventure activities
- Fundamental movement skills
- Games and sports
- Lifelong physical activities
- Rhythmic and expressive activities.

The intention is that these focus areas are all addressed across the curriculum to give the students a breadth of skills and experience as they become competent and confident participants in movement and physical activity experiences.

### **Connecting Physical Literacy to the HPE Curriculum**

Internationally, the concept of physical literacy has been defined and operationalised in sports policy and curriculum documents in a variety of ways. With respect to sports policy, physical literacy has been endorsed as the cornerstone of lifelong participation in physical activity and excellence in sport. Coaching Ireland's LISPA (Longterm Involvement in Sport and Physical Activity) framework and the Canadian Sport Centre's LTAD (Long Term Athlete Development) model both draw on Higgs and colleagues' (2008, p. 5) definition of physical literacy:

... the development of fundamental movement skills and fundamental sport skills that permit a child to move confidently and with control, in a wide range of physical activity, rhythmic (dance) and sports situations. Physical Literacy also includes the ability to read what is going on around them in an activity setting and react appropriately.

Similarly, UK Sport (2002) has defined physical literacy as the development of agility, balance, coordination, and skill across a wide range of activities. As identified by Almond (in press) in a critique of perceptions of physical literacy, these definitions taken together, prioritise the development of physical skills and abilities, and specifically the development of fundamental motor skills.

While this version of physical literacy may serve the interests of the sporting sector, it arguably de-emphasises the cognitive and affective learning domains and thereby a broader educative intent. Unsurprisingly perhaps, a broader conception of physical literacy has been employed in a range of ways in curricular documents. In Canada the concept of physical literacy appears in many provincial PE curricula (i.e. British Columbia, Saskatchewan, Ontario, Newfoundland and Labrador) but is employed in a more holistic fashion. Ontario's Revised Health and Physical Education Elementary Curriculum (2010, p. 3), for example, uses Mandigo and colleagues' (2009, p. 28) definition in an effort to bridge the gap between the needs and philosophies of sport and those of education:

Individuals who are physically literate move with competence in a wide variety of physical activities that benefit the development of the whole person.

Physically literate individuals consistently develop the motivation and ability to understand, communicate, apply, and analyze different forms of movement. They are able to demonstrate a variety of movements confidently, competently, creatively, and strategically across a wide range of health-related physical activities. These skills enable individuals to make healthy, active choices throughout their life span that are both beneficial to and respectful of themselves, others, and their environment.

In the US, the National Association for Sport and Physical Education (NASPE) (2013) has stretched the definition still further by substituting 'physically educated' with 'physically literate' in their updated K-12 Standards. That is, physical literacy is taken to be the sum total of the skills, knowledge and attitudes inculcated in PE and, in fact, the very goal of the subject area.

In another variation, Tremblay and Lloyd (2010) have described physical literacy as a "fresh springboard" for PE but suggest that in order to legitimate and unlock its potential "appropriate metrics must be in place to evaluate the key domains of physical literacy" (p. 26). Significantly however, one of the key proponents of physical literacy, Margaret Whitehead (2013), cautions that any assessment of developing physical literacy should be seen as the charting of an individual's progress on their personal physical literacy journey. Norm referenced assessment and comparison with others is not appropriate. Judgements should be ipsative, that is, made against previous attainment. She has described physical literacy as "a disposition acquired by individuals encompassing the motivation, confidence, physical competence, knowledge and understanding that establishes purposeful physical pursuits as an integral element of their lifestyle" (p. 41). Manifested in a curriculum, Whitehead and her colleagues (see, for example, Murdoch & Whitehead, 2013; Whitehead, 2013; Whitehead & Almond, 2013) suggest that physical literacy includes the valuing of:

- poise, confidence, competence and efficiency in purposeful and culturally relevant movement;
- basic movement patterns that lay a foundation for experiencing a repertoire of purposeful physical activity or movement forms across environments;
- knowledge and understanding of movement across the lifecourse and as it relates to health; and
- including all, building self-esteem and empowering students to take responsibility for their own learning.

The picture that emerges is one of physical literacy being a contested concept that is not consistently applied. It was not a concept with sufficient national and international "settlement" to be highlighted in the Shape Paper or HPE curriculum even if ACARA had an appetite for another "literacy" dimension. However, Whitehead's vision for physical literacy resonates with the Australian curriculum in many respects in that the HPE curriculum also:

- values movement education and assessment of/for learning;
- emphasises movement confidence and competence;

- presents a taxonomy of movement experiences that give depth and breadth for learners to engage in purposeful physical pursuits;
- has a lifelong focus; and
- is concerned with the inclusion, positive self-esteem and empowerment of all.

However, it is Whitehead's (2011, p. 1) conceptualisation of physical literacy that introduces the notion of "capability" (ie. "Physical literacy is a fundamental and valued human capability...") that may be particularly powerful in the Australian curriculum in the future. Introducing physical literacy as a "capability" in a curriculum (see Nussbaum, 2011), emphasises its breadth, pervasiveness and relevance across the lifecourse. Already in the Australian Curriculum, "the general capabilities encompass the knowledge, skills, behaviours and dispositions that will assist students to live and work successfully in the twenty-first century" (ACARA, 2013). Currently, there are seven general capabilities across all learning areas:

- Literacy
- Numeracy
- Information and communication technology capability
- Critical and creative thinking
- Personal and social capability
- Ethical understanding
- Intercultural understanding

and physical literacy, we argue, would enhance this set.

Physical literacy as a general capability would add an important dimension to all teachers' understanding of the significance of physicality and speak back to mind-body dualism that permeates schooling. However, at the time of writing HPE, there was no appetite in ACARA to consider changes to their general capabilities.

## Conclusion

Internationally and within Australia, the debate about what is physical literacy and how it might be most usefully recruited in shaping or promoting H/PE curricula requires ongoing conversation. In saying this, the Australian HPE curriculum, consistent with Whitehead (2010, 2013) and others (e.g. Almond, in press; Keegan et al., 2013), does not sit comfortably with interpretations of physical literacy that claim its power is its connection to the concept of literacy (e.g., Higgs, 2010), that twin it with health literacy (e.g., Ontario Ministry of Education, 2010), that align it to fundamental movement skills or sporting pathways (e.g., Manitoba in Motion, n.d.), or that are seeking to refine a physical literacy assessment matrix (e.g., Tremblay & Lloyd, 2010). While not explicit, the Australian HPE curriculum resonates with conceptualisations of physical literacy that emphasise a lifelong journey of physical embodiment, awareness, engagement and pleasure. With

subsequent revisions of the Australian HPE curriculum, it may be that advocates of physical literacy can successfully argue the concept is most powerful if added to the general capabilities to enhance their capture of what it means to be human in the 21st century.

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## Physical Literacy within the Educational Context in Canada

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### Abstract

This paper looks at the development of physical literacy in Canada over the last 10 years. The discussion is based round some of the strategies to promote physical literacy, as identified by Margaret Whitehead (2010). Initiatives taken by personnel in Canada are set out showing how each of these strategies is being promoted.

O Canada. The country with the second largest landmass in the world. A county where images of majestic mountains, glacier fed rivers and lakes, coastal hiking trails, and clean outdoor air pop into peoples' imaginations around the globe. While many of these images are true (and we are proud of them), for many of our children and youth, the only experiences they have with such natural beauty is through images on television and computer screens, and other forms of digital technology. The average Canadian student in grades 6 to 12 spends an astonishing 7.8 hrs EACH DAY in front of a screen (Leatherdale & Ahmed, 2011). Childhood obesity (Public Health Agency, 2011) and inactivity/ sedentary behaviour rates are rapidly climbing (Active Healthy Kids Canada, 2013) along with corresponding health problems and their associated costs (Janssen, 2012).

One of the most comprehensive solutions being presented to address these and other health issues (physical, social, mental) is through the development of a physically literate society. Many sectors across Canada (i.e., education, sport, recreation, public health) have turned their attention to ways in which the development of physical literacy can be the foundation for the healthy development of current and future generations. This article highlights the journey travelled so far and the journey yet to come to motivate our children and youth away from their screens and to experience the many benefits that being physically literate has to offer. To provide a framework for this discussion, strategies to promote physical literacy identified by Margaret Whitehead (2010) in her concluding chapter in *Physical Literacy Throughout the Lifecourse* will be presented with respect to various Canadian initiatives that address each selected recommendation.

*"Promoting a better understanding of the nature and significance of the concept of physical literacy, particularly working in the field of education" (Whitehead, 2010, p. 191)*

Canadian Sport for Life (CS4L) and Physical and Health Education (PHE) Canada have both taken leadership roles across Canada to promote physical literacy at the grassroots level across several sectors (e.g., education, sport, recreation, public health). PHE Canada has developed a working definition of physical literacy for educators, which builds upon the seminal work of Whitehead (2010). Through their Physical Literacy website, PHE Canada (2013) has developed resources for educators and parents that help them to better understand the concept of physical literacy and why it is important. As well, the CS4L (2013) Physical Literacy website has compiled a number of resources that are geared towards educators, coaches and recreation leaders on helping them to better understand physical literacy.

As a result of the increased awareness of the importance of physical literacy raised by organizations such as PHE Canada and CS4L, more and more physical education curricula across Canada have embedded the concept of physical literacy into their learning outcomes for students. Within Canada, education is the responsibility of the individual provinces and territories and therefore, there is not one National curriculum. However, a growing number of newly updated provincial curricula have identified the important role that physical education has to play in the development of physical literacy. For example, in the province of Ontario, the vision of the physical education program is to "... help [students] thrive in an ever-changing world by enabling them to acquire physical literacy" (Ontario Ministry of Education, 2010, p. 3). In Manitoba: "Throughout Kindergarten to Grade 10, PE programming emphasizes acquisition and application of movement skills in a variety of physical activities for developing physical literacy" (Manitoba Education, Citizenship and Youth 2009, p. 38). This focus upon physical literacy, particularly within the vision statements of curricula, has resulted in significant attention being paid to physical literacy within the education sector. For example, the Ontario Physical and Health Education Association (Ophea, 2013) has created a series of videos for parents, teachers, and students explaining the importance of physical literacy and its relationship to the PE curriculum. PHE Canada (2013) has also provided a number of resources for educators (e.g. video, podcasts, practical activities, workshops, documents, etc.) that highlight effective pedagogical strategies that teachers can use to enhance the development of their students' physical literacy.

*"Challenging the assumption that physical activity is only for the physically talented"*  
(Whitehead, 2010, p. 192)

Canada's Long Term Athlete Development (LTAD) plan has provided a framework for all of Canada's National Sport Organizations (NSO) to implement physical activity programs for individuals across the lifespan (Balyi, Way, Norris, Cardinal, & Higgs, 2005). The development of physical literacy is the foundation for BOTH elite sport and for the health of the nation. In other words, each of the NSO's LTAD sport-specific models provides a plan for the development of high performance athletes as well as individuals who wish to participate for recreational and health benefits. However, whether it is the goal of reaching the podium at a major international event or being active for life, the development of physical literacy, particularly through childhood and adolescence, is at the foundation of LTAD. CS4L (2013) and PHE Canada (2013) have both taken a

leadership role in recognizing and connecting physical educators to the LTAD model. By recognizing that PE in school can be one of the most effective ways to enhance the development of physical literacy for all Canadian children and youth (PE is required in most provinces until Grade 9 – age 14), CS4L (2013) and PHE Canada (2013) have created a number of resources and support tools to help educators understand the importance of physical literacy and its importance within the LTAD model.

*“Ensuring that all practitioners understand fully that a wide variety of physical activities need to be introduced to young people, to cater for the interests of all” (Whitehead, 2010, p. 192)*

The adoption of a movement education approach within many of Canada’s PE curricula has helped to ensure that students are exposed to a wide variety of physical activities. Influenced by the work of Rudolf Laban (c.f., Wall & Murray, 1994), many teachers who immigrated to Canada from Great Britain after World War II soon had a far reaching impact upon the development of a “new way” of teaching PE that challenged the more militaristic style embedded in many schools at the time (Mandigo, Corlett & Lathrop, 2012). The concept of physical literacy first evolved from prominent movement educators at the time such as Ruth Morrison (1969) who wrote:

“To be physically literate, one should be creative, imaginative, and clear in expressive movement, competent and efficient in utilitarian movement, and inventive, versatile, and skilful in objective movement.” (p. 3)

This type of holistic and monistic approach to PE encouraged movement across diverse forms of movement and placed an emphasis on the “how” activities were taught (i.e., pedagogy) rather than always the “what” was being taught. Educational dance and gymnastics and developmental games (that later evolved into Teaching Games for Understanding) soon became the dominant movement forms in many PE curricula across Canada. Today, movement education is still very much a part of PE curricula (Francis, Sheehan, Robinson, & Johnson, 2011). Curriculum outcomes that require students to develop movement skills (e.g., stability, locomotion, manipulation) in conjunction with movement concepts such as body, effort, space, and relationship across multiple forms of physical activities (e.g., games, dance, gymnastics, fitness, outdoor pursuits, individual pursuits, etc.) are identified in many PE curricula documents across Canada (e.g., British Columbia, Saskatchewan, Ontario, Nova Scotia). As well, organizations outside of the education sector have also developed resources that can be integrated into PE programs. For example, the Canadian Coaching Association’s (2013) *Fundamental Skills Program* provides both teachers and coaches with practical tools on how to support the development of fundamental movement skills with their students and athletes respectively.

*“Challenging the assumption that physical activity is not appropriate for those with a disability or for the older adult population” (Whitehead, 2010, p. 192)*

AND

*“Breaking down barriers in respect of participation in all or some activities by particular groups, such as women and those from different ethnic backgrounds” (Whitehead, 2010, p. 192)*

The concept of physical literacy in Canada has been one viewed through an inclusive lens. It has been a concept that has brought together various groups who represent Canada's diverse and sometimes marginalized population. For example, the resource entitled *No Accidental Champion* (Higgs, Bluechardt, Balyi, Way, Jurbala, & Legg, 2013) has adapted the LTAD framework for athletes with a disability. This has resulted in an increased emphasis on the development of physical literacy for children and youth with a disability in physical education and sport programs. PHE Canada, for example, has developed two resources for physical educators that focus on the development of fundamental skills as an important basis for developing physical literacy for children with physical (Lloyd & Legg, 2009) and behavioural disabilities (Lloyd, 2010). The Canadian Association for the Advancement of Women in Sport and Physical Activity (CAAWS) published a report entitled *Actively Engaging Women and Girls*. In their recommendations to educators, the report states: “Physical education and school-based sport and physical activity can provide valuable opportunities for girls and young women to develop physical literacy and a foundation for life-long participation” (Johnstone & Millar, 2012, p. 39). These are two examples, among many others, that highlight the emphasis being placed within education on ensuring that ALL Canadian children and youth have an opportunity to develop their physical literacy

*“Fostering enthusiasm for getting involved in physical activity, through strategies to increase motivation for, and confidence in, being active” (Whitehead, 2010, p. 192)*

AND

*“Establishing assessment for learning in the learning/ teaching situation and developing a proven system of charting progress in developing physical literacy” (Whitehead, 2010, p. 192)*

PHE Canada and CS4L have developed assessment tools to help educators and practitioners chart the progress of students' levels of physical literacy and to provide formative feedback to students about the development of their physical literacy. For example, PHE Canada's (2013) Passport for Life program assesses four key areas of physical literacy: Active Participation, Living Skills, Fitness Skills, and Movement Skills. Each of these components is consistent with the holistic perspective of physical literacy and are also a part of PE curriculum across Canada. The program is currently designed for students in Grades 4 to 6, with a pilot program in place for students in Grades 7 to 9 to take place later in 2013. Using standardized and developmentally appropriate assessment tools for each of the four categories, teachers can input the students' results and then use that data to provide formative feedback on areas they are performing well and areas where they could improve. Practical ideas to help them improve are also provided. Teachers can then track the students' progress during the year and schools can also monitor their progress from grade to grade. The tool also provides practitioners

with pointers as to how their pedagogy might support student progress – not least in respect of developing their motivation and confidence. The assessment tool is not designed for summative purposes (i.e., to determine a students' grade in their PE class) but rather as an assessment tool *for* learning that will enable students to develop strategies to enhance their current levels of physical literacy and for teachers to plan activities to help support them in their development of physical literacy.

CS4L's (2013) recent release of the PLAY tools have a similar focus but geared more towards sport and recreation practitioners as well as parents. The PLAY tools provide an assessment of children ages seven and up with a measure of their movement competence (i.e., stability, object control, and transport) as well as their motivation and confidence to be physically active. The tool also provides an assessment of where the children participate to encourage participation in multiple environments (e.g., snow, ice, land, air, water, outdoors) as well as how they interact respectfully with others in these environments. Similar to the Passport for Life program, the aim of these assessments is for formative purposes and children, coaches, and parents are encouraged to use the assessments to help set realistic and attainable goals. A PLAY tool for parents and a self-assessment PLAY tool for children are also included to help with their ongoing journey in the development of physical literacy.

