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Physical Literacy - A Debate

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Abstract

The intention of this paper is to stand back from current physical education practice and take a broad philosophical view of the fundamental goals of all aspects of movement education. The concept of Physical Literacy as currently defined is presented and compared with the notion of being 'physically educated'. The concept of Physical Literacy is justified from an existential and phenomenological viewpoint. Physical Literacy is then considered alongside firstly motor development and secondly the ongoing work on talent identification.

The implications of the notion of Physical Literacy for movement opportunities from birth and in movement education and physical education throughout schooling are considered.

Finally the paper opens up four areas of debate in relation to the concept of Physical Literacy. These are:-

1. Is Physical Literacy a universal concept?
2. How can the concept relate to the physically challenged and those with other disabilities?
3. How far should a physically literate individual be able to verbalise/articulate the components of this attribute?
4. Has an understanding of personal health promotion a place in the concept of Physical Literacy?

Introduction

For the purposes of this short paper I will cover all the items referred to in the abstract but will take them in a slightly different order:-

- Philosophical Foundations
- Physical Literacy and Physical Education
- Universality i.e. Q1. Is Physical Literacy a universal concept? and Q2. How can the concept relate to the physically challenged and those with other disabilities?
- The role of Propositional Knowledge i.e. Q3. How far should a physically literate individual be able to verbalise/articulate the components of this attribute? and Q4. Has an understanding of personal health promotion a place in the concept of Physical Literacy?
- Implications for work in School
- Motor Development
- Talent Identification

In the short time available, I intend to pick out key aspects of a longer piece. However I have copies of this for those who would like to read it. I also have a few copies of my 1990 and 2001 papers. The paper that supports this presentation may be of interest to those of you who would like to know the wide range of support that there is for some of the positions I will outline. It is more a document setting out the background to my presentation, sharing some aspects of my current thinking, with a good many quotations, rather than a paper in the full, tight, academic sense.

Philosophical Background

The motivation for working on the concept of Physical Literacy stemmed from what I perceive to be a disturbing contradiction between the views of educationalists in the United Kingdom and of philosophers such as Merleau-Ponty, Clark, Gill, Lakoff, Johnson and Burkitt - to name but a few.

Educationalists generally hold a Cartesian, dualist view of being, which casts the body as a mere mechanism, essential to 'housing' our intellect but of little value in itself. The outcome of this view is a very low priority for work in the physical domain in education. Any respect shown for this work sees it primarily as a means to an end of achieving and retaining physical fitness.

This contrasts starkly with current thinking which has developed from a variety of backgrounds, one of which is the work of Existentialists and Phenomenologists exemplified in the writings of Merleau-Ponty. The key aspects all of these philosophers are concerned to highlight are firstly the holistic, monist view of being and secondly the central role our embodied nature in almost every aspect of life.

With respect to the holistic view Strawson (quoted in Gill 2000 p18) argues that the concept of a person is logically primitive and is not derived from mind and body. Gill (p45) himself says that 'We do not, properly speaking, *have* bodies; we are, in truth, embodied creatures.' Looking at the nature of our monist existence Sartre (1957 p476) says 'for human reality, to be is to act', and Burkitt says (1999 p74) '...prior to the Cartesian 'I think', there is an 'I can...'. Lakoff and Johnson (1999 p3) assert that 'The mind is inherently embodied.'

With respect to these philosophers' views on the role of our embodied dimension as playing an essential part in many aspects of existence Merleau Ponty (1962) expresses the view that the perceiving mind is the incarnate mind. He also goes on to argue that in relation to bodily intentionality there is an intimate relation between perception and

movement. They are not separate from each other but function together. Lakoff and Johnson (1999 p4) hold the view that 'Reason is not disembodied...but arises from the nature of our brains, bodies, and bodily experience.' Importantly they also argue (p495) that concepts '...are not part of a disembodied innate faculty of pure mind.' but are embodied and 'get their meaning through....embodied experience.' Developing this view Johnson (1987 p74) asserts that 'It is crucially important to see that balancing is an *activity we learn with our bodies* and not by grasping a set of rules or concepts.' It is exciting to read Lakoff and Johnson (1999) where they demonstrate the embodied basis of very many of our commonly used concepts.

Gill (2000 p100) supports this in his view that 'Only against the backdrop of embodied experience does propositional knowledge become comprehensible and useful', while Burkitt (1999 p 85) writes 'Thus, the basis of meaning is not to be located in the rules that order cognition, nor in the grammatical structure of linguistic sentences, but in the bodily pattern and order of active perceptions.'

As well as our embodied dimension being critical in respect of perception, reason, the development of concepts and the grasp of propositional knowledge, Burkitt (1999) discusses the role of our embodied nature in emotion. He puts forward the position that embodied involvement in the experience of emotion is not the outcome of a mental state but is an integral part of the emotion itself.

While the attention of these philosophers is often on the totality of embodiment, that is all the senses and all ways we can express ourselves i.e. in language, movement and through art forms, there is no doubt that our motile capacities are absolutely crucial to the contribution made to existence by our embodied nature. Movement is not downplayed or relegated to significance only in the early childhood years. In fact in interrogating their positions these philosophers repeatedly find themselves going back to our embodied motile capacities as they ask the questions 'how' and 'why' in relation to the nature of existence.

Gill (2000 p130) writes '*Embodiment* is, after all, the axis or fulcrum of all tacit knowing, which in turn is the matrix of all explicit knowing.' and goes on to show how Polanyi was careful not to refer to involvement of our embodied dimension as a foundation but as the ongoing axis of thought and knowing.

There is no doubt of the huge role that the intellect plays in the way we live our lives, and no one can argue with this, but what is so heartening is the way that, repeatedly, philosophers refer back to our embodiment as the seat of the intellect. Burkitt has a Chapter entitled 'The Thinking Body'. Here (1999 p12) he explains that

'...what we call 'mind' only exists because we have bodies that give us the potential to be active and animate within the world, exploring, touching, seeing, hearing, wondering, explaining; and we can only become persons and selves because we are located bodily at a particular place in space and time, in relation to other people and things around us.'

On a similar point Burkitt (1999 p 74) includes reference to Hammond et al in explaining that 'Action is therefore the key to understanding human being, for objects are not located in a transcendental spatial framework, but instead are varyingly situated in relation to the agent's specific field of action.'

Following from reading a range of these philosophical works - which is enormously reassuring to someone who has spent their life advocating the value, in itself, of work in the physical domain and seemed to be getting little support from elsewhere than in the profession - there seemed to be a need to review the purpose of what is currently called physical education.

The challenge seemed to me to come to a clear understanding of the current philosophical writings relating to what is usually termed 'embodiment' and the key role it is now recognised as playing in existence, and then to draw up a strengthened rationale for work in education in the physical domain. This would build from the views of these thinkers with their insistence on the centrality of our embodied nature to so many aspects of life as we know it.

However, given the breadth of impact that the embodiment make on life and picking up Polanyi's point that the contribution our embodiment makes to life does not end when we are 5 years old or 10 years old, and that we live our entire lives as embodied, it seemed that the focus in education should be on developing a capacity, a potential in this area. This motile capacity would provide the launching ground for a life-long experience in which our embodied nature was able to make a significant contribution to the quality of life.

I have chosen to call the extent of our ability to capitalise on our embodied dimension *Physical Literacy* (or literacy of the motile aspects of the human embodied dimension) and would argue that debating this concept will give us the opportunity to re-evaluate work in the physical domain in education. The goal in education would not be to produce physically educated young people but to ensure that every pupil left compulsory education having acquired literacy in respect of the motile aspects of their embodied dimension.

This brings me to the next section where I look briefly at the two concepts - physical literacy and physical education.

Physical Literacy and Physical Education

Development of the concept of Physical Literacy gives me, us, the opportunity to revisit the whole focus, purpose and nature of our work in school in the light of current philosophy that sees our embodied nature as fundamentally significant to very many aspects of life, throughout our life-span.

So how would I differentiate between physical literacy and physical education?

Work in physical education would seem to have an intent to produce 'physically educated' young people. This seems to suggest that what is desired is a particular end state, perhaps comprising the ability to perform a certain range of physical skills. This end state suggests that what is worked towards is the mastery of a measurable profile of achievements, of a prescribed set of skills. These skills are usually realised within a narrowly defined set of activities. The intent and reality of physical education can therefore become to produce able gymnasts, games players, dancers and swimmers.

I would have to accept that the above is not the intention of all physical educationalists and that indeed the Strands (1) of the current NCPE in England (DfEE 1999) do give the opportunity to move beyond an end state mentality. The Strands look towards general capacities rather than specific activity skills. However with the stress in education on assessment in both curriculum and examination work, the spectre of physical education being about being able to jump hurdles and no more, tends to persist. A worrying aspect of this type of work in school is that it is not necessarily seen as a worthwhile enterprise for inclusion in education. The concept of a physically educated individual does not seem to give weight to our advocacy for the subject.