*“Bringing together all those in promoting physical competence so that they share the common purpose of promoting physical literacy and speak with one voice” (Whitehead, 2010, p. 192)*

CS4L hosts an annual National summit to bring together representatives from government, sport, education, health, and the corporate sector to discuss and learn about physical literacy. Their leadership in this area recently culminated in an International Physical Literacy Conference (April, 2013) that brought together over 250 delegates from a number of countries and sectors. Physical literacy has also been a key theme at several education conferences over the past five years. From PHE Canada's National Conference, to Provincial Conferences (e.g., Newfoundland and Labrador, Alberta, Manitoba) to local school board and public health professional development workshops, the concept of physical literacy has brought people from across the various sectors together to help develop a common movement vocabulary.

## Conclusion

The concept of physical literacy and the goal to create a physically literate nation has clearly brought people together. Educators, coaches, parents, public health workers, recreation leaders, government officials, etc are all starting to use a common language; the language of physical literacy. The results to date have been very encouraging. While there is still a long way to ensuring that all Canadian students possess a level of physical literacy that is sufficient to help them live healthy and active lives, the road ahead looks promising given how far we have come and the collective work of leaders across Canada.

## Author's Note

While this is an original paper, some overlap in the content does exist with a soon to be published book chapter entitled: Mandigo, J.L., & Lathrop, A. (submitted). The relevance of physical literacy in the development of physical education curriculum and pedagogy in Canada. Chapter in M. Chin & C. R. Edington (Eds). *Physical Education and Health: Global Perspectives and Best Practices*. Urbana, IL: Sagamore. The book chapter builds on the information provided in this paper and provides a more detailed description of various initiatives that support the development of physical literacy across Canada.

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## About Physical Literacy in Venezuela

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### Abstract

This essay presents a short view of how the term physical literacy is perceived in Venezuela, a country in which this term has not been used, nonetheless it seems that there have been elements in place that look at the objectives of physical literacy. So in order to present the information there is a review of the historical development of Venezuelan society in connection with its evolution and later its education, mostly physical education. At the end there is a short reflection as more discussion needs to be conducted.

**Key Words:** Physical literacy, Venezuela, indigenous people

It will be very easy and simple to indicate that we do not work with the term physical literacy in Venezuela, and indeed it is a term that has not been used or discussed in the national literature. Nevertheless as we analyze this term we observe that in the national education system there are objectives and there is a vision that could be compared with the principles that aligns with the concept of physical literacy (Whitehead & Murdoch, 2006)

To be fair we would need to start by acknowledging the indigenous people of this region in the piece of land known as Venezuela after the arrival of the of the Spaniards colonizers in 1548. Before the colonizers arrived, the natives considered work and exercise as two inter-related elements in their culture. They were connected as physical exercise was needed to work, in order to fulfill the basic natural needs. So in order to satisfy hunger and protection everybody had to work without discrimination by sex or age; everybody participated in the daily activities and shared what was taken from nature. A characteristic of this period is that physical activity and work were closely related, this attitude is also found in their education because it was necessary to the daily life and tradition to have physical abilities and to respect particular animistic religious beliefs. Young people learnt physical-labour activities from adults in a uniform social pattern, as well as from the other members of the tribe. We could say that it is an applied physical education; there is a teaching process in which young people assimilate the necessary skills for their lifetime and they become an efficient members of the tribe (Mizrahi & Lopez de D'Amico, 2012). Indigenous people were very good swimmers, horse riders, canoeists and wrestlers, as well as adept with arrows and had natural abilities to walk long distances and to run (Mizrahi, 2013)

With the arrival of the Spaniard Colonizers the characteristic and number of the original indigenous inhabitants varied, due to the miscegenation (Spaniard, Indians and blacks) and the killing of indigenous people by the colonizers and the evangelization process.

The Conquer and Colonization period lasted between XV to XVIII century. The Colonizers prohibited the indigenous games, songs and dances as they were considered profane and they have to dedicate all their time to work. In the 'Colonial society' only the highest class had the privilege to practice physical activities (games and 'sports'). The Conquerors imposed their own culture, so besides education and weapons, they also brought their own entertainments such as: tournaments, rods, bullfighting, quintain, that incorporated physical activity, in addition they also brought artistic activity such as comedies, prologues, merry dances and theatrical representations (Flamerich, 2005). The independence period lasted from 1810 to 1830, but at the end of it most indigenous inhabitants were killed.

In 1819 the first legal document can be found that mentions the importance of physical exercise; Simón Bolívar (national hero) included it as he understood the importance of corporal training and the importance of knowing the human body (Ramírez, 2009); and in 1897, 'gymnastics' was first included in the Code of Public Instruction as a compulsory subject (López de D'Amico, 2012). Physical education has evolved following the sociocultural and political changes in the country; for more than a century it has been a compulsory subject in the education system although referred to by different names. In Venezuela, as in many other places it started as a disciplinary subject that looked to hygiene. Later it looked at sport performance, then it changed to be more focus in psychomotor development, and nowadays it looks at an individual with active corporal movement in which the professional teacher has to combine knowledge and life experiences of the student in order to promote his/her holistic and harmonic development in order to promote a healthy wellbeing. Through the different historical documents as far as late XIX century it is observed there was acknowledgement of the importance of physical exercise for the development of the human being as a whole (e.g., Ramírez, 2013)

In 1999 a new constitution came in place and it has provoked systematic changes in the education system which finally was legally expressed in the Organic Education Law in 2009 (LOE). The education system is divided in: initial education (0 – 6 years old), primary school (grades 1 – 6), secondary school (years 1 – 5 or 6), and university level. PE, sport and recreation are present throughout the education system. At initial education PE and Recreation are present in the learning area named: Personal, Social and Communication Education. The main purpose at this stage is to acquire the basic motor abilities.

In primary school Physical Education there are two main purposes: From grade 1 to 3, it is a means to provide a comprehensive education to the individual and fundamental vehicle to promote general health and the development of ability and cognitive skills. From 4th to 6th grade it is a means to develop in each individual the perceptive, physical, socio-motor elements, besides his/her enjoyment and development of the personality.

In secondary education (high school) the area of learning presents four components: a) physical activity as a systematic element to optimize the integral health of the human being; b) recreation as a means of formal and non formal education; c) sport as a vehicle for the development of abilities and specific skills; and d) physical activity and recreation to educate towards a better quality of life. This last also refers the relationship between individuals and

the environment.

At the moment the national syllabus is under review as dimensions as health and environment are elements that have to be reinforced in all areas of knowledge. At university level the sport credit has existed since long ago and in many career courses related with Physical education and Health are offered either as compulsory (e.g., in any teaching training career) or as an optional course.

When I started to write this article I discussed with many academics who at first hesitated to accept the term 'physical literacy' (alfabetización física in Spanish) basically for two reasons: there has been a view that we have always followed foreign models and secondly because there has already been much debate and discussion about many names and terms related to PE, without any agreement about which term is best. There is some consensus that the term physical literacy might be acceptable as it points towards creating lifelong habits related with an active life style, which is seen as a goal of PE. While that should be the case, the reality is that we have a population that is suffering the consequences of sedentary lifestyle. We also know that there has been good intention in some policies but their implementation has been weak and that more trained teachers are needed.

In the last years some programs have been implemented to promote physical activity. Barrio Adentro Deportivo (Sport within the suburb) as a program, later transformed into Mission, addressed to the sector of the population that historically has less access to sport activity and health services (Ramírez & Bastardo, 2007). There are five fundamental aspects considered in this Mission: a) Physical activity for adults, people with different abilities and pregnant women; b) Mentoring in technical aspects to Bolivarian schools; c) Training sport monitors; d) Physical recreation for All; e) Development of the mass participation in sport. The Mission has spread into the 24 states and the capital district, offering the following programs: a) Grandparents circle; b) Dance aerobics; c) Physical culture; d) Laboral gymnastics; e) Gymnastics for kids; f) Physical preparation for pregnant women; g) Chess practice; h) Sport Talent Schools.

Within this project particular attention is given to the age group that has traditionally been more inactive, that is older people. So in some sectors now it is common to observe these people, called 'grandparents' doing their routine of exercises and even zumba classes (bailoterapia in Spanish). The program started in 2002 and it is still in place.

More discussion needs to be developed in order to point out that is not a new term but as we accepted e.g., 'computer literate', to mention the most known one in the last two decades. It has to be understood that to be 'physical literate' is a must for the well being of society.

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## American Physical Education: A Discursive Essay on the Potential Unifying Role of Physical Literacy in the United States

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*Tony Moreno*

### Abstract

In the US, higher rates of obesity have generated increased healthcare costs resulting in greater awareness and programs to help intervene and prevent the higher incidence of chronic illness and disease. To date, physical education as a preventative approach has lacked cohesion in curricular approach to increase physical activity and help address the current health crisis. The introduction of physical literacy as a concept may be an important tool to help physical educators in the US unify in approach in enabling youth and future generations to appreciate physical activity, reduce the prevalence of obesity, and decrease health care costs.

In the United States (US), acquiring affordable healthcare is a challenging and complicated issue as entire families, small businesses, local governments, and major corporations struggle with a fledgling economy, unemployment, and increased under-employment. With persistent political scrutiny, the Patient Protection and Affordable Care Act of 2010 was eventually established to help many Americans acquire affordable healthcare. Within the American economic system, it is not difficult to understand why healthcare costs are high, because similar to precious metals, oil, and grain, health is a “commodity” and everyone needs and should be of “good health”. However, upon review of various economic and health reports from the Centers for Disease and Control (CDC), it is apparent the demand for good health far outstrips supply thus, costs are anticipated to become more expensive as demand increases (Finkelstein, Feibelkorn, & Wang, G., 2004; Hammond & Levine, 2010).

Combined with increasing health care costs and a delicate economy, the burden of overweight and obesity and their association with the higher incidence of chronic illness and disease (e.g. coronary heart disease, type II diabetes, hypertension, etc.) has generated greater discussion with regard to the importance of physical activity among various US federal and state health agencies (Wang, Beydoun, Liang, Caballero, & Kumanyika, 2008). According to reports from National Health and Nutrition Examination Survey (NHANES), from 1976-80 to 2009-10 there was relatively little change in the percentage of overweight Americans (32.1% to 32.7% respectively) between the ages of 20 to 74 (Fryar, Carroll, & Ogden, 2012). However, during the same period, the trend for obesity alarmingly more than doubled from 15% to 36% for the same age group. In addition, for children and adolescents,

the 2009-10 NHANES report indicated that 16.9% of the population ages 2 to 19 years were categorized as obese. Obese children are at high risk for short-term health consequences and long-term tracking of obesity into adulthood (Ogden, Carroll, Kit, & Flegal, 2012). This is a growing health concern because it is estimated that about 70% of obese adolescents will mature to become obese adults, thus perpetuating the cycle of chronic illness and disease throughout the lifespan. (Akhtar-Danesh, Dehghan, & Merchant, 2005).

Because the predominance of conditions associated with overweight and obesity are derived from an imbalance between energy expenditure and energy intake, addressing low levels of *physical activity*, malnutrition, or a combination of both become important concerns for allied health organizations and professionals within the US. Recently, it was estimated that approximately 58% of American children ages 6 to 11 do not engage in the recommended amount of daily physical activity, and by adolescence the proportion jumps to 92% (Benson & Mokhtari, 2011). This decline of physical activity among youth has generated several popular and media driven initiatives such as the National Football League's "Let's Play 60" and First Lady Michele Obama's "Let's Move in School" to create greater awareness of the overweight/obesity epidemic among parents and school-age children.

### ***Physical Education is Affordable Healthcare***

To effectively address the issue of escalating healthcare costs, an idealistic, although very calculated approach would be to produce an effective and efficient socio-educational model that strives to help schools and communities grasp and understand the multi-faceted importance of health, fitness, and physical activity. Healthy and "*physically educated*" individuals demonstrate lifelong decisions and lifestyle choices strongly associated with the prevention of chronic illness and disease (Centers for Disease Control, 2009).

In the US, the most effective venue to introduce, encourage, and practice these lifelong habits (as with all academic subjects) is the school setting, where students of physical education can learn and develop the understanding that they are ultimately responsible for, and caretakers of their own health and well-being in a progressive manner. It is vital at present to ensure that the physical education curriculum implemented in the school setting has the potential to not only make an impact on cognitive and affective areas of learning, but principally the psychomotor domain. This is especially true for elementary age groups, for it is accomplishment and the competency of secured motor ability that empowers the student with the confidence to move frequently and effectively in a variety of physical activity pursuits and environments (Stodden, Goodway, Langendorfer, Robertson, Rudisill, Garcia, & Garcia, 2008).

Physical education models that address awareness rather than acknowledge competency are cost effective and simple to implement, but awareness does not necessarily initiate voluntary participation in regular physical activity. Awareness sends a message of consciousness that inevitably turns to unconsciousness unless it is regularly reinforced. An educational model based upon awareness does not ensure the engagement or practice vital to the mastery of movement concepts critical for enhanced health and well-being.

## *Physical Education in the Free Market*

Given the free-market and media-rich environment within the US, it has become common for various educational institutions, business enterprises, professional organizations and individuals to create and support programming that utilize the terms physical activity, physical education and “*physical fitness*” in a frivolous manner. Perhaps lending to more confusion is the recent introduction of the term “*physical literacy*” that has slowly trickled into the consciousness and vocabulary of various professional physical education organizations and practitioners.

Whitehead (2010) defines *physical literacy* as a concept where an individual will demonstrate the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful physical activity throughout the lifespan. Conversely, *physical illiteracy* is evident when one no longer exhibits these attributes and as a result, may be less inclined to engage in physical pursuits on a regular basis. Because physical literacy as a concept can underlie the capacity for a person to feel confident about play, games, sport, exercise and other various forms of physical activity, the American Alliance of Health, Physical Education, Recreation, and Dance (AAHPERD) has embraced this paradigm as part of the National Standards and Grade-level outcomes for quality Kindergarten through 12th grade physical education (Figure 1). AAHPERD is typically recognized as an influential policy-making and governing organization among physical education professionals employed in primary and secondary schools within the United States.

Before one can further address the potential impact of physical literacy in the United States, it is important to understand the position of physical education as a curricular subject in the school setting. Over the years, the time and resources dedicated to quality physical education programs among elementary and secondary school settings have deteriorated dramatically (National Association for Sport and Physical Education, 2012). Although at present it appears the trend for increased obesity has stabilized in the US, the lack of a centralized commitment to physical education as an essential part of a complete educational curriculum has further compounded the issue of decreased physical activity among youth, and perhaps nurtured and sustained increased overweight and obesity among Americans for all age groups for the past 35 years.

Despite the present challenges, the dynamic of increasing and enhancing the physical activity experience inside and outside the classroom setting is both exciting and cumbersome at the same time. Exciting because social crisis (e.g., increased health care costs, obesity, etc.) often brings about the best of innovation from many entrepreneurs, organizations, and resources to find solutions to problems that can potentially affect many. At present, it appears that a significant (albeit unknown) portion of physical educators are moving away from a curriculum traditionally centered about individual and team-oriented sports (sport-skill model) and instead, becoming more reliant upon free market activities found in the commercial fitness industry (e.g., resistance training, bicycling, high-intensity training, yoga, martial arts, etc.). This “fitness model”, often referred to as “health-related” physical education, is attractive and has been absorbed into the lesson plans of multiple school districts and instructors because they offer curricular variety for the physical educator and new challenges for the student (McKenzie, Sallis, Prochaska, Conway, Marshall & Rosengard, 2010).



The concern with introducing “fitness” programming with a free-market ideal is that an “anything goes” approach without scientific basis can become ambiguous with regard to quality and validity as an effective tool or solution to a health problem. This ethos runs counter to what is acceptable in the American school setting where administrators and teachers are bound or tend to follow curricular guidelines and standards as determined by each state or even school district. This in itself leads to unclear, inconclusive, and differing *best practices* and in many cases, confusion and a lack of cohesion as to *what* is the ultimate learning objective in the physical education setting. Is it physical fitness? Is it to learn a sport? Is it physical activity? Is it evidence-based? Finally, is it the role of the physical educator to offer a “health club-like service” to the student for the sake of entertainment and participation, or is it to create a learning environment where the student is to be challenged on all physiological, neurological, and mechanical fronts while engaged in “*motor learning*”?

In contrast, the entrepreneur is uninhibited to experiment, revise, and alter programming in the hopes of creating, acquiring and maintaining a customer base without any regard for mandated or advocated restrictions or guidelines. In this setting there is no need for agreement of terminology (unless Government or State licensure or certification is necessary for service), as quality customer service will most always be deemed successful by results that generate positive revenues and market-share.

In the school setting however, it is this difference of agreement where the boundaries of principle, quality, effectiveness, and definition become non-distinct and distorted leading to misunderstandings or misperceptions for both physical education teacher, parent, and student expectations. To reiterate, it is this lack of cohesion that threatens quality physical education and its vital role in providing “preventative” health care because of the potential for poor quality control, leaving it open as a discipline open to public scrutiny.

### ***Physical Literacy is “the Tie that binds”***

Interestingly, the introduction of physical literacy as a key concept within the physical education community offers physical educators an opportunity to unify a curriculum rooted in the mastery and exhibition of fundamental motor ability. If, as defined by Whitehead (2010), physical educators can embrace the affective, cognitive, and psychomotor qualities of physical literacy, it should be appreciated that the acquisition of motor ability should be the primary basis from which not only movement competence is achieved, but movement confidence is realized. It is this confidence that is the key component for physically active lifestyles from childhood into adulthood that can potentially have a strong impact on preventing chronic illness and disease in the United States (Barnett, Van Beurden, Morgan, Brooks, & Beard, 2008).