My goal is to move on from physical education and work to a satisfactory and productive definition of physical literacy. The move would be away from a prescribed activity centred performance model to a person-centred participation model. This concept would be based on sound philosophical principles and thus add significantly to the justification for serious and sustained attention to be given to motility in education. Physical literacy will need to be presented as focusing on that part of the embodied contribution to life that highlights our motile capacities. It goes without saying that unpacking the positions of current philosophers and relating these insights to work in school is a major task and one that I and others are only just beginning.

There is a huge gap to bridge. However I am convinced that this work could provide some really exciting and powerful areas of justification for our area of work. My contacts with you all are most welcome in tackling this task.

The notion of physical literacy, however, is not new and has been referred to on various occasions over time, for example, in 1991, the concept was used by the then, UK Sports Council (1991), to argue for more attention to be given to physical education in school. However serious work on defining the concept has been lacking.

I have drawn comparisons before to Literacy understood as the ability to read and write. Briefly this form of Literacy opens the door to so much e.g. understanding, knowledge and aesthetic appreciation and activity. To be Literate in this sense makes a huge difference to the quality of our lives in the C21st. Similarly I would want to maintain that physical literacy is an attribute that has the potential to make a beneficial and significant difference to a person's ability to take advantage of the many opportunities life offers. These opportunities include both the contributions our embodiment makes to perception, reason, emotion and knowledge and to the rich rewards there are to be gained from realising our embodied potential per se. I would argue that quality of life depends on making good use of all the attributes with which we are endowed. Not to capitalise on our embodied capacities results in our not fully realising and benefiting from a key dimension of our human nature.

In a recent paper (Whitehead 2001) I drew up the following preliminary definition of a physically literate individual:

An individual 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.

In working on this provisional definition I looked in more detail both at embodied capacities and at environmental issues.

With respect to embodied capacities I began to tease out the initial concepts of poise, economy and confidence. I elaborated on these by citing further motile capacities such as balance, co-ordination, flexibility, agility, control, precision, strength, power, endurance and the ability to move at different speeds – that is explosively, right through to sustaining a movement over a long period of time. I might add to this list core stability, perceptual-motor acuity e.g. hand/foot-eye co-ordination and spatial

awareness and also rhythm. These capacities would enable the individual to interact with a wide variety of environmental situations.

Our relationship with the environment is critical to the debate as it is as a result of this interaction that the philosophers I have quoted, particularly Existentialists and Phenomenologists, argue that we create ourselves. For these philosophers we are essentially 'beings-in-the-world' We create ourselves from our interaction with the world. The richer this interaction the more fully we will realise our human potential.

It follows that the nurturing of all the avenues through which we can interact with the world, will provide the ground for our development. As our embodiment and motility are key avenues for interaction, fostering this dimension of our personhood will contribute to the depth and breadth of our life experience.

A number of philosophers express the notion of our nature as beings-in-the-world succinctly. For example Burkitt writes (1999 p74) '...prior to thought and representation, then, there is a primordial coexistence between the body and its world, which grounds the possibility of developing conscious awareness and knowledge.' while Lakoff and Johnson (1999 p 566) express the view that 'The environment is not an "other" to us. It is not a collection of things that we encounter. Rather, it is part of our being. It is the locus of our existence and identity. We cannot and do not exist apart from it.'

In support of this position Gill (2000 p97) writes that 'Our body is the entry point into the world, the medium through and in which our reality is constituted. This symbiosis between our bodies and social and physical reality not only overcomes the traditional dichotomy between the knower and the known, but simply does not allow it to arise.'

Similarly Johnson (1987 p207) expresses the view that '-It is a mistake, however, to think of an organism and its environment as two entirely independent and unrelated entities; the organism does not exist as an organism apart from its environment. The environment as a whole is as much a part of the identity of the organism as anything "internal" to the organism.' He goes on to quote Levins and Lewontin who write '... the environment and the organism actively codetermine each other.'

Clark (1997 p98) takes a wide view of existence in the world and including evolution in writing 'Adaptive success finally accrues not to brains but to brain-body coalitions embedded in ecologically realistic environments.'

There are also a number of philosophers who put forward the idea that in interacting with the world it is not always our embodiment that leads the liaison, the world itself

can initiate action . With respect to this view Clark (1997 p224) says 'The combination of embodiment and embedding provides for persistent informational and physical couplings between John and his world – couplings that leave much of John's "knowledge" out in the world and available for retrieval, transformation, and use as and when required.'

The information 'held' by the world is called an affordance by Gibson (quoted in Weiss and Haber 1999 p129) Here it is explained that 'Affordances may be defined...as opportunities for action in the environment of an organism.' and 'that things in our experience are not just neutral lumps to which we cognitively attach meaning. The things we experience "tell us what to do with them."' Johnson (1987 p204) expresses the same idea by saying that "'Things" outside us talk back to us,...'.

Wider (1997 p131) quotes Sartre's view that 'Thus the world from the moment of the upsurge of my For-itself is revealed as the indication of acts to be performed'. while Merleau-Ponty refers to our intimate attachment to the world as the 'intentional arc'.

Weiss and Haber (1999 p111) refer to our being in a state of equilibrium with the world and write 'One's body is simply solicited by the situation to get into equilibrium with it.' and Gill (2000 p52) explains Polanyi's position with respect to tacit knowledge and writes 'tacit knowing is accomplished through what Polanyi calls "indwelling", the process of immersing oneself in the particulars of subsidiary awareness by means of embodied activity until these particulars come together as a meaningful whole in an "integrative act." '

With respect to interaction with the world, views are also expressed concerning the way that the more we interact with the world and come to know it, the more we know of ourselves. Burkitt (1999 p 76) writes 'The original sense of 'I' is the 'I can', a practical sense of the body's active possibilities, and therefore the sense of identity possessed by humans is not based on disembodied thought, nor in early visual representation of the self. Instead, the sense of self we develop is primarily based on the feel we have of our body and the way it connects us to the world.'

This follows from the view that we create ourselves from the interaction with our surroundings. From the standpoint of the physical dimension it is surely true that the richer the range of environments with which we interact the better we will 'know' ourselves as embodied. Allied to this is the self confidence that results from self realisation particularly where success is experienced.

I have quoted at length here as these extracts support the way our embodiment, via its motility plays a pivotal role in life. It opens many doors for us. The opportunity to

enrich life via this capacity must be one of the key justifications for movement work to be addressed seriously in education.

The principal focus of my work to date has been to articulate the importance of physical literacy on the grounds of the potential that this motile capacity has to enrich life. There is still a great deal of work to link these ideas to the task of developing this literacy in school. We have an excellent opportunity to use the substantial support there is for the significance of our embodied dimension in arguing for attention to be given to our subject in education.

As a result of beginning to develop the concept of physical literacy, a wide range of questions need to be addressed. For the purposes of this paper I will pick four of these to discuss.

They are:-

1. Is physical literacy a universal concept?
2. How can the concept relate to the physically challenged and those with other disabilities?
3. How far should a physically literate individual be able to verbalise/articulate the components of this attribute?
4. Has an understanding of personal health promotion a place in the concept of physical literacy?

Questions 1 and 2 both come under the head of Universality while Questions 3 and 4 can be looked at together under the heading of the Role of Propositional Knowledge.

Universality

Is physical literacy a universal concept? That is, does it refer to every human, and would the manifestation of physical literacy be the same in whatever period of history or place in the world in which the person lived.

Reading the work of those holding broadly Existential and Phenomenological views, citing the centrality of our embodied nature to human perception, reason, knowledge and emotion, the answer would have to be, that, as humans, we all experience the world from an embodied perspective and that physical literacy would attract one definition. The concept would need to be applicable to all human beings no matter when or where they lived.

However further reading of Burkitt (1999) who comes to the issue from a sociological position, indicates that while he would agree that embodiment and therefore possibly physical literacy, plays a key role in the life of all humans, he argues that the specific role of the embodiment differs markedly depending on the culture within which we live. For example he would put forward the case that C21st physical literacy in England would include the ability firstly to interact with the wide range of artifacts such as cars and computers, which we have created, and secondly to operate effectively in the context of established social practices, including the particular form of inter-personal relationships that are seen to be acceptable in our culture. Burkitt writes (1999 p 25) 'However, as far as human beings are concerned, it is not just the interaction between organism and environment that defines our being, for these 'movements' of life are also interrelated with, and affected by, our history as social and cultural groups.' His book, *Bodies of Thought*, (1999) is well worth reading and includes some thought provoking sections on attitudes to the body through history.

It would seem that my provisional definition of physical literacy would need to include reference both to common characteristics and to specific culturally grounded characteristics of the concept.

The issue of the physically challenged opens up the whole area of how far the capacity to be physically literate will be characterised not only by being human and by living in a particular culture but by a person's unique motile potential. It could be argued that each person has a different motile potential and in our discussion we should widen the debate to embrace all of us, from the physically challenged to the able bodied, each with our own unique embodiment.