As physical literacy is embraced in the US, there appears to be a collective agreement that quality physical education is the medium through which one becomes physically literate, with the aim of making one movement competent (AAHPERD, 2013). It is this process that must be resolved and refined so that motor competence is acquired, rehearsed, and challenged in a variety (depending upon biological maturation) of contexts so that one becomes not only movement capable in a variety of environments, but motor confident in multiple settings. As one becomes more comfortable in the context of their choice, it is here that the recognition of

activity is enjoyable and becomes an important part of their lifestyle. Although the student of physical literacy realizes physical fitness is important, they do not move for the “sake of physical fitness” but rather, they move as it becomes an important part of how they define themselves or their “being” in the present (Whitehead, 2010).

Equipped with the appropriate amount of motor capability and confidence, it is from here that “passionate” moderate to vigorous participation in physical activity with adequate levels of physiological and mechanical stress will generate the biological adaptations that will enable one to possess greater “physical fitness” and adaptation to physical stressors. In essence, this will allow one to become “physically fit” with higher capacities for cardio-respiratory ability, muscular strength, flexibility, and perhaps enhance other performance-related bio-motor abilities such as power, agility, balance, and reactivity (Hallal, Victoria, Azevedo, & Wells, 2006).

Until there is a consensus of definitions and direction for how physical fitness, physical education, and physical activity co-exist, there will continue to be discord and little agreement in establishing a unified or “best practice” physical education curriculum in the United States. In addition, it is uncertain what this consequence will have on the reputation of the discipline as supporters of physical education argue that teaching opportunities have diminished due to curricular changes and/or distressed school budgets. With regard to school-aged children, limited or non-existent opportunities to learn how to competently and confidently move will accelerate “health and physical illiteracy” within the United States (Stodden et al. 2009).

As a notion associated with the enabling of both physical competence and self-confidence, physical literacy becomes one of the core objectives for the physical educator to “educate” and cultivate among students within the school setting, further strengthening the unique relationship physical movement can possess with regard to the affective, cognitive, and psychomotor domains of learning (Strong, Malina, Blimkie, Daniels, Dishman, Gutin, B., & Trudeau, 2005). For students of Physical Education Teacher Education (PETE) programs, it is important they understand the concept of physical literacy and the essential exercise and movement science coursework that trigger an understanding of the various physiological and biomechanical perspectives related to skill acquisition, motor competence, and the development of a scientifically sound and appropriate physical education curriculum. In addition to understanding the mechanisms of physiological and biomechanical stressors necessary to acquire the various components of both health and performance-related physical fitness, it is imperative physical educators reach beyond the classroom setting, investigate, and covet papers that form the basis for movement literacy, including but not limited to Nikolai Bernstein’s (1986) seminal essays in “On Dexterity and its Development”, from which it can be argued initiate those critical concepts related to the origin of Dynamical Systems Theory.

At present, physical literacy is a novel and evolving concept within the United States and is becoming adopted as an important ideal with regard to increasing physical activity among Americans to help stem increasing overweight and obesity and reduce the incidence of chronic illness and disease. Physical literacy is not physical education, but it should be recognized that physical education is the curricular process in the school setting where youth are taught to become both motor competent and confident. It is this competence and confidence that enables moderate to vigorous physical activity as part of one’s self or being,

thus becoming a component of everyday life. As physiological and mechanical stress is applied to the body, this enables properties of physical fitness to help the human body cope with activities of daily living, sport, and recreation. Although under persistent renewal and interpretation in terms of definition, physical literacy is “the tie that binds” the ambiguity often found in the American school setting. The time has come for American physical educators and the governing bodies of their various associations to realize the tremendous impact this physical literacy as a concept can have on long-term health consequences and reduced health care costs for many Americans, especially youth.

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## Teacher Pupil Relationships

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*Geri Conlin*

### Abstract

Studies show that pupils want physical education teachers who are caring, entertaining, participate with them, are good role models and have a positive relationship with them. In a similar vein university students say they want to become a physical educator because of a love of the subject matter and a desire to positively influence their own future pupils by being an active role model and by encouraging the development of pupil self esteem. Research including 1655 junior high school age pupils revealed that pupils who were taught, via 10 minute scripted DVD, by average-appearing female and both average- and overweight-appearing male teachers learned fitness concepts, considered the teacher an expert on fitness and participated in fitness activities, were motivated to participate in activity and considered physical activity important. Findings suggest that students taught by overweight female teachers may be at a disadvantage when learning about fitness concepts. Teachers can encourage their pupils to become physically literate when they are physically literate themselves, especially when they move competently and confidently.

Physical educators want to be influential in the lives of young people and to be physically active role models (O'Bryant, O'Sullivan & Raudensky, 2000). In a qualitative study conducted by O'Bryant et al. (2000) involving eight master's degree students returning to school to become physical education teachers, five themes concerning the reasons students want to become physical educators emerged. The pre-service teachers want to help pupils know about the importance of physical activity, assist in the development of pupils' self-esteem, be a healthy and active lifestyle role model and have an understanding of physical education content and pedagogical knowledge. The authors concluded that the pre-service teachers want to practice what they preach. These eight teachers seemed to recognize that physical literacy can only be achieved by their pupils when the pupils have knowledge and understanding of physical education concepts and are motivated to participate and confident enough in their own skills to participate in physical activity.

In another study (Conlin, unpublished), over 400 university students were asked why they had chosen to pursue higher education leading to a career in teaching physical education. The students answered with very few exceptions that they loved sport and they wanted to make an impact on pupil's lives the way they have been positively influenced by their own teachers. Their teachers had helped them to become physically literate by encouraging their

competence in movement skills and their confidence to perform those skills in an active setting.

University physical education majors,  $n = 73$ , were asked to identify characteristics of their most memorable and influential teachers from their education experience from age five to 18. These 181 memorable and influential characteristic responses were categorized and analyzed to find that 36% of the responses referred to their previous teachers showing a caring attitude toward the pupils. This caring attitude displayed by the teacher encouraged confidence in the pupils and the motivation to try physical activities as evident in those making progress on their physical literacy journey. Twenty-seven percent of the student responses referred to their teachers' ability to be fun and entertaining, 22% referred to the teaching skills of the memorable teacher and only 6% referred to the knowledge the teachers processed. In order to promote physical literacy in pupils the teacher must encourage pupil confidence to perform movement skills.

In another unpublished study of 70 high school pupils, 35 girls and 35 boys, from seven different high schools, were asked how their physical education teacher modeled healthy behaviors. Thirty four responses suggested their teachers looked fit and another sixteen pupils said their teachers did not model healthy behaviors in any way. Sixty of the pupils said it was easy to teach physical education and 64 said their physical education teacher did not work as hard as their other teachers. Another interesting finding in the study showed that 66% of the pupils suggested that teachers should retire if they no longer participate in activities with their pupils. It seems that pupils may be motivated to learn movement skills when their teacher participates with them using those same skills thus becoming physically literate. Another 29% of the pupils said physical education teachers should retire when they no longer have a positive relationship with their pupils. In another study where pupils were asked about their physical education teachers, Melville and Maddalozzo (1988) surveyed 850 high school pupils and found that the pupils felt that physical education teachers should be good role models.

In studies related to teachers as role models, both Rice (1988) and Ryan, Fleming and Maina (2003) found that teachers are not poor role models and that pupils liked that teachers participated with the pupils. Pupil activity was found to be influenced by the active lifestyle of the teacher (McTeer & White, 1991). Pupils were found to be more active when the teachers provided a role model for fitness (Senne et al., 2006). Pupils identify their teachers as role models of physical activity when the teachers participate with the pupils in the classroom (Conlin, unpublished).

It appears from these few studies that pupils want physical education teachers who are caring, entertaining, participate with their pupils, are good role models and have a positive relationship with pupils. These qualities are in some ways similar to the reasons university students gave for their desire to become a teacher of physical education: love of the subject matter and a desire to positively influence their own future pupils by being an active role model and by encouraging the development of pupil self esteem. Teachers can encourage their pupils to become physically literate when they are physically literate themselves, especially when they move competently and confidently.

Overweight and obesity rates have been on the increase in the United States for over 30 years, with a current obesity prevalence of 35.5% among adult men and 35.8% among adult

women (Centers for Disease Control, 2010; Flegal et al., 2012). As a result school aged youth regularly see as many as 1 in 3 adults who do not represent a healthy weight. Thus, it has become increasingly important that adults working in physical activity settings represent healthy appearing role models (National Association for Sport and Physical Education (NASPE), 2010). With the increasing adult obesity prevalence in the United States the question of the importance of an active healthy role model for youth is raised. The effectiveness of role models in producing behavior change has been demonstrated using Social Cognitive Theory [SCT] (Bandura, 1997). The SCT suggests that human behaviors change through observation of the actions and consequences of others' behaviors and therefore, within SCT, there is a strong need for a credible role model of the behavior targeted for change (Glanz, 2002).

A study of 1655 junior high school physical education pupils examined if junior high school pupils' scores on a test of aerobic fitness concepts changed differently when aerobic fitness content was delivered by average-appearing and overweight-appearing female and male Physical Education teachers on a 10 minute DVD. A secondary purpose of the study was to determine pupils' perception of the teachers as experts on fitness concepts, looking physically fit, regularly participating in fitness activities, if they would like having the teacher as a Physical Education teacher and to determine the pupils' motivation to be physically active, their expectation to be physically active and their perceptions of the importance of being physically active and their like of physical education after viewing the average and overweight-appearing teachers. Pupils in the 7th-9th grades from eight different schools were randomly assigned to view one of four DVDs showing a female or male teacher either average or overweight appearing.

The female and male teachers had average ( $\pm 1.5$  inches) waist, mid-upper arm and thigh circumference measurements as determined by measuring the waist circumference of a group of 20- to 30-year old physical education majors (26 female and 35 male), from three different university Physical Education Teacher Education programs and then calculating the sex-specific mean values for waist circumference, Table 1. Anthropometric Reference Data for the years 1999-2002 (McDowell, Fryar, Hirsch & Ogden, 2005) taken from the Centers for Disease Control and Prevention, the National Health and Nutrition Examination Survey [NHANES] percentile rankings for waist circumference were used to find the corresponding percentile rankings for upper arm and thigh circumferences. The average-appearing female and male teachers were recruited from a university undergraduate Physical Education Teacher Education program in a southwestern state in the United States from those who fit the average-appearing measurements. They were a 22-year old female and her 23-year old brother, Figure 1. They possessed similar hair color and facial appearance and expressions. Their overweight appearance was determined by finding the age- and sex-specific 95th percentile measures for waist, thigh and upper arm circumference using the NHANES data as reported in Centers for Disease Control and Prevention, Anthropometric Reference Data for the years 1999-2002 (McDowell, Fryar, Hirsch & Ogden, 2005). A 'fat suit', as is typically used in theatrical performances, was constructed and worn under their outer clothing to create an overweight appearance, Figure 2.

The aerobic fitness concept lecture was scripted from chapter four of the text, *Fitness for Life, Middle School* (Corbin, Lambdin & Le Masurier, 2007), and chapter four of *Fitness for Life, Middle School, Teacher's Guide* (Le Masurier, Lambdin & Corbin, 2007). A 15-question,



multiple-choices, aerobic fitness concepts knowledge test was created using questions taken from *Fitness for Life, Middle School, Teacher's Guide* (Le Masurier et al., 2007) ancillary materials test question bank. The survey was constructed using similar statements from previous studies (Dean et al., 2005; Melville and Maddalozzo, 1988; Thomson, 1996). A total of eight statements were addressed requiring responses on a Likert scale (strongly agree -5, agree -4, not sure -3, disagree -2, strongly disagree -1). The eight statements included: 1) This Physical Education teacher is an expert on fitness concepts; 2) This Physical Education teacher looks physically fit; 3) This Physical Education teacher regularly participates in fitness activities; 4) I would like having this teacher as a Physical Education teacher; 5) After seeing this DVD, I am motivated to be physically active; 6) After seeing this DVD, I think it is important to be physically active; 7) After seeing this DVD, I expect to be physically active; and 8) After seeing this DVD, I like physical education.

Using the pretest scores as a covariate, unexpected ANCOVA results, Figure 3, show a significant main effect of teacher sex ( $p=.005$ ) on the adjusted mean test score change from pretest to post-test. Based on previous studies (Melville & Maddalozzo, 1988; Dean et al, 2005; Thompson, 1996), it had been hypothesized that pupils viewing the overweight appearing teachers would not score as high as those pupils viewing teachers appearing as a role model of healthy activity. There was expected a significant main effect for teacher appearance rather than for teacher sex.

Using the survey questions, motivational responses toward the teachers as seen in ANOVA analysis show significant main effects for sex and significant appearance by sex interaction effects for the teacher being an expert on fitness concepts and for being liked, Table 2. There were significant main effects for appearance for the teacher being fit and for participating regularly in fitness activities and being liked. Using the survey questions, motivational responses toward physical activity as seen in ANOVA analysis show significant main effects for sex and for appearance and significant appearance by sex interaction effects for the motivation to be physically active, the expectation to be physically active, the perception of the importance of being physically active and liking physical education except the main effect for appearance for the expectation to be physically active. Tukey post hoc test results, Tables 3 and 4, show the significant main effects for sex were largely confined to the overweight female teacher.

Both research and university students remembering their own former influential teachers as well as high school pupils discussing their current physical education teachers lend insight to the relationships between secondary school pupils and physical education teachers in the United States. Teachers want to be influential in the lives of their students and share with them their love of sport and healthy activity. Pupils want their teachers to care about them, provide an entertaining learning atmosphere, participate in activities with them and develop positive relationships with them. Pupils also think it is easy to teach physical education and physical educators do not have to work as hard as teachers in other disciplines. Pupils have lower test scores, are less motivated to be physically active, have less expectation to be physically active, have fewer perceptions of the importance to be physically active and like physical education less when taught by an overweight appearing female teachers than by average appearing teachers and overweight male teachers. Overweight female teachers are not considered an expert on fitness and are not liked as much as average appearing teachers and overweight male teachers. Pupils think overweight appearing teachers are not

fit and do not participate in fitness activities. Pupils like female teachers.

Though pupils seem to learn fitness related content from overweight appearing teachers they do not consider an overweight teacher a physically active role model and they are less motivated to engage in fitness related activities. This is especially true for overweight female teachers. Teachers who display their own physical literacy can better encourage their pupils toward physical literacy.

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## Fostering Physical Literacy Through Professional Development in USA

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### Abstract

Given the state of obesity around the world, school personnel have been called upon to provide additional opportunities for physical activity and to facilitate physical literacy in students. However, physical education teachers and especially classroom teachers may lack the knowledge and competence to deliver activities and employ strategies that foster physical literacy in their pupils. Therefore, effective professional development for both classroom teachers and physical education teachers targeting physical literacy is necessary. This brief paper examines key components of effective professional development, with particular reference to generalist teachers in the Primary School, that could better prepare teachers to promote and foster physical literacy.

### Background

The number of overweight or obese children has risen dramatically around the world, such that 6.7% of children under five are overweight with an estimated 9.1% by 2020 (de Onis, Blössner, & Borghi, 2010). In the United States, the overall rate of obese children has plateaued over recent years, but specific populations such as adolescent males still show significant increases (Ogden, Carroll, Kit, & Flegal, 2012). Sedentary behavior (Rey-Lopez, Vicente-Rodriguez, Biosca, & Moreno, 2008) has been cited as a primary cause of obesity, with an increase in screen time (Tremblay et al., 2011) and a lack of resources or access to a conducive environment (Sallis & Glanz, 2006) significantly diminishing child and teen engagement in physical activity. Given that our youth population attends school for upwards of seven hours each day, schools have been identified as an ideal place to promote health by providing students with physical activity opportunities (Institute of Medicine, 2012; Pate et al., 2006). The Centers of Disease Control and Prevention (CDC, 2011) recommend children engage in at least 60 minutes of moderate to vigorous activity each day. Yet, in the United States, only 3.8% of first through fifth grade students attend daily physical education class, with 7.9% at the middle school level and just 2.1% in high school (Lee, 2007). In addition, a trend toward a decrease in frequency or duration of recess time further limits opportunities for students to be physically active at school (Ridgers et al, 2012).

First Lady Michelle Obama unveiled the *Let's Move! Active Schools* initiative in February of 2013, which uses a Comprehensive School Physical Activity Program foundation to encourage school personnel to provide students with physical activity opportunities

throughout the school day. In May of 2013, the Institute of Medicine (IOM) released a report supporting this movement titled “Educating the Student Body: Taking Physical Activity and Physical Education to School” that assessed current practices, examined relevant research, and provided recommendations and action steps for helping schools to get students more active. One recommendation from this IOM report was that a “whole-of-school” approach should be adopted and that all school personnel should advocate for an environment that fosters physical activity (Institute of Medicine, 2013). Given the decrease in physical education and recess time and the push to increase activity minutes, the responsibility to offer physical activity opportunities and encourage student engagement must be shared and classroom teachers must be prepared to provide such opportunities. Further, the desired outcome of this activity participation at school is for students to become, not just physically active, but physically literate. The most recent physical education standards in the United States, set for by the National Association for Sport and Physical Activity, present the overarching goal as “to develop physically literate individuals who have the knowledge, skills and confidence to enjoy a lifetime of healthful physical activity” (American Alliance for Health, Physical Education, Recreation and Dance, 2013). As such, effective professional development for both physical education teachers and classroom teachers on fostering physical literacy is necessary.

Physical literacy has been described as the “motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the lifecourse” (Whitehead, 2011). This concept takes the foundation of physical activity and builds upon it such that it becomes a habit. Children who engage in physical activity are more likely to continue this participation as adults (Boreham & Riddoch, 2010). Physical literacy encompasses the skills needed to be physically active, the understanding of why activity is important, and the ability to apply knowledge and create a persistent lifestyle of health and fitness. For teachers, the application referred to above is critical as students need to be capable of transitioning their physical activity in the school to life beyond compulsory education.

Providing lessons and activities that foster physical literacy requires curricular change, which necessitates buy-in from teachers. While there is a dearth of research addressing barriers to implementation of physical activity in the school, in other areas of education change identified failure to recognize the need for change as a primary obstacle (Greenberg & Baron, 2000), suggesting that teachers do not include physical activity in their programmes because they have never considered incorporating movement in their curriculum and are unaware of its impact across many areas of development such as cognition. Other hypothesized barriers include a lack of confidence or competence to present physical activity, a lack of time and/or resources, and concerns about class management and student behaviour. Therefore, it is important that professional development address these concerns and prepare teachers for effective implementation.

Professional development, or continuing education, is formal training for practising teachers that is designed to increase teachers’ knowledge and skills, improve teaching, and facilitate individual growth. Research suggests that quality professional development can be effective in producing change in teachers’ attitudes and behaviors (Castelli, Centeio, & Nicksic, 2013). While limited studies target professional development and student health outcomes, professional development literature in education is well documented. Researchers have

proposed that effective professional development should occur across multiple sessions, be interactive and social, and have direct application for participants (Castelli, Centeio, & Nicksic, 2013; Darling-Hammond & McLaughlin, 1995; Garet et al., 2001). From this literature, four key components of professional development have been identified and applied to physical literacy.

## **Providing Professional Development for Physical Literacy**

Conducting professional development to foster physical literacy should follow the guidelines of effective professional development, as supported by empirical research. The following section briefly discusses four key components that should be addressed within physical literacy professional development: (1) active and engaging, (2) cooperative, (3) content and population specific, and (4) knowledge enhancing.

### **Active and Engaging**

Just as teachers need to make physical education lessons active and engaging for students, professional development trainers should include hands-on, meaningful activities that model effective strategies for fostering physical literacy. Sessions should strive to increase competence and motivate learners to engage in activity on their own. Learning should transcend the training sessions as professional development facilitators provide opportunities for participants to reflect on their own current practice and their progress toward implementation before, during, and after the professional development experience. Having teachers reflect on their own practices and engaging them in thoughts about their own students and personal situations will further engage teachers in the learning process.

Training should include physical activity breaks for teachers throughout the professional development session that are appropriate for teachers to use in their own school settings. During brainstorming or peer debriefing activities, participants may engage in a “walk and talk” strategy instead of sitting. Additionally, facilitators should provide essential questions that encourage teachers to reflect on their own personal physical literacy. Teachers who model physical literacy by embracing it in their own lives may be more successful in influencing their students to become physically literate (Lumpkin, 2008; Moore et al., 1991).

### **Cooperative**

When professional development is both collective and collaborative, such that it includes all teachers working together, it allows teachers to share ideas and problems in a productive environment that serves as a support group and think tank. When professional development facilitators and school administrators encourage a sense of community, it permeates the infrastructure and can positively impact school climate, enabling physical literacy to be a school-wide priority.

To facilitate this cooperative environment, professional development sessions should include peer discussion and review and should foster sustainable partnerships and/or teams. By initiating these relationships during training, discussion of physical literacy can continue

outside the allotted professional development time, maybe even leading to a physical literacy Community of Practice among the teachers. Teachers can share successes and failures of implementation and work together to find strategies best suited to their own schools and students. This collaboration should also extend to the teacher-student relationship as students can provide valuable feedback on lessons and activities.

### ***Content and Population Specific***

For any learning to be effective, it must be meaningful to the learner. In professional development, training should be targeted to both the subject area and student demographics of the teacher participants so that concepts and strategies in training sessions can be directly applied in the school setting. Sessions should model activities that are contextually appropriate to the age level of the students in the classes of teachers attending the professional development. Information must also pertain to the subject area taught by the participants so that lessons can be implemented in the school setting without any additional planning requirements. This might require those facilitating the training to spend more time developing activities and materials in order to ensure that the concepts being applied within the training are relevant to each individual situation. Trainers should attempt to tailor sessions so that lessons applied in the school setting engage students and motivate them to apply their new knowledge and skills outside of the school.

Specifically, because physical education teachers and classroom teachers have different standards, different environments, and different challenges, professional development sessions should be individualized (Castelli, Centeio, & Nicksic, 2013). If conducting separate training sessions is not possible, facilitators should consider break-out sessions that group teachers by subject area so they can specifically address the needs of physical education teachers and of classroom teachers in learning to present activities that foster physical literacy.

### ***Knowledge-enhancing***

Facilitators of professional development should attempt to structure trainings so that teachers leave professional development sessions with new information, materials, and skills. As such, participant knowledge of physical literacy should be assessed at the commencement of professional development and regular feedback from participants must be requested throughout to ensure applicable learning is taking place. Prior to the completion of training, trainers should confirm that teachers understand, and can explain, physical literacy. While the concept of physical literacy is becoming common in Canadian and British standards, the United States physical education standards embracing physical literacy were just released April 27th, 2013. As such, it is imperative that professional development sessions provide teachers with a solid foundation of understanding. Teachers should also be encouraged to value their own health and monitor their personal journey toward physical literacy. Finally, teachers should be provided with a toolkit of discussion items and activities for implementation in the school setting, designed to foster physical literacy in students.



## Discussion

Physical activity has been linked to a multitude of social, psychological, and cognitive benefits, including improved academic performance (CDC, 2010). To truly embrace physical activity as a lifestyle choice and become physically literate, students require multiple opportunities to learn about physical literacy and engage in physical activity throughout the school day. For teachers to foster physical literacy in their students, effective professional development must equip them with the proper foundation to offer physical activity in the school setting.

The implications from existing professional development literature suggest that effective training is effective teaching. Quality teachers assess prior knowledge, check for understanding, and individualize instruction (Angelo & Cross, 1993; Hiemstra & Burton, 1990). As such, professional development trainers must be prepared to assess teachers' prior knowledge of physical literacy, check for understanding of the concept, and individualize activities and information so that it is directly applicable to teachers. Providing effective professional development to foster physical literacy can positively impact lifelong change in both teachers and students.

Physically literate teachers may be healthier, have more energy, and be less susceptible to burn-out (Carson, Baumgartner, Matthew, & Tsouloupas, 2010), could be better models for students (Lumpkin, 2008; Moore et al., 1991), and be more apt to provide opportunities that promote physical literacy in students (McKenzie, LaMaster, Sallis, & Marshall, 1999). Similarly, students who are physically literate are more likely to demonstrate increased attention and concentration and be engaged in lessons, perform better on achievement tests, and have greater attendance than students lacking physical literacy skills (Troost, 2009).

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## Healthy Aging in the 21st Century

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### Abstract

The importance of place and space will be examined in regards to healthy aging in the 21st century. A recent study with Russian immigrant women who have moved to the USA over the last 20 years, exemplifies the importance of access to physical activities, which does not only provide ample access to improve one's fitness level, but also provides the important parameters to social and mental stimulation, all of which are extremely beneficial in fostering a healthy aging process. This qualitative study based on in-depth interviews with a cohort of 20 women serves as an example of parameters needed to ensure a healthy aging process. It is crucial for communities to provide availability of and access to health promoting behaviours.

### Introduction

In the near future, there will be an exponential growth of older adults in the world. The growing population of older adults in Europe and North America has put a strain on the health care systems of the industrialised world. Older adults sometimes need specialised and long-term care for such pernicious disorders as cancer, heart disease and stroke, and Alzheimer's disease. These conditions also create social and economic strains on friends, partners and other family members, often young and middle-aged adults, who become economic and social caregivers for their aging parents.

The spectre of "old age" also has a cultural dimension. We often associate "old age" with physical and mental decline. Old people are often seen as physically and mentally incapable of looking after themselves. They are depicted in stereotypical ways, walking with canes, shuffling in walkers and moving along in wheelchairs. They are perceived as cognitively impaired, unable to competently function in the contemporary technological world. These images are, of course, cultural stereotypes based on prejudice. They form the bedrock of what many commentators have called "Ageism," a body of attitudes and practices that discriminate against older adults (Butler, 1989). A review of several decades of research in gerontology, of course, presents a fuller and more nuanced account of the social and economic lives of older adults. Advances in medical care have not only extended the life spans of contemporary men and women, but have increased the emotional and physical quality of later life. In fact, research results indicate that in the past several decades, an increasing percentage of men and women lead active and

healthy lives well into later life.

This paper considers how older adults pursue well-being in later life. The role of physical activity and fitness will be examined and the influence on both physical and emotional health. Fitness and emotional health, of course, cannot be considered in isolation. Therefore the social, cultural and economic parameters associated with aging will be analysed and how they affect health and well-being. Using this macro-context, interview results of recent research will be presented with a specific group of people – women in the Russian Diaspora.

## **An Aging World and Health Challenges**

As mentioned at the outset, the population of older adults is expanding in every region of the world. Although life expectancy varies from region to region, most people are not only living longer but also having fewer children. This trend means that the average age of the world population is increasing. One hundred years ago, average life expectancy in the United States was 47.3 years, today it is 77 (Hoyer & Roodin, 2009). Although people are living longer in most places, there are still great variations in life expectancy. People tend to live longest in Japan with a life expectancy of 82.9 years, the United States is ranked number 19 in life expectancy.

Considerable ethnic and cultural differences exist in the domains of life expectancy and health and well being. Studies in the United States have found, for example, that African Americans and Hispanics tend to have a higher rate of chronic illness and lower life expectancy than European Americans. Substantial gender differences have also been documented: white women tend to live an average of 6 years longer than other older adults, but these women tend to struggle with a greater number of health concerns. Those with the lowest income are more likely to struggle with poor health and have a lower life expectancy.

In the past, people tended to live longer in the industrial societies of Europe and North America. In those societies, technological sophistication, which provided better nutrition, sanitation and healthcare, produced populations with high percentages of people over the age of 65. By the year 2050, in fact, one-third of the world's population is expected to be over sixty. Along with increasing age, we will face specific health challenges. Although prevention methods and improved treatments have helped to prolong life, we are also faced with an increase in chronic disease and debilitating illness as well as a wide range of disabilities.

The exponential increase in obesity among all age groups is another important health challenge in the 21st century. Obesity is a wide-spread epidemic, especially in the USA. According to the 2007 National Health and Nutrition Examination Survey, more than 64%

of US adults are overweight or obese ([www.cdc.gov/nchs](http://www.cdc.gov/nchs)). Although women and men share similar percentages of obesity, women are more often socially sanctioned for their weight. They are subjected to age, gender and weight bias (Fontane, 1996).

So, the world is 'greying' at a faster rate than previously anticipated. Given this tectonic change, what social and psychological challenges will older adults face in the coming years? What will it take to help these elders maintain a positive quality of life? One way to maintain well-being as we age is to be physically and socially active. Indeed, later adulthood can be, according to a variety of studies, an active and productive time of life (Baltes & Carstensen, 1996; Diener, Diener & Diener, 1995). Accordingly, it seems that an increasing number of older men and women are living healthy and productive lives, often well into their eighties. Ironically, advances in life expectancy have led to a dramatic decrease in social appreciation of older adults. The various sources of media are flooded with negative images of aging and older men and women.

### **Ageism and Physical Activity**

Cross-cultural studies have found that older adults today are subjected to multiple sources of discrimination. Among the most prominent of these is ageism, which is widespread around the world. It may seem surprising, but studies in the United States have found that the majority of older adults say that they have been subjected to some form of ageism (Palmore, 2001). Ageism is a process of systematic stereotyping and prejudice against older men and women (Butler, 1963). This form of prejudice results from a widespread and deep-seated fear of the aging process, which also compels younger people to distance themselves from older men and women (Palmore, 2001). Scholars have called this distancing "aging anxiety," which centers on the anticipation of loss as we age. Fear about aging usually begins early in life and continues across the life-span. Concomitantly, ageism has a negative impact on the self-images of older men and women.

Older women especially, are often subjected to what Susan Sontag (1972) called "double jeopardy"—the double whammy of ageism and sexism combined! With the increase in the number of elders with various needs, many of the positive attitudes about age have eroded and ageism has spread from the industrialised world, especially due to the global reach of the Internet and television programmes from the west. Images on the Internet and television tend to value youth and denigrate age and ageing.

Indeed, social theorists have linked modernisation to the loss of elder power. Atchley (1994) contends that modernisation theory helps to understand social change and aging. In this early theory of modernity, much attention is focused on the status of elders. In more traditional societies, older men and women played an active and vital role. In societies in which processes of modernisation have unfolded, older adults have experienced losses of position, status and power. In other words, there tends to be an



inverse relationship between the status of elders the processes of modernisation and technological advancement.

Films, commercials, books and magazines depict older adults as depressed, unattractive, ill, disabled, lonely, decrepit and even ready to die (Haught, Walls, Laney, Leavell & Stuzen, 1999). These images reinforce social attitudes that “old age” is the time of life when one loses physical and mental competence. The reality of what it means to be older in the 21st century, of course, presents a very different picture. Changes in patterns of activity, robust lifestyles, improved health care and increased life expectancy mean that greater numbers of older adults present living and breathing challenges to the traditional images of old age as a sedentary period of life, as a time to sit on a rocking chair and relax, as a time to shrivel up and die. Older men and women are staying physically, socially and sometimes sexually active well into their nineties. They are healthier, happier and more economically potent than ever before.

Clearly, perceptions of age and older adults are not connected to the reality of what it means to be an elder in contemporary societies. Younger people may think older people are old and decaying. The economic, social, cultural and political processes that constitute globalisation will play an increasingly important role in how “society” perceives older adults. Indeed technological innovations triggered by the flows of the global economy will help define new processes of aging as well as the positive and negative attitudes society holds toward older men and women. Changes in roles and attitudes about aging will influence the entire developmental process and extend to the arenas of employment, health care, lifelong learning and social services in developing countries as well as in developed nations (Weaver, 1999; McConatha, 2002).

As the population of older adults expands exponentially, one wonders how this will impact the spread of ageism. By the year 2050, demographers estimate that nearly one third of the world’s population will be over 60 years old ([www.ilcusa.org](http://www.ilcusa.org)). Western Europe, Italy, Greece, Germany, Spain, France and other countries in Europe currently have populations in which least 16% of the people are over 65 years of age ([www.ilcusa.org](http://www.ilcusa.org)). With nearly 38 million Americans currently older than 65 years old, health promotion for this population is an important area of social and political consideration ([www.census.gov](http://www.census.gov)). Numerous studies have found that staying active leads to increased well-being and happiness in older adulthood. People who are physically and socially active seem to be most likely to maintain their physical and psychological health (Atchley, 1989). Thus, it is of critical importance that older adults have access to places and spaces in which they can be active, an access that would ensure a more graceful and healthy aging process.

### **Health Promotion and Physical Activity**

The Healthy People 2010 campaign in the United States seeks to increase life



expectancy and quality of life. The campaign promotes information so that every individual can have the opportunity to make informed decisions about their health. This programme encourages educators, politicians and social leaders to increase access to health care for all Americans. It is particularly interested in promoting healthy environments, vital neighborhoods and vibrant communities that can foster well-being regardless of age, gender, ethnicity and social class.

Through their health outreach programmes, non-profit organisations around the country have begun to urge older adults, especially immigrants such as the group of interviewees from the Russian Diaspora, to increase their physical activity, eat healthier foods, manage their stress and engage in preventive health care. In order for a health promotion programme to be successful, outreach activities need to be designed in a sensitive and culturally appropriate fashion. Such activities need to incorporate an understanding of the values, religion, diet and beliefs about health and illness of the populations they are attempting to reach.

A recent study of health and well-being among women in the Russian Diaspora asked about health promotion and access to physical activities in the greater Philadelphia area. A qualitative research methodology was used when conducting extensive semi-structured interviews. This case study approach focused on 20 older women (65-85 years old). Questions asked included: *How are their health needs met? What sources of support are available to them? What are their existential struggles in a country that is socially, culturally and linguistically alien to them?* The majority of women indicated that there was support from various governmental agencies as well as social workers, including translators, to help them cope not only with the transition to start a new life in a different culture, but also with information regarding health promotion availability and fitness programmes offered in the sponsored housing complex where they resided. However, it was evident that their well-being at large depended on their adaptive success; that is, how well they were able to maintain social, physical and spiritual engagement.

As this study of Russian immigrant women suggests, globalisation has put an increasing number of older men and women into situations of economic, social and cultural marginalisation. These older adults may be ill or disabled, live in rural or underserved areas, lack education or suffer from the impact of poverty. They may also hold a different set of beliefs about health and illness and culturally varied thoughts about how to manage health and well-being. These diverging beliefs on health promotion present a considerable challenge to health promotion researchers and practitioners, who at any given moment may be faced with the challenge of confronting a culture of resistance to health promoting behaviour change.

Health promotion is the art and science of helping people discover the synergies between their core passions and optimal health. In so doing they become motivated to strive for optimal health, a dynamic balance of physical, emotional, social, spiritual and intellectual health. Such lifestyle change can be facilitated through a combination of learning experiences that enhance awareness, increase motivation and build skills and most importantly create supportive environments that provide opportunities for positive health practices (O'Donnell, 2009). In this study, the subjects had access to healthy

breakfast and lunch options in their building as well as daily exercise programmes in a near-by fitness center. They also had ample opportunity to walk outside on the large residential property as well as in near-by shopping centres. This availability encourages walking rather than driving to do errands.

Health promotion strategies are not limited to a specific health problem or to a specific set of behaviours. Recognising the difficulties of outreach, The World Health Organization (WHO) has addressed the problem of health promotion, suggesting that the principles of and strategies for health promotion should be fine-tuned for a variety of population groups, risk factors, diseases and in various settings. Health promotion outreach, WHO suggests, should be sponsored in schools, community development organisations and should be highlighted in health policy, legislation and regulation. Such outreach efforts should be also applied equally to the prevention of communicable diseases, injury, acts of violence and mental health.

In this research study it was found that the well-being of the Russian women results from their ability to maintain social, physical and spiritual engagement. It is suggested that their ability to maintain this engagement is, to a large extent, dependant on their sense of cultural competence, a state that results from their participation in communities of like-minded people who share their socio-political history, language and culture. On one hand, this shared experience provided them with a sense of connection in an alien and alienating world. On the other hand, it was also found that shared experience may also hinder their adaptability to the larger social and cultural environment.

The key to successful aging, following the results of gerontological research, is a sense of well-being, a process involving a person's physical, mental, spiritual and social dimensions. The difference between a successful and unsuccessful aging experience depends, to a large extent, on how people are able to successfully engage in health promoting behaviours that maintain a sense of well-being. In other words, health care providers believe that health promotion, or outreach, should be holistic—an ecological approach that focuses on understanding the person in the context of his or her environment (Stokol, 1992). From this perspective, each person's health and well-being can be best understood by considering the interaction of an individual's genetic predispositions, personality, along with his/her social and cultural circumstances. Indeed the social and cultural environment plays an important role that helps or hinders a person's ability to age with energy and grace. When an environmental context deteriorates into unstable political situations, unsafe streets, or poverty stricken neighbourhoods, the atmosphere not only increases individual stress but also hinders an aging person's ability to engage in health promoting activities.

### **Aging well through Physical Activity**

Regular physical activity can be an important moderating variable that influences the detrimental effects of aging. Regular physical activity can lower the risks for various chronic illnesses and is one among several preventative behaviours that healthcare professionals promote. Others include consuming a healthy diet, avoiding excessive use of alcohol, not smoking, reducing stress as well as sustaining satisfying relationships and

accessible social support. They also include having a personality that is optimistic and resilient. Regular physical activity seems to create a positive context that reinforces these health promoting behaviours. Physical activity can increase social interaction, improve stress management and even increase cognitive functions such as memory and problem solving (Lemme, 2006).

Studies have found that social and cultural environments that enable older adults to remain physically active can significantly influence the overall quality of life. Among the most important supports for physical activity is a safe walking trail. Statistics indicate that by the age 75, one in three men and one in two women do not engage in any regular physical activity. Research has indicated that knowledge, attitudes, beliefs about health and fitness and perceived barriers to physical well being influence to what extent older adults exercise (Dishman, 1994). For example, if an older man or woman feels unsafe in their neighbourhood, they are less likely to walk. If they do not have the resources to join an exercise facility, they are less likely to maintain physical activity. If they feel anxious about possible injury, they may be more likely to be sedentary. There are currently 38 million Americans who are over the age of sixty five. Although the benefits of physical activity have been proven, it is estimated that 47% of adults 65 to 74 years of age are sedentary. Educational information as well as programme planning can be beneficial in increasing the number of older men and women who incorporate physical activity into their routines. Participation in regular physical helps to slow the gradual decline in physical functioning associated with age (Centers for Disease Control and Prevention, 2005). For those who do maintain a level of activity, walking and gardening are the most popular physical activities.

The benefits of regular physical exercise have been widely known for years. In 1959, WHO defined the health of older adults in terms of fitness rather than pathology. The Duke University Centre for the Study of Aging and Human Developmental has concluded that regular exercise appears to reverse some of the physical and psychological changes associated with aging (Fontane, 1996). Clearly, there is overwhelming evidence that physical activity is key to successful aging (Sawatzky, Liu-Ambrose, Miller & Marra, 2007; Tahmaseb McConatha & Volkwein-Caplan, 2010).

Medical advances have enabled people to live longer, healthier and happier lives. Despite medical advances, though, older adults require more medical and long-term care services than any other segment of the population. With the growing number of older adults, it becomes increasingly important to address health behaviours and lifestyles that can improve the quality of life in later adulthood and help decrease the millions of dollars spent each year on medical care. Indeed, one of the great social and cultural issues of our time is how society will adapt to the expenses of an increasingly aging and interconnected population?

## Conclusion

Well-being in later adulthood is greatly dependent on community support – the places

and spaces people live in. This study indicated that support from a cohort of like-minded individuals is an important factor that concomitantly increases feelings of competence and self-worth and diminishes feelings of loneliness and isolation. Supportive communities can enable people to solve their problems and buffer their feelings of cultural isolation and dislocation, especially for older immigrants. A sense of control, feelings of competence, subjective health, spirituality and the availability of and satisfaction with social and emotional support are important factors that promote well-being. The maintenance of a regular exercise or fitness programme is an important resource that ensures an active and healthy aging process. Whether the physical activity is simply based on functional activities, such as gardening or household chores or walking to the store or in a park, research results of the last 30 years have significantly suggested: “use it or lose it”. In the end, we strongly suggest that scholars and policy-makers concentrate on the availability of and access to health promoting behaviours. It is important for communities to provide places and spaces that ensure healthy aging.

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## IAKS 50th Anniversary

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*Arch, Carlos Vera Guardia*

The International Association for Sports and Leisure Facilities (IAKS) is the peak international association in the field of sports and leisure facilities. It is recognised by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Olympic Committee (IOC) and many other international organisations. IAKS has more than 500 members in almost 100 countries and is considered the most important international association in the field of sports and leisure facilities.

In October 2015, IAKS will celebrate its 50th Anniversary in conjunction with its World Congress in Cologne, Germany. A special programme will be conducted in conjunction with the Cologne Fair with invitations extended to many international sports organisations.

Over the years, IAKS has contributed to the conceptual, technical and social development of sports and leisure facilities throughout the world, offering technical advice, organising seminars, workshops, the IOC-IAKS Award, IPC-IAKS Award, and the important international Congress every two years.

It is important to mention that the contribution of IAKS throughout the years to the development of sports has been widely recognised and is not limited to just prestigious sports facilities but it has reached the most humble recreation and sports facilities in densely populated areas of developing countries.

Cooperating with ICSSPE, IAKS had the opportunity to organise the sessions on Sports Facilities for the Pre-Olympic Congresses in Malaga (1992), Dallas (1996) and Thessaloniki (2004) with great success and massive participation by specialists and sports leaders.

Between 1970 and 1985, IAKS was part of the German programme to support the Latin American countries in sports facility development, especially in Argentina, Colombia and Venezuela.

In 1971 and 1972, International IAKS Seminars were organised in Lima, Peru and Maracaibo, Venezuela in collaboration with Universities, sports organisations and Municipalities in those regions.

In 1976, IAKS contributed with the only Graduate Programme of Sports Facilities ever taught in Latin America, a one year specialisation programme, at the University of Zulia in Maracaibo, Venezuela.

At the Pan American Congresses on Physical Education of 1989 in Guatemala, 1991 in Colombia and 1993 in Costa Rica, IAKS played an important role in the special interest area of Sports and Leisure Facilities.

Every year, IAKS organises technical workshops and seminar in Europe in different subjects of interest.

IAKS has Sections in several countries in which there are several members interested in promoting the field of sports and leisure facilities, with one of them being a Regional Section for the Latin American and Caribbean Countries.

The biennial Congresses in Cologne present the latest information on sports and leisure facility development throughout the world, with one of the important sessions the Developing Countries Forum. This is devoted to that important group of countries that in fact represent a majority of the world's population.

The IOC-IAKS and IPC-IAKS Awards recognise the importance of sports and leisure facilities in the development of sports and wellbeing and better health of the general population through physical and leisure activities.

The Awards were conceived to recognise not only aesthetic characteristics of different categories of facilities but considers their environmental, social and economic sustainability and quality of services provided as well as satisfaction of users and owners.

For the 50th Anniversary Congress in 2015, a very special programme is being organised with an Opening Ceremony to which many International Sports Organisations and dignitaries will be invited. This will be followed by a series of conferences, an exhibition of award winning facilities and a Closing Ceremony with special recognition of institutions and individuals to be made.

IAKS recognises its importance in the development of sports and is constantly trying to contribute to the creation of better facilities, trying to help in the whole complex process of providing the most adequate amenities for people of every country and region in the world, sufficiently considering their culture, environment and socio-economic realities and conditions.

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## A magnificent Year for the European College of Sport Science (ECSS)

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Steffen Neubert

### ***EJSS now Medline listed***

Since 2001, the European College of Sport Science (ECSS) has released the European Journal of Sport Science (EJSS) as its official peer-reviewed journal. The EJSS consists of original research articles and intra- and interdisciplinary reviews of sport science research from scientists worldwide. It is published bimonthly, with six issues per year both in print and as online editions. Registered with an impact factor the EJSS is accepted for Thomson Reuters Journal Citation Reports®. Over recent years, the EJSS has steadily grown with the number of submissions increasing each year. The succinct articles and multimedia illustrations of a multidisciplinary EJSS cover the natural, biological, medical, behavioural and social science as they pertain to sport and exercise. Besides these state-of-the-art research articles, the EJSS also contains the ECSS Position Statements, published regularly.

In early 2013, the EJSS was accepted into Medline by the National Library of Medicine, prompting Prof. Andrew Jones, Editor in Chief of the EJSS, to say *“This marks a significant achievement both for the journal and for ECSS. A Medline listing will increase the journal’s visibility, bringing our articles to the attention of many more researchers, educators, practitioners and sports science students throughout the world. In turn, this will result in more citations for the articles we publish, along with more submissions to the journal. More citations will give us a higher impact factor, and this will create even more interest. In short, I believe a Medline listing creates a virtuous circle which can only lead to stronger submissions and a higher quality journal. I would like to thank our Section Editors, Editorial Board, reviewers and authors for making this success possible; it represents appropriate recognition for the high-quality research we have published in EJSS over many years.”*

### **Largest Congress in history of the ECSS**

The ECSS Congress 2013 was the largest congress in the history of the ECSS. 3 114 delegates from 74 different countries participated in ECSS Barcelona 2013. When looking back at this outstanding scientific event, during the four days, high-quality



research work was presented in a total number of 4 plenary sessions, 36 invited sessions, 465 oral presentations, 1 228 mini-oral presentations and 454 ePosters. The extraordinary social events such as opening and closing ceremonies, Young Investigators Award cocktail party and the amazing closing party were organised professionally. Participants enjoyed the hospitality of the Spanish hosts and socialised with colleagues from different research areas and 68 exhibitors from the industry to *unify sport science*. Presented by the hosting institution, National Institute of Physical Education of Catalonia (INEFC), ECSS affiliated institutions and Congress sponsors, ECSS Barcelona 2013 was flanked by 7 satellite symposia which took place prior or within the lunch breaks of the Congress.



Hosted by the INEFC, the Congress venue provided an excellent setting, right at the centre of the Olympic Rings on Montjuïc Hill; next door to some of the main tokens of Barcelona's Olympic dream, such as Calatrava's sculpture, the historical Lluís Companys Olympic Stadium and the beautifully built sports arena, Isozaki's Palau Sant Jordi. Barcelona offered a unique setting for the Congress with an amazing venue up at the Montjuïc Hill and lively city of Barcelona.

*"The ECSS as a European organisation never had a congress in Spain. It was time to give the floor to Spain as an important contributor to European sport science. ECSS was lucky to find in INEFC not only a competent partner, but also a perfect venue for its major annual event,"* said former President of the ECSS Prof. Hans Hoppeler in March, 2013, and he was proven right.

### **Best Researchers awarded at ECSS Barcelona 2013**

Since the inauguration of the ECSS and its first annual Congress in Nice, France in 1996, Mars Inc. as a founding partner of the ECSS has sponsored the ECSS Young Investigators Award (YIA) with generous cash prizes to support up-coming scientists. Young scientists have the opportunity of entering this prestigious competition for scientific excellence, where outstanding scientific work can be presented at the annual

Congress. A jury consisting of the ECSS Scientific Board and ECSS Scientific Committee grants the awards based upon an oral or a mini-oral presentation for the top ten presentations respectively. Each year the YIA Cocktails reunite all former YIA winners– an ECSS-based network, uniting generations of sport scientists. Today, many former YIA winners are still closely connected to the ECSS and even support the ECSS in its Boards and Committees. The award has functioned for previous YIA winners as a starting point for their scientific career.



This year, the ECSS received a record number of 538 applications. 276 contestants were selected according to the reviewing criteria and 117 proceeded to the finals. In the two categories, mini-oral presentations and oral presentations, the 10 best finalists were awarded. The Winner of the mini-oral competition was Yoko Kunimasa, Japan and Nathan Smith, United Kingdom won the oral presentations.

For the first time, the Gatorade Sport Science Institute (GSSI), platinum partner of the ECSS, awarded outstanding research in the area of sports nutrition. Several applications for the GSSI Nutrition Award were received and among them, five contestants were nominated to present their work in front of representatives of the ECSS Scientific Committee and the ECSS Scientific Board. Tine Bex of Belgium won the competition.

In addition, the best Catalan poster was awarded by the Professional College of Physical Education of Catalonia (COPLEFC) and went to Josep Sánchez of Spain.

### **Bengt Saltin appointed ECSS Patron**

Within the framework of the closing ceremony, Prof. Bengt Saltin, one of the founding fathers of the ECSS, its first President from 1996 - 1997, organiser of the 2nd ECSS Congress in Copenhagen in 1997 and former member of the Executive Board and Scientific Committee was appointed ECSS Patron by ECSS President Prof. Sigmund

Loland.



In his honorary lecture, Bengt Saltin cherished the Barcelona 2013 Congress and the quality of research and presentations. He expects a good future for sport science and an ever growing role of the ECSS within it. Bengt Saltin's impact in sport science is unique and inspiring.



The closing ceremony was followed by the open air ECSS Congress party, which was one of the social highlights of the Congress. A huge Paella and BBQ was arranged, beer and wine were served and people were dancing to live music and the beats of a DJ at Plaza Europa until late at night.

Preparations by ECSS are already in full swing for its 19th Annual Congress and the organisation looks forward to welcoming its members as well as researchers and scientists from all over the world to ECSS Amsterdam 2014 next summer.

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## **L'Arche, a Community of People with Disabilities and the University Graduate in the Allied Health Fields: A Potential Collaboration**

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*Christine C. Milner*

### **Abstract**

Sport Science Departments on university campuses are well positioned to prepare students for careers in allied health fields and play a key role in advising future graduates on post-graduation career strategies. Many students, upon completion of an undergraduate degree, seek transitional experiences between university and post-graduate education. L'Arche communities, for people with intellectual disabilities, provide a unique opportunity for these students to learn life-changing skills and redefine their attitudes about disability. While much has been written about L'Arche communities in general, this paper seeks to examine the potential benefits to be gained from this immersion experience for the college graduate. Eight adults who perform the role of "assistant" at L'Arche Portland were interviewed over a two week period. Their comments support the literature regarding the potential for deeply transforming experiences that can occur in this environment. Thus, a case can be made for encouraging graduates to seek such an experience as a complement to their academic preparation for careers in the allied health fields.

**Keywords:** L'Arche, disabilities, allied health fields, sport science

### **L'Arche, a Community of People with Disabilities and the University Graduate in the Allied Health Fields: A Potential Collaboration**

Graduates going into the allied health fields of physical and occupational therapies, medicine, adapted physical education, special education and therapeutic recreation will carry with them important perceptions and attitudes regarding disability. These perceptions are shaped by courses in their respective curriculums and the experiences that supplement cognitive learning. During their undergraduate experience, fieldwork, internships and service-learning experiences can all contribute to sharpened perspectives that will serve them well in future allied health careers. As a next step, many graduates choose to take time off between university studies and graduate school. Immersion experiences such as living and working in a L'Arche community can be a

valuable transitional step in pursuit of a career in the allied health fields.

This paper will include a general description of the L'Arche movement, the potential for personal transformation through participation in such a community and an analysis of potential benefits for university graduates who might seek a future career in the allied health fields.

## **L'Arche: An Overview**

L'Arche is a worldwide community of homes that exists to meet the needs of people with disabilities. The movement was founded by Jean Vanier in a small French town when he invited two people with intellectual disabilities to live with him in his home (Vanier, 1989). Vanier is a prolific writer and speaker and his writings continue to form the groundwork for the L'Arche movement.

L'Arche communities are homes where people with and without disabilities share all aspects of daily life together. "Core members" (individuals with intellectual disabilities) and "assistants" (individuals who provide care) share the necessary tasks of daily life such as cooking, cleaning, shopping and personal care. More importantly, they share in the struggles and joys of life, with special emphasis on jointly discovering the richness experienced by living in community together.

But L'Arche is much more than a physical community of people sharing life together.

Reflecting on L'Arche, Hryniuk (2010) clearly articulates the uniqueness of this community by focusing on the demonstration of love that emerges between the caregiver and the one who is receiving care in a spirit of mutuality and reciprocity. To the casual observer, L'Arche appears to exist to meet the physical and social needs of the core members. The mystery of L'Arche emerges when these needs are provided in an atmosphere of love that transcends chores and meals (Hryniuk, 2010). "One cannot separate the tenderness of a glance of recognition between an assistant and a person with a learning disability over the dinner table or in the bathroom from the sheer physicality of washing dishes or cleaning floors together" (Hryniuk, 2010, p. 92). The dinner hour is one of the most visible representations of this community. The conversation surrounding the nightly meal is savoured and enjoyed, representing spiritual and social renewal (Vanier, 1989; Webb-Mitchell, 2003).

## **Current Inquiry**

The invitation to spend two weeks at Neahkahnle House in Portland, Oregon provided the opportunity to study this unique immersion experience first-hand. Eight assistants were interviewed for approximately one hour each. Each assistant was given the following four questions prior to the interview: What is your educational background/other

work experience? What led you to pursue a place in the L'Arche community? How have you grown through this experience? What does L'Arche mean to you? Permission was granted to use the transcript of their interviews anonymously. Names have been changed to further protect the identity of the core members. The interviewees were between the ages of 23-42 with varying years of service (ranging from 2 weeks to 12 years).

## Transformative Experiences

It was found through these interviews that this shared experience had tremendous growth potential for assistants. Assistants, often young college graduates, come to L'Arche to serve those who are considered weak by the world's standards. But, as they confront their own brokenness and vulnerability, they discover a shared humanity with those they serve (Reynolds, 2008). According to Hryniuk (2010), as they drop barriers and defenses while working with those who need their care, a "deep transformation of their own personality" (p. 5) occurs. They "discover in this relationship a radical acceptance by the other that frees them to be more fully who they are" (Hryniuk, 2010, p. 141). The mutuality and growth that is embedded in these interactions between core members and assistants through self-discovery leads to greater maturity.

In interviews with assistants, they described how the vulnerability and mutuality they experience with the core members changed them forever. One assistant described his transformation in these words: "But ultimately, somehow mysteriously and in new and profound ways, I have discovered my own acceptance. That is, I am fully loved and fully accepted and fully worthy" (Anonymous, personal communication, September 16, 2011). Another described it this way: "I have a place of belonging. I am accepted no matter what." (Anonymous, personal communication, September 14, 2011).

## Cultivating Patience and Gentleness

Patience and gentleness are emphasised and practiced in L'Arche communities. Swinton, in his introduction to *Living gently in a violent world: The prophetic witness of weakness* by Hauerwas and Vanier (2008), reminds us that gentleness is a skill learned over time. Patience is required and demonstrated as core members are slowly prepared for the day's activities.

One assistant described his experience in this way:

"So another way I have grown is being patient with myself and being patient with others. And I'm still growing in this, but I definitely am aware that I am growing. But they [core residents] really call me to slow down. And Brent literally says "sit down" or Robert says that too, sometimes, "sit down" and "why don't you have some lunch?" I grew up in a culture of do, do do do do. You will be recognised for your work. But what they call me to and what I have learned (and some times/days better than others) is that there is so



much richness in just sitting down or taking time to play a little game with Brent for awhile or go outside and rake the yard with Rachel a little bit.” (Anonymous, personal communication, September 11, 2011).

### **Developing Deep Mutual Relationships.**

These kinds of transforming relationships can result in reciprocal relationships and, in fact, rare and deep friendships with core members (Kearney, 2000; Reinders, 2008). This is one of the mysteries of L’Arche that only can be understood by listening to accounts of profound personal connections made between assistants and core members.

In the words of one assistant:

I love doing morning routines where I am spending time with them and it’s just me and them and the rest of the world could be gone. I grow in relationship with them. Robert is like my dad [speaking of a core resident who is 81 yrs. old]. I am really close to him. (Anonymous, personal communication, September 11, 2011).

Clearly, these relationships benefit both assistants and core members. “Despite the success they have found in strengthening their status in the public sphere, people with disabilities - particularly intellectual disabilities - experience loneliness and isolation in the sphere of their personal lives” (Reinders, 2008, p. 6). The constant interaction between assistants and core members in L’Arche homes provides a vibrant environment that can help to mitigate these tendencies.

### **Learning Unconditional Acceptance.**

Learning to accept another who is radically different is a lesson reinforced time and again through the everyday life at L’Arche. This is perhaps the greatest lesson learned in L’Arche communities. In the words of Young (2007) “welcoming difference is never easy, but it is wonderfully enriching” (p. 94). According to Reynolds (2008), attitudes regarding difference can lead to stigma, or an undesirable difference that characterises an individual. “First, the stigmatised person is reduced to his or her stigma. The stigma becomes the defining feature of that person’s being, thus enabling society to manage and marginalise the undesirable difference it represents” (Reynolds, p. 64). This acceptance of difference, thereby reducing stigma, was reinforced by interviews with assistants: “I guess not letting the fears of ‘Oh that person looks different from me or acting differently’ stop me from engaging with them”. (Anonymous, personal communication, September 19, 2011). Clearly, experiences at L’Arche help assistants move from a position of seeing people with disabilities as “the other” to a perspective of shared humanity. Creamer (2009) reinforces this idea by pointing out that differences are between the “disabled and temporarily able-bodied” and reminds us that we all are likely to experience disability at some point in our lives (p. 3).

## Potential Benefits for University Graduates

How disability is perceived matters greatly. Communities like L'Arche have the potential to impact how graduates in the allied health fields view disability. Medical environments such as physical therapy appropriately place emphasis on rehabilitation and restorative function. According to Creamer (2009), this medical model of disability views the body as a machine that exhibits the presence or absence of function, putting focus on diagnosis and treatment. Little or no attention is given to the attitudinal or physical barriers that help to define disability. In contrast, the socio-political model assumes societal responsibility for disability (Creamer, 2009; Reynolds, 2008). "This model highlights the fact that individuals are often more handicapped by the physical and attitudinal barriers in society (e.g., lack of access to employment, education and health care) than by their own abilities" (Creamer, 2009, p. 25). Training in the therapies and other allied health fields most likely focuses on the medical model. This can serve individuals well if there is the potential for cure. When cure is not an option, individuals with disabilities need help in discovering how to live a full and meaningful life. The socio-political model places the responsibility for change on all of us.

Perhaps the greatest lesson learned by assistants at L'Arche communities is how to reduce these physical and attitudinal barriers. We can all play a role in helping people with disabilities enjoy life. This can be accomplished by removing physical barriers such as steps, curbs and narrow doorways that create daily obstacles. More importantly, though, we need to be mindful of attitudinal barriers that bring great pain to people with disabilities. How we speak and generally relate to people with disabilities reflects our attitudes about their value and worth. Disability scholars reflect in the literature the need to use "person first" language when referring to people with disabilities (Eiesland, 1994; Reynolds, 2008). When referring to "that blind person" or "that intellectually disabled" person, the focus is on the disability and not their personhood. People with disabilities deserve to have their identity rooted in their individuality, not in generalisations. "This [distinction on] usage underscored the conviction that an individual's disability is just one of many personal characteristics, rather than being synonymous or coextensive with that person's self" (Eiesland, 1994, p. 27). Assistants learn the valuable lesson of not only using "person-first" language, but seeing beyond the disability and discovering the true person. Professionals in the allied health fields can play a pivotal role in advocating for and modeling the responsibilities we all have to create a better world for those with disabilities.

## Conclusion

Assistants report a deep sense of appreciation for the L'Arche community. The vulnerability and mutuality experienced in relationships with core members is life changing. They learn how to live patiently in their everyday interactions with core members who encourage them to slow down and listen carefully to the needs of others,

as well as their own needs. Deep friendships are formed and appreciated by assistants and core members. The unique ability to approach people who are different from them with confidence is developed. Most importantly, they learn to accept others who might not measure up to the world's standards and in the process, gain their own acceptance. These are highly transferable skills for the allied health fields.

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<http://www.icsspe.org/>

## The eLF - eLearning Fitness Project

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## Abstract

This article presents the main results and methodology of eLF e-learning courses. The eLF system will contribute to create the strong “critical mass” necessary to facilitate the growth and expansion of the Health Enhancing sport and physical activity sector in Europe and worldwide.

## Introduction

The Sports Club for Health Guidelines foreword states that sports clubs have an inherent place in physical culture and they play a multiform role in society (Finnish Sport for All Association, 2011). These guidelines evolved from the idea that it is sensible for sports clubs to join in health promotion because the core business of sports clubs, i.e., moving people, promotes health.

The Sports Club for Health (SCforH) program was promoted by The Association for International Sports for All (TAFISA) and financed by the European Union (EU) Sport Unit (DG EAC) in 2009 as one of the preliminary actions in physical activity and sport. One of the work packages is about “instructor education” and Appendix 4 of the Guidelines for health-oriented sports activities in a club setting, states that by 2012, the education level of the instructors shall meet that required by the European Qualification Framework (EQF) and the education level (of the sports instructors) should be indicated on all certificates.

In 2010, the EAEAC, EU DG Education and Culture, financed the eLearningFitness Project (eLF), which is based on the EQF-Fitness standards, developed by EHFA. These standards indicate the Knowledge, Competences and Skills of fitness instructors at EQF Levels 3 and 4.

Today, the eLF Network is composed of 19 Principal Partners and over 90 Associate Partners in 27 countries as shown on the enclosed map.

## Facts

The International Olympic Committee (IOC), which does not have a specific role in fitness activities, has commented positively on the eLF Project and welcomes the development of standards and education for the promotion of physical activity for health in the sport sector, considering that physical activity is at the core of all sports disciplines. Together with the World Health Organisation (WHO), the IOC Medical and Scientific Department is developing a strategy for the promotion of physical activity and is considering a possible association with the eLF Project.

The eLF Network is confident that there is a need to expand and improve the knowledge and education of instructors and technical staff, considering that “fitness” is an essential part of Sports for All activities and strongly related to public health. TAFISA’s support of the promotion of physical activity for health is very valuable and fits perfectly with the WHO policy to promote HEPA, Health Enhancing Physical Activity, as the primary prescription for healthy lifestyles and the prevention of cardiovascular and metabolic diseases.

While most sport disciplines are monothematic and have their own specificity that cannot be used or applied in any other sport discipline (let’s say that they are vertical and there is no overlapping or interconnection among them), fitness is very horizontal and constitutes the basis for the practice of any sport activity. Fitness is the base on which all sport disciplines are built. Unless the person is “FIT”, he cannot participate in any sport activity safely and successfully, even at the amateur level.

It is easy to understand that this is a very sensitive issue, considering that it correlates sports activities with people’s health. Therefore, it is necessary to guarantee transparency regarding the instructor’s qualifications to ensure safety, to protect the practitioners and to acquire the trust of the health professionals. This endorsement is necessary to encourage these professionals to prescribe sports activities without any doubts or fears, for the enhancement of the health of their ‘patients’.

Through the eLF e-learning training platform, the Sports for All organisations and the SCforH facilities / operators / instructors, will be able to adopt and use a modern, easy and economic system to educate, test, verify and evaluate the professional knowledge, skills and competences of the future “sport for health” trainers. This system, which is necessary for their professional enhancement and for the satisfaction and safeguard of the practitioners, will be available at a very low cost.

## Method

## Objectives

The eLF project has two main goals:

1. To create a European e-learning training system in fitness (physical activity for health) to cover the minimum standards for both the theory (knowledge) and the instructor's practical skills and competencies of the instructors based on the EQF Levels 3 and 4;
2. To create a network of National Registers of Exercise Professionals, which will connect with other international registers as the EREPs (European Register of Exercise Professionals) and be affiliated to the ICREPs (International Confederation of Registers for Exercise Professionals).

More information on the project and all the Principal Partners can be found on the project's website [www.elearningfitness.eu](http://www.elearningfitness.eu).

eLF Partners:

### The eLF Training Courses and Professional Certifications

All four eLF distance training courses, which will be available in 14 languages, have one common module, named Core Knowledge, which covers all of the basic scientific information necessary to provide students with the Knowledge, Competence and Skills to operate as a HEPA instructor. Through the eLF courses, it will be possible to obtain professional certification as:

- Group Exercise instructor (Aerobics and Muscle Conditioning), EQF level 3
- AquaFitness instructor, EQF level 3
- Fitness instructor (weight room and cardio machines), EQF level 3
- Personal trainer, EQF level 4 (acceded after having successfully completed the fitness instructor course).

The eLF Core Knowledge module, a preliminary part of each specific course, is particularly indicated for the basic training of SCforH instructors and operators, using it as a common basis of education and knowledge, before starting, or completing, the training in the specific practical programmes pertaining to the various sport disciplines and activities.

### The European System of the eLF National Registers



Currently, surveys in most countries show that there is a great inadequacy between the supply and demand for professional skills in Sport for Health activities, facilitating the recruitment of incompetent staff with great risk for the health and safety of the practitioners. The eLF processes will further consolidate the activities of the sports sector, stimulating the creation of new ones and promoting entrepreneurial development, for the benefit of the organisations, the operators, the technical staff and, most importantly, the safety and satisfaction of the customers.



The main function of the eLF registers will be to guarantee transparency regarding the instructor's professional qualifications and facilitate the search for skilled professionals by sport operators in the labour market.

All students that successfully pass the final exams of each course (theoretical and practical) will automatically enter their country's National Register.

### **Benefits for Participants**

Recognition as a professional instructor, certified on the basis of the EHFA standards and in the EQF level system, have the advantage of:

- Better qualifications for current job
- Customer care and attention
- Motivation and Networking opportunities
- Development of presentation / public speaking skills
- Learning from other countries (knowledge transfer).

### **Discussion**

The use of the eLF system by the Sports Club for Health Program and the Sports for All activities/providers will contribute to the creation of the strong "critical mass" necessary to facilitate growth and expansion of the Health Enhancing sport and physical activity sector in Europe and worldwide. The eLF Project will guarantee the efficacy of the training programmes and the transparency of a system that will give the fitness community credibility and legitimacy through:

- the consistency and sustainability of an e-learning platform based on the EQF (European Qualification Framework);
- the functionality and transparency of the following processes and procedures:  
assessment, validation and certification of the knowledge, competence and skills of the students after the conclusion of the e-learning training courses;
- activation and operation of an European network of pilot National Registers for Exercise Professionals.

The system that the eLF Partners, including the Associates, wish to create through this project will give the European and International sport organisations, operators, employers and instructors, a useful and efficient skills monitoring tool.

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### ***The Effects of Mifalot Soccer Programmes on the Attitudes of Arab and Jewish Youth towards each other***

*Michael Leitner, Yair Galily & Pini Shimon*

#### **Abstract**

Utilising sports and other recreational activities to foster peaceful relations and coexistence is an idea that has gained popularity in recent years, particularly in Israel.

The aim of the current research is to fill a gap in the literature on the subject of coexistence programming. The Mifalot organisation conducts a programme called “Get to Know Your Neighbour” in which Palestinian, Jordanian and Israeli youth play soccer together. The programme, based mainly on the participants' love for football, is a series of activities and lessons designed to prepare children to meet and interact with youth from neighbouring communities. The study examines the effects of participation in this programme on the attitudes of the Palestinians, Jordanians and Israelis towards each other.

**Key Words:** Coexistence, Israel, Soccer, Peace

#### **Introduction**

Utilising sports and other recreational activities to foster peaceful relations and coexistence is an idea that has gained popularity in recent years, particularly in Israel. There are a variety of recreational coexistence programmes presently being conducted in Israel, ranging from soccer, basketball, martial arts, ultimate Frisbee and cricket, to dancing, music, arts and cooking.

However, the effectiveness of these programmes in promoting coexistence is being questioned. A conference was held in Jaffa, Israel on July 11, 2012 titled “Jews and Arabs kick around the same ball – and what's next?” The conference examined and questioned the effectiveness of recreation programmes in fostering coexistence. As discussed at this conference, although there are many programmes in place, there has been relatively little research conducted on examining the effects of these individual programmes on the attitudes of their participants.

This study sought to fill a gap in the research literature on the subject of coexistence programming. The Mifalot organisation conducts a programme called “Get to Know Your Neighbour”, in which Palestinian, Jordanian and Israeli youth play soccer together. The programme, based mainly on the participants' love for football, is a series of activities and lessons designed to prepare children to meet and interact with kids from neighbouring communities. This study examined the effects of participation in this programme on the attitudes of the Palestinians, Jordanians and Israelis toward one another.

## **Methodology**

Mifalot conducts soccer activities in their “Get to Know Your Neighbour” programme, which bring together Israeli, Palestinian and Jordanian youth ages 10-12. This study assessed the effects of this programme on the attitudes of the youth toward one another. Pretest questionnaires were administered in the Fall of 2011, before the joint activities for the year began. Post-test questionnaires were administered in June, 2012 at the last joint activity for the year. The difference in responses between the pre-test and post-test questionnaires was examined to determine the effects of the joint soccer programme on attitudes of the participating youth toward each other.

The questionnaire used in this study is the same one used in the 1998 and 1999 studies with Israeli elderly Arabs and Jews (Leitner, Scher and Shuval, 1999; Leitner and Scher, 2000). It consisted of eight items and was based on the questionnaire used by the Carmel Institute in their nationwide study in 1994 of teenagers' attitudes. There were separate versions of the questionnaire for the Palestinians and Jordanians, in Arabic and for the Israeli Jews in Hebrew.

The questionnaires were completed anonymously to encourage the respondents to be honest in their answers. The pre-test questionnaires were completed by the youth on the bus on the way to their first joint activity of the year. They had to submit their completed questionnaires before getting off the bus. The post-test questionnaires were completed at the last joint activity of the year.

## **Results and Discussion**

There are two sections to the presentation of the results of this study. The first one is a comparison of the pre-test and post-test responses of the Palestinians and Jordanians (the Arabic questionnaires). The second section is a comparison of the pre-test and post-test responses of the Israeli Jews (the Hebrew questionnaire).

### **Questionnaires to Palestinians and Jordanians**

There were 131 Palestinians and Jordanians who participated in the “Get to Know Your Neighbour” programme during the year who answered the post-test. These post-test responses were compared to the pre-test responses of 112 Palestinians and Jordanians who had previously not participated in Mifalot coexistence programmes. On both the pre-test and the post-test, there were 20 Jordanian respondents.

Table 1 below displays the results from the questionnaires administered to the Palestinians and Jordanians. The last column indicates the percentage change in the scores from the pre-test to the post-test.

**Table 1: Mifalot Arabic Questionnaire Results**

#### Questionnaire Item Pretest Post Test Change

Questionnaire Item	Pretest	Post Test	Change
Willing to host a Jewish Israeli*	45.5%	64%	+18.5%
Opposed to having a Jewish Israeli neighbour**	21.5%	52%	+30.5%
Ready to have a Jewish Israeli friend*	38%	64%	+26%
Trusting all or most Jewish Israelis	<2%	37%	>+35%
I have a Jewish Israeli friend	<1%	27.5%	>+26.5%
I hate none or only a few Jewish Israelis	30%	53%	+23%
None or only a few Israeli Jews hate Palestinians	16%	38%	+22%

\*Figures shown indicate the percentage agreeing or strongly agreeing with the statement

\*\*Figures shown indicate the percentage disagreeing or strongly disagreeing with the statement

As shown in Table 1, positive changes were seen in all of the questionnaire items. The amount of change ranged from 18.5% for the question about willingness to host an Israeli Jew to over 35% for the question about trusting Jewish Israelis. The question about being opposed to having a Jewish Israeli neighbour had reversed scoring, meaning that having more respondents disagreeing or strongly disagreeing with the statement on the post-test indicated a positive change in attitudes. In summary, positive changes in attitudes of at least 20% were obtained for all of the questionnaire items except for the 18.5% figure for the item about willingness to host an Israeli Jew.

#### Questionnaires to Israeli Jews

There were 198 Israeli Jews who participated in Mifalot’s “Get to Know Your Neighbour” programme during the year who answered the post-test. These post-test responses

were compared to the pre-test responses of 140 Israelis who previously had not participated in Mifalot coexistence programmes. Once again, the pre-test responses of previous participants in Mifalot programmes were not included in the comparison of the pre-tests and post-tests but their post-test responses were included.

Table 2 below displays the results from the questionnaires administered to the Jewish Israelis. The last column indicates the percentage of change in the scores from the pretest to the post test.

**Table 2: Mifalot Hebrew Questionnaire Results**

#### Questionnaire Item Pretest Post Test Change

Questionnaire Item	Pretest	Post Test	Change
Willing to host a Palestinian*	49%	60%	+11%
Opposed to having a Palestinian neighbour**	32%	60%	+28%
Ready to have a Palestinian friend*	36%	47%	+11%
Trusting all or most Palestinians	6%	26.5%	+20.5%
I have a Palestinian friend	4%	23.5%	+19.5%
I hate none or only a few Palestinians	37%	53.5%	+16.5%
None or few Palestinians hate Jewish Israelis	12%	29%	+17%

\*Figures shown indicate the percentage agreeing or strongly agreeing with the statement

\*\*Figures shown indicate the percentage disagreeing or strongly disagreeing with the statement

As shown in Table 2, positive changes were obtained in all of the questionnaire items. All of the items changed by more than 10% from the pre-test to the post-test. The change scores ranged from 11% for two of the items (willingness to host and readiness to have a friend) to 28% for being opposed to having a Palestinian neighbour. The question about being opposed to having a Palestinian neighbour had reversed scoring, meaning that disagreeing or strongly disagreeing with this statement were the more positive or desired responses.

#### Summary, Conclusions and Recommendations

This study provides concrete evidence of the value of joint sports programmes in conflict mitigation and coexistence efforts with Israelis, Palestinians and Jordanians. In particular, the positive changes from the pre-test to the post-test in the areas of trust,

hatred and perceived level of hatred of the other group are encouraging.

There are similarities and differences in the results of this study and those of earlier studies on attitudes of Arabs and Jews toward each other cited in the introduction. One similarity is that the previous research showed that 62% of Israeli Arabs thought that all or most Jews hate Arabs. In this study on the pre-test, 60% of the Palestinians and Jordanians indicated that they thought that all or most Jews hate Arabs. These figures are remarkably similar. Keep in mind that the children (ages 10-12) in this study were younger than the teenagers studied in the earlier research by the Carmel Institute (Gal, 1996). In addition, the Arab respondents in this study were Palestinian and Jordanian, NOT Israeli Arabs. Despite these variables and the many years that had passed between the studies, the figures for this question were almost identical when comparing the pre-test results to the results of the Carmel Institute's research.

However, the post-test findings for this question were markedly changed, with only 36% of the Palestinians and Jordanians stating that they thought that all or most Jews hate Arabs. If the joint soccer activities made such a big difference (24% change) in this study, then it is likely that a similar programme with Israeli Arab teenagers would produce similar positive changes.

The similarities in responses to this question in the two different studies make the differences in responses to the question about hatred of Jews even more intriguing. In this study, 54% of Palestinians and Jordanians on the pre-test said that they hated all or most Jews, compared to only 24% of Israeli Arab teenagers indicating that they hated all or most Jews in the Carmel Institute's 1994 study. The level of hatred dropped to 31% on the post-test, but this figure is still higher than the 24% in the earlier study.

There are several possible explanations for the higher level of hatred found in this study. One possibility is that Palestinians and Jordanians hate Israeli Jews more than Israeli Arabs do. Another possibility is that younger children are more honest in answering questionnaires than teenagers are and are more willing to admit that they hate Israeli Jews. The post-test in this study showed the Arab respondents to perceive a lower level of hatred of Jews toward Arabs (36%) than in the Carmel Institute study (62%), but at the same time, a higher level of hatred toward Israeli Jews (31% on the post-test) than in the Carmel Institute study (24%). It is also possible that these findings reflect true feelings. After playing with Israeli Jews, Palestinians and Jordanians realise that Israeli Jews do not hate them, but that their feelings of hatred toward Israeli Jews were stronger than that of Israeli Arabs toward Israeli Jews.

Meanwhile, the responses of the Israeli Jews on the pre-test in this study were similar to those of the Jews in the Carmel Institute research. The percentage that indicated that



they hated all or most Arabs was about the same (36% versus 37%). Surprisingly, a lower percentage (46%) on the pre-test in this study answered that all or most Palestinians hate Israeli Jews, compared to the 59% of Jews saying that they thought all or most Arabs hate Jews in the Carmel Institute study. The post-test figures are encouraging, showing that hatred dropped to 23.5% and perceived hatred by Arabs dropped to 36%.

The comparison of the feelings of trust in this study versus earlier studies is perhaps the most encouraging finding. The earlier research had shown that 66% of Arabs and 66% of Jews felt that it was impossible to trust the other. In this study, in the post-test only 20.5% of Palestinians and Jordanians answered that they did not trust Israeli Jews at all or almost not at all. Similarly, only 25% of the Israeli Jews on the post-test indicated that they did not trust Palestinians at all or almost not at all. These results attest to the power of sports to help improve relations between Arabs and Jews.

In conclusion, programmes such as “Get to Know Your Neighbour” need to expend in order to reach more youth. The positive impact of this programme is documented in this study. The more people that are reached by programmes such as these, the more ambassadors for peace we will have. The bad news, as indicated by the pretest results, is that a great deal of hatred and lack of trust exists among Palestinians, Jordanians and Israelis. The good news, as indicated by the post-test results, is that by playing soccer together, feelings of hatred can be greatly reduced and feelings of trust can be enhanced.

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## New Doctoral and Masters Programmes in Venezuela

### Master Opening Class by Herbert Haag

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*Rosa López de D'Amico*

In June 2013, the Universidad Pedagógica Experimental Libertador (UPEL) in Maracay, Venezuela launched two Masters programmes and a Doctoral programme. The masters programs are Sport Management and Recreation, while the doctoral program is in Physical Activity and Sport Sciences; the first doctoral program of its kind in Venezuela. UPEL was honored to have Prof. Dr. Herbert Haag deliver the opening classes to these programmes.

The Research Center Estudios en Educación Física, Salud, Deporte, Recreación y Danza: EDUFISADRED (Studies in Physical Education, Health, Sport, Recreation and Dance), at UPEL Maracay is responsible of these three initiatives to continue promoting academic and research development in areas related to the study and enjoyment of physical activity, dance, sport, recreation, physical education and health.

The creation of the doctoral program in Physical Activity and Sport Sciences is indeed a big step forward as it is the first one in the country. It offers motivation for other universities in the country to work together in network for the benefit of academia and research in PA, PE and sports. The programme was approved in December, 2012 by the Venezuelan National Universities Council (CNU). This project was first dreamed of in 2006, but began to develop in earnest in 2011 and went through the rigorous evaluation processes established by the National Universities Council.

In the opening class of the doctoral program, there were 33 candidates, all very much exited by the new experience. The master class by Prof. Dr. Herbert Haag in the inauguration of the first Doctoral Program was indeed an important step in the development of sport science as an academic discipline. On the occasion of this event, the keynote highlighted important issues in regard to sport science development. Besides, two paradigms were discussed in regard to an academic discipline and also to sport science:

1. Nature: Representing the framework for dealing with sport science. Two issues are covered in this regard:

- Body of knowledge (Intra-Inter as Dual Approach).
- Research Methodology (Kiel Model of Research Methodology).

2. Self-understanding: Ways in which sport science is understood by itself. The importance of holistic understanding for the logic of an academic discipline like sport science (Haag, 2010)

The following picture shows the group of doctoral candidates with Prof. Dr. Herbert Haag

PICTURE 1



Overall, the class was an excellent opportunity to explain and analyse perspectives which are important for the development of sport science in general and in Venezuela specifically.

It is also important to acknowledge our appreciation as well to the following organisations that supported the doctoral project in its initial stages: International Association of Physical Education and Sport for Women and Girls (IAPESGW), Latin-American Association for Socio-cultural Studies of Sport (ALESDE), Latin-American Association of Sports Management (ALGEDE) and the International Society for Comparative Physical

A seminar in Sport Methodology was also given by Prof. Dr. Herbert Haag to the masters students of both programmes, which were approved by the National Council of Universities (CNU) in February, 2013. The visit of Prof. Haag was also beneficial to the candidates of these two new programmes at UPEL Maracay. It was a very interesting experience for all 45 students that participated in the seminar. Following is a picture of most participants.

PICTURE 2



Both activities were organised at Universidad Pedagógica Experimental Libertador (UPEL) on the Maracay campus, coordinated by EDUFISADRED. Those directly responsible were: Josil Murillo, Gladys Guerrero, Maira Vallenilla, Jorge Ramírez, Elizabeth Mizrahi and Rosa López de D'Amico. Our appreciation also goes to the translators: Diorling Medina, José Iriarte and Alessandro D'Amico.

It is important to highlight that with both groups Prof. Dr. Herbert Haag had the opportunity to use with his book on Research Methodology (Haag, 2004) in its Spanish version (Haag, 2006) that was translated and published by UPEL in 2006. The whole experience was fantastic and both groups were very satisfied with Prof. Haag, who also provided extra information related to academic organisations (ICSSPE in particular) and resources in general, particularly the recent ICSSPE Directory of Sport Science.

Our gratitude to Prof. Dr. Herbert Haag who shared with us in this important occasion when commenced the first Doctoral programmes in Physical Activity and Sport Sciences in Venezuela and two important Masters programmes in our field.

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## Women: Are they changing the Face of global Sport Management?

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*Darlene A. Kluka & Anneliese Goslin & Rosa Lopez de D'Amico & Gudrun Doll-Teppe*

### Introduction

The demands of international sport management in the 21st century will include more indepth knowledge of international law, communication and media relations (Kluka, Goslin & Steyn, 2012). The need for professionalisation of sport, its associated commercialisation and its globalisation will also continue to gain importance. The need for sport managers to resemble those who participate is also an area of importance as the world becomes more globally linked through technology, economies, languages and cultures. Of particular interest is the presence and influence of women as sport managers.

The status of women in societies has been at the centre of conversations for generations (Goslin & Kluka, 2007). Concepts of gender mainstreaming, gender equality, gender equity and women's empowerment have been identified as key drivers for promoting women's quality of life (Doll-Teppe, Pfister, Scoretz & Bilan, 2005; Malhotra, Schuler & Boender, 2002) and sustainable social change. Gender mainstreaming as an element of social change involves implementation, monitoring and evaluation of policies and programmes that are central to achievement of gender equality (United Nations, 2000).

Despite global equal opportunity legislation and policies, there is little doubt that women continue to be substantially under-represented and marginalised in management positions, particularly on executive decision making levels (Ying, 2007; Hovden, 2006). Although there appears to be general agreement that women manage differently than men, there seems to be less agreement on how they manage, especially in the context of sport. As women increasingly enter and hold management positions in sport that traditionally have been held by males, the status and adequacy of female management styles have begun to show promise in changing the face of global sport management.

Throughout the world we are seeing and experiencing evidence of commercialisation and globalisation of sport. Globalisation continues to dissolve physical boundaries



between countries and technological advances continue to enable sport managers to connect on virtual and real platforms unlike a decade or two ago. International sport councils such as ICSSPE (International Council of Sport Science and Physical Education), the envisaged formal establishment of the World Association for Sport Management (WASM) or international sport governing bodies are examples of global sport management groups that are expected to function effectively across national and cultural borders. The reality of cross-cultural sport management groups, councils or associations emphasises the need for globally responsible and sensible sport managers (male and female) skilled to manage effectively in global sport management contexts. This puts an immense premium on appropriate global sport management styles.

The complex and borderless world of global sport management often confronts members of international sport councils' executive boards or members of committees responsible for organising international sport events with management challenges posed by diverse cultures, traditions, business and legal frameworks in geographical or virtual settings they are unfamiliar with. Female sport managers operating in a global sport context are often expected to meet global management challenges with local training and experience. Failure in such circumstances obviously reinforces stereotyping of female sport managers as ineffective. In a globally connected sport industry where mega sport events such as the Olympic Games often has the potential of greater positive economic, political and societal impact than governments can hope for, it is imperative for sport managers to demonstrate appropriate and effective management styles to impact the face of global sport.

If navigating the complex landscape of global sport management is not daunting enough on its own, adding the variable of gender equality multiplies the challenges even more. Despite an array of Declarations, Calls to Action, Protocols and Ways Forwards on gender equality, significant research on the position and status (or lack thereof) of women in management in general and sport management in particular, highlights the sober reality of continuous underrepresentation of females. Issues addressed in some of the research involved:

- What keeps female managers from reaching the top?
- Are male managers better than female managers?
- Do males and females have different management styles?
- Are female management styles more effective or better than male management styles?

Diverse explanations are suggested as to why females stay underrepresented in global management contexts. In general, proposed reasons are grouped into two categories:

- Systemic challenges (e.g. policies or human resource management structures) and

- Skill set/management intelligence of female sport managers.

We prefer to focus on the latter category (*skill set/management intelligence*) in an attempt to answer the leading question posed for this paper and explore the significance of female management styles in changing the face of global sport management.

Researchers clearly indicate that women do have the necessary skill sets to manage effectively in management positions (Eagly & Carli, 2006; Hovden, 2006). There are abundant examples of female sport managers who demonstrate extremely effective management styles in their respective mono-cultural local sport management contexts. Effective domestic sport management styles, however, do not guarantee efficacy in a global sport management context. A fundamental characteristic of effective global sport management is cross-cultural interaction between sport managers from diverse cultures. Female sport managers' effectiveness in these cross-cultural environments depend on how *intelligent* they are in identifying, integrating and interpreting signals from management styles that differ from their local sport management style.

Three moderators are widely stressed to facilitate effective transition from local management styles to global sport management styles:

- Global mindset
- Cultural intelligence
- Emotional intelligence

### ***Global mindset***

The Global Mindset Project (GMP) driven by the authoritative Thunderbird School of Global Management concluded that a global mindset is multi-dimensional and consists of a blend of intellectual capital, social capital and psychological capital. *Intellectual capital* reflects a global female sport manager's intellectual and cognitive capabilities and centres around knowledge of the global sport industry, understanding diverse value networks and organisations, understanding complex global issues in sport and possession of cultural intelligence. *Social capital* implies a female sport manager's ability to establish networks, relationships, norms, trust and maintain goodwill in social relationships across cultures and national boundaries. *Psychological capital* signifies a positive psychological profile towards contact with diverse cultures, an affinity for learning and exploring other cultures as well as personality traits of resiliency, curiosity and a quest for adventure.

### ***Cultural Intelligence***

The ability to manage across cultures is claimed to be a fundamental global management skill in the 21st century. The ability or intelligence to read/analyse diverse cultural signals in global sport contexts and then adapt management behaviour (style) appropriately represents the inner core and unique hallmark of successful female sport managers. Local cultural frameworks define individual management styles while the multi-cultural environment of global sport contexts demands knowledge and insight of diverse cultural norms and values. An understanding of how different cultural norms and values influence management styles does not come intuitively; it requires focused effort from female sport managers to develop competency of cultural understanding. The seminal GLOBE (Global Leadership and Organisational Behaviour Effectiveness) study initiated by the Thunderbird School of Global Management is regarded as the pivotal and most ambitious contribution in understanding differences between cultures and how it influences management styles within cross-cultural organisations, including sport organisations. For this reason, it is critical for female sport managers operating across cultures to be mindful of the findings of the critical GLOBE project to optimise global sport management versatility. The GLOBE project identified nine cultural dimensions that manifest themselves differently across cultures:

- Performance orientation
- Assertiveness orientation
- Future orientation
- Humane orientation
- Institutional collectivism
- In-group collectivism
- Gender egalitarianism
- Power distance
- Uncertainty avoidance

Global cultures are divided into ten cultural clusters:

- Anglo cluster
- Latin America cluster
- Latin Europe cluster
- Sub-Saharan Africa cluster
- Nordic Europe cluster
- Middle East
- Germanic Europe cluster
- Southern Asia cluster

- Eastern Europe cluster
- Confucian Asia cluster

Culture influences the way sport managers behave, communicate, use power, avoid uncertainty, value time or performance or the position of women in sport contexts as it implies a set of norms, thought patterns, beliefs and emotional responses. Female sport managers cannot directly or blindly apply their local concepts in a global sport context. Sport managers from different cultural clusters value cultural dimensions differently. When sport managers from the Confucian Asia, Sub-Saharan Africa, Anglo, Nordic Europe or Latin America cultural clusters converge in global sport management contexts, there could be conflict of management styles as different emphasis is placed upon cultural dimensions.

For example:

<b>CULTURAL DIMENSION</b>	<b>IMPORTANT</b>	<b>NEUTRAL</b>	<b>LESS IMPORTANT</b>
<b>Performance orientation</b>	Confucian Asia Germanic Europe Anglo	Southern Asia Sub-Saharan Africa Latin Europe Nordic Europe Middle East	Latin America Eastern Europe
<b>Gender egalitarianism</b>	Eastern Europe Nordic Europe	Latin America Anglo Latin Europe Sub-Saharan Africa Southern Asia Confucian Asia Germanic Europe	Middle East
<b>Humane orientation</b>	Southern Asia Sub-Saharan Africa	Middle East Anglo Nordic Europe Latin America Confucian Asia Eastern Europe	Latin Europe Germanic Europe

A *culturally intelligent* female sport manager has the ability to construct an appropriate *glocal* sport management style because she is aware how different local cultures value management behaviours and adapt her global management style appropriately. Acquiring and developing cultural intelligence is a delicate art that requires more than mere reading facts of a country's demographics and cultural norms. It requires first, self-awareness of one's own cultural blind spots, the consequences of ethnocentrism and stereotype cultural assumptions and then developing appropriate skills and global mindset needed for cross-cultural interaction. Heightened levels of cultural awareness link to *mindfulness*, a concept originating from Buddhism and recently applied to cultural intelligence (CQ). Mindfulness (as opposed to mindlessness) serves as moderator between knowledge of different cultures and behaviour and translates into appropriate global sport management styles.

### ***Emotional Intelligence***

Emotional intelligence is a second recently introduced marker of effective global management styles. Emotional intelligence is the multi-dimensional ability to monitor one's own and others' feelings, to discriminate amongst them, and to use this information to guide one's thinking and management action and style in specific contexts. *Perceiving emotions*, as a dimension of emotional intelligence, requires female sport managers to not only detect and interpret emotions in pictures, voices, body language and cultural norms and values but also identify their own emotions. The ability to perceive emotions provides a gateway to interpreting subsequent emotions. *Using emotions* requires an emotionally intelligent female sport manager to harness different emotions to facilitate cognitive management skills such as problem solving, reasoning and decision making. *Understanding emotions* requires female sport managers to understand the finer nuances and manifestations of and between emotions as well as how emotions can change over time in meetings or discussions. Poor emotional intelligence in a complex and multi-cultural international sport business environment is likely to impact negatively on goal achievement.

Female sport managers who demonstrate some of the following behaviours in their global management styles appear to be successful in global contexts:

Global mindset	Cultural intelligence	Emotional intelligence
Adaptability	Have cultural awareness of self and others	Realistic self-assessment
Resiliency		Able to verbalise emotions
Curiosity	Recognise ethnocentrism	Trustworthiness and integrity
Optimism	Understand the consequences of cultural assumptions	Comfort with ambiguity
Self-confidence	Know key cultural tendencies that repeatedly cause misunderstanding and mistrust	Openness to change
Willingness to accept ideas no matter where they come from		Restless with status quo
Knowledge and understanding of how to build and manage global alliances	Use communication styles appropriate to different cultures	Cross-cultural sensitivity
Collaborativeness	Ability to suspend judgment about other cultures and gender	Attuned to others' feelings, emotions and moods
Knowing other languages and cultures		Able to build and grow management teams

### Pointers for female Sport Managers to impact the Face of global Sport Managers

Effective global sport management styles are learned behaviour. This implies that female sport managers aspiring to impact the face of global sport contexts can acquire appropriate management styles through developing global mindsets as well as high levels of cultural and emotional intelligence to supplement their fundamental intellectual management competencies. Distinctive management behaviours (global mindset, cultural and emotional intelligence) can be assessed through tools such as the Global Mindset Inventory, Cultural Intelligence Scale, Cross-Cultural Adaptability Inventory Test or the Emotional Quotient Inventory and then developed appropriately.

Researchers (Kluka, Goslin & Rosenberg, 2011; Goslin & Kluka, 2007) have shown that the most powerful activities and practices to develop effective global sport management behaviours or styles include:

- Mentoring
- Management coaching
- Action learning
- Face-to-face contact to appreciate cultural and management style differences
- Networking across cultures
- Dialoguing.

Likewise, the least powerful strategies to develop effective global sport management behaviour include:

- Academic classroom teaching
- Imposing generic management style models on all global management contexts.

In summary, female sport managers have the ability to impact the face of global sport management. Global sport management contexts differ substantially from local sport management contexts and effectiveness in local sport management contexts does not guarantee success in global sport management contexts. Gender does not influence effective global sport management potential. Global mindset, emotional and cultural intelligence are critical moderators to transform and develop effective local management behaviour into effective global management styles. There is no single ideal global sport management style for female sport managers. The critical moderators of global mindset, emotional and social intelligence can be learned and developed in female sport managers. A succession strategy for female sport managers who have the desire to develop from local sport management to global sport management could also assist in impacting the face of global sport management.

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## ICSSPE News

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*Ben Weinberg*

### **ICSSPE Supports Paediatricians to Increase Knowledge of Energy Balance and Physical Activity**

ICSSPE supports the Excellence in Paediatrics (EiP) Institute - a non-profit organisation that unites paediatricians around the world - in its latest initiative called the PEARL Project, which helps to promote energy balance and physical activity amongst children and families.

In addition to ICSSPE, PEARL is supported by many of the key stakeholders in the energy balance and physical activity field, including the International School Health Network (ISHN), American College of Sports Medicine (ACSM), the EPODE International Network and the International Association of Physical Education and Sports for Girls and Women (IAPESGW).

The obesity epidemic on the rise across the globe is a consequence of poor diet and a lack of physical activity. The PEARL Project's long-term aim is to tackle this by providing free-to-view eLearnings to healthcare professionals around the world as well as holding an annual summit that charges global experts and national delegations to commit to, and action, change at the national level.

The objective of the 2013 PEARL Summit, taking place in Doha, Qatar during EiP's Annual Conference (4-7 December), is the promotion of physical activity among children and adolescents. The Summit highlights the critical need to align physical activity experts and advocates with frontline paediatricians. By creating this link, PEARL will provide practitioners with the ability to effectively spread the message and benefits of physical activity to the next generation. Alongside the Summit, EiP also accepts abstracts on physical activity for their main annual conference, giving the 50 best abstract submitters the chance to win a free place at the EiP Conference in Qatar this December. Finally, PEARL aims to educate at least 5,000 healthcare professionals per year via free-to-view eLearnings that provide direct advice on topics ranging from media use and obesity trends, to promoting physical activity and energy balance.

Apart from the eLearnings there is also a dedicated global needs survey taking place,

linked to a PEARL Network of like-minded healthcare professional who are joining together to promote physical activity.

Physical activity is seen as key to fighting the obesity epidemic and by uniting with, and educating paediatricians, the PEARL Project offers ICSSPE members the chance to help train educators and improve children's health, globally.

### **Guido Schilling Receives Award**

Guido Schilling has been awarded by the International Society of Sport Psychology (ISSP) for his contributions to the advancement of the discipline. He received the award at this year's ISSP 13th World Congress of Sport Psychology, which took place in Beijing from 21 - 25 July.

In 1965, Schilling attended the first World Congress for Sport Psychology held in Rome. Since then he has been committed to sport psychology, research and education.

Holding degrees in Physical Education and Applied Psychology, he not only worked as a sport psychology lecturer but also as a coach and consultant. He held posts in national and international organisations for sport psychology and was President of FEPSAC (Fédération Européenne de Psychologie des Sport et des Activités Corporelles) from 1975 to 1983. For several years he was a member of the ICSSPE Editorial Board, which he also chaired.

### **Enlarged Partial Agreement on Sport**

ICSSPE's appointment as a consultative body to the Enlarged Partial Agreement on Sport (EPAS) has been renewed.

In this role, ICSSPE continues providing policy advice to the sport-related work of the Council of Europe through sharing knowledge and drawing upon its global network. In 2013 the programme of EPAS has focused on drafting an international convention to combat the manipulation of sports results. EPAS currently consists of 35 member states, while its Consultative Committee is made up of almost 30 sports organisations.

Following a resolution passed in 2007, the Council of Europe installed EPAS not only to

provide a forum and platform for governmental actors and public authorities, but to include sport federations and NGOs in order to discuss current challenges and perspectives in European sport. Specifically aimed at ensuring good governance and high ethical standards, it seeks to develop policies, monitoring mechanisms and capacities with regard to sports ethics, the autonomy of the sport sector, match fixing, child and youth protection as well as diversity in sport.

## **Communities and Crisis Seminar**

The Sixth International Seminar on Sport in Post-disaster Intervention, entitled 'Communities and Crisis – Inclusive Development through Sport' was held in Rheinsberg, Germany, from the 18th to 23rd of October.

The seminar gathered 46 participants and 16 speakers from several countries and was conducted under the leadership of the International Council of Sport Science and Physical Education (ICSSPE) and supported by Kennesaw University as well as Katholieke Universiteit Leuven.

During this edition, participants benefited from more than fifteen workshops focused on inclusive community building through sport and delivered by outstanding experts from the following institutions: Swiss Academy for Development (SAD); PlayAble; Centre for Psychosocial Support, International Federation of Red Cross Red Crescent Societies; Lydia Zijdel Foundation; Freie Universität Berlin; Kennesaw University; Salisbury University; Technische Universität München (TUM); Katholieke Universiteit Leuven and Loughborough University.

ICSSPE offered eight bursaries to attend the Seminar. These covered 100% of the registration fee plus a shuttle from Berlin to Rheinsberg and back; accommodation and food. The scholars came from South Africa, Colombia, Oman, Pakistan, Canada, Costa Rica, Romania and Hungary.

During these four fruitful days there were discussions embracing manifold topics such as psychological aspects of trauma; community building and disaster recovery; gender equality issues; victimisation and trauma; development of adapted sports; psychosocial support and monitoring and evaluation. All in all, participants and experts learned, exchanged ideas and shared personal experiences on how sport might be used to manage crisis as well as to achieve a more inclusive society.

## Moving forward

World Federation of the Sporting Goods Industry supports Designed to Move Strategy.

Following a meeting of Designed to Move stakeholders in Portland earlier this year, the World Federation of the Sporting Goods Industry (WFSGI) expresses how important it is to take a lead in promoting and ensuring physical activity across the globe. The WFSGI stresses the strategic aspect of the initiative and the need to continue advocacy as well as awareness raising processes in order to impact decision-making bodies and governments. Also it is necessary to create synergies, work together and make organisations accountable for their social responsibility. In fact the WFSGI has contributed to the production of the WHO Global Action Plan (GAP) 2013-2020 in order to acknowledge the need to invest in physical activity.

Further information on Designed to Move can be obtained from the link on the bottom of the ICSSPE website. In addition, Margaret Talbot has contributed a related piece to the most recent issue of the ICSSPE Bulletin, which is available for all members through our resource section.

## MINEPS V: "Best Case for Stakeholder Involvement"

Sylvia Schenk views the Declaration of Berlin as a further step towards good governance.

Representatives from over 125 countries including Sport and Education Ministers, researchers and experts gathered together at the Intercontinental Hotel from the 28th to 30th of May in Berlin, Germany. For the three days discussions covered important topics in sport: the examination of the case for more public investment; combating match fixing and doping in sport; as well as reinforcement of the right to access sport for all people, across all regions. On the final day of the conference, all participants committed to the Declaration of Berlin.

In her closing statement, Margaret Talbot, International Council of Sport Science and Physical Education (ICSSPE) President, called the multi-stakeholder engagement a "dream team" for future development. Assistant Director General for Social and Human Sciences at UNESCO, Pilar Alvarez-Laso, stressed the important role of civil society and

that implementation and commitments will be furthered when the Declaration is presented at the upcoming UNESCO General Conference for further adoption. The Federal Minister of the Interior of Germany, Hans-Peter Friedrich, considered MINEPS V and the Declaration as an “excellent communication platform and framework for multilateral initiatives and a good basis for promoting political decision-making and implementation at the national level.”

Gudrun Doll-Tepfer, current Vice President of the German Olympic Sport Confederation, referred to the all-encompassing process as “important and exemplary” explaining that there had never been so much stakeholder involvement and commitment in this type of meeting before. The evolution of the Berlin Declaration was the result of a year and half of cross-sectoral preparation. Driven by the host nation, Germany, and UNESCO and coordinated by ICSSPE, over 90 researchers and practitioners were engaged through discussion forums to put forth a global position on each of the three conference themes. Committed to engaging governments and drawing stakeholders closer together, many of the experts involved in the drafting process actively contributed to the conference discussions. Sylvia Schenk, Sport Advisor at Transparency International stressed that MINEPS V was the “best case for stakeholder involvement” and that she was impressed with the progress made - specifically referencing actions to preserve sport integrity - in a very short time and encouraged actors to remain patient, yet persistent as their work continues.

In the past, MINEPS conferences have been a closed dialogue for governments to develop and commit to international strategy in the field of sport science and physical education. As a progressive move, this year’s conference went beyond promoting collaboration in words but to engrain it through the meeting and planning process. Opening speeches by the Presidents of the International Olympic Committee, International Paralympic Committee and Special Olympics emphasised the sport movement’s commitment to the conference outcomes and for the first time an Expert Forum was held prior to the plenary session to ensure that current research and best practices were heard by governments and integrated into the drafting process of the Berlin Declaration.

The Ministry of the Interior of Germany has already referred to the significance of the Declaration of Berlin to serve as basis for encouraging cross-sectional collaboration in order to achieve sport-political advancements. Members of all parties of the German parliament meanwhile have considered the conference an important step towards developing comprehensive solutions for pressing issues such as match fixing, doping or inclusion. In fact the German government has expressed its intention to initiate respective measures at the national level.

## Cooperation in Favour of University Development

ICSSPE and Human Kinetics invite academic institutions to apply for books.

The Share the Knowledge Programme is a joint project between ICSSPE and Human Kinetics aimed at distributing sport science, physical education and sport books to institutions from developing countries that lack financial resources. Those in need of literature for studies, research and practical work in sport science, physical education, coaching and sport and fitness, can apply for books and publications that have been selected by Human Kinetics.

Recognising the importance of facilitating the availability of books and resources to support the study, research and practical work in all areas of sport science and physical education, ICSSPE organises and finances the programme.

Up to 50 books may be requested at a time. Currently all books are in English.

For more information or to request an application form, please contact ICSSPE via [icsspe@icsspe.org](mailto:icsspe@icsspe.org)

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