To be fully human we are all reliant on the motile capacities with which we are endowed. However to accept that we are all motile is not the issue here - what I am looking for is an ability to capitalise on our embodied state or motility to reap the rich rewards available from this form of interaction with the world.(2) The ability to use our motility to the greatest effect is what I have called physical literacy.

Perhaps we are approaching the answer here in relation to people's very different physical endowments.

If physical literacy is the ability to use our motility to the greatest effect and we accept that everyone's motile potential will be specific to him/herself, then physical literacy itself will differ in nature for each individual.

What is at issue here is to capitalise to the full on our motile potential - be we young, old, able bodied or physically challenged. All can achieve physical literacy but the

scope of this will differ for each individual. I would argue that there is much to be gained from nurturing this capacity to the full - as indicated above, by the way our embodiment enriches many facets of life.

I would contend that our physical literacy is markedly under-developed in western culture and, in this situation, life is less fulfilled and our knowledge of the world the poorer.

So the answer to the first two questions is:- that physical literacy is universal in as far as we are all similarly embodied and rely on this dimension of ourself for realising a range of human capacities. However the scope of any individual's physical literacy will be influenced by the culture within which s/he lives and the motile capacities with which the individual is endowed. This answers the second question in that the physically challenged can achieve physical literacy in capitalising to the full on whatever range of capacities they have.

Physical literacy could therefore be described as the ability to capitalise on motile potential. As humans we all exhibit this potential, however its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed.

The Role of Propositional Knowledge in Physical Literacy.

Questions 3 and 4:- 'How far should a physically literate individual be able to verbalise/articulate the components of this attribute?' and 'Has an understanding of personal health promotion a place in the concept of Physical Literacy?' beg the question about how far articulated, propositional knowledge related to motility and our embodied nature is part of physical literacy.

In some senses I might be tempted to follow the ideas of Polanyi and others who talk a great deal about tacit knowledge, pre-reflective awareness and preconscious motor response of the knowing body. For example Nietzsche (1969 p69) writes, 'Behind your thoughts and feelings, my brother, stands a mighty commander, an unknown sage – he is called self. He lives in your body, he is your body.' and Polanyi referred to in Gill (2000 p 54) argues 'that because tacit knowledge is the anchor or tether for explicit knowing, it necessarily follows that we always know more than we can tell.' The corollary of these views is that motile capacities are pre-conscious and non-conceptual and therefore in order to capitalise on our embodied potential we need to do more than just 'do'. Propositional knowledge would not form part of a concept of physical literacy.

There is an intriguing anecdote referred to by Csordas (in Weiss and Haber 1999 p 143) which refers to a discussion between a western anthropologist and a philosopher from New Caledonia, in which the latter indicated that before their primitive tribe had contact with the west, his people had not formed a concept of the body-object, living life in a totally holistic mode. In fact they did not have a word for the body as a separate entity. On enquiring what western thought had brought to his people the philosopher replied 'What you've brought us is the body.'

This is a fascinating example and one that could be seen to support the notion that while physical literacy is, at root, universal in respect of both time and place, its specific manifestation will depend on the parent culture. An individual living in a culture that had not developed language to identify the body as a separate entity could well achieve physical literacy without articulating any aspect of this capacity.

Burkitt(1999 p46/47) devotes considerable space to the way that events in medieval times altered attitudes to the body. He discusses the work of Foucault and Elias and explores how the body was seen as 'a universal, lived phenomenon, represented in everyone. The material body of the individual (was) part of the collective, ancestral body of the people.' This changed in medieval times when, he explains, (57) '...the constitutive subject becomes more central and is seen to be distinct from the body as spirit or essence, the body itself comes to be understood as matter and as a mechanism, or as Descartes put it, an automaton.'

It is of interest that it was Sartre (1957) who first engaged in serious debate as to different ways in which we can view our embodiment. He asserted that to understand existence we have to appreciate that there are three ways in which we can conceptualise our embodiment. For Sartre we have a body-for self, a body-for-others and a body-for-others-as-perceived-by-the-self. The body-for-self is the mode of our embodiment that enables us to interact with the world on a pre-reflective level and is the fundamental axis of much of our cognitive capacities, not least the development of concepts. The body-for-others is how we are seen by observers and the final perspective is our awareness of how others view our embodiment. This last perspective on our embodiment is the realisation of our being able to take 'an outsiders' view' on this aspect of ourselves. This perspective also plays a major role in the creation of self confidence and self-esteem and has taken on somewhat disproportionate importance in cultures where role models are everywhere to be seen in the media. This, the sociology of the body, is a fascinating area and is worthy of detailed study in that it impacts significantly on how we as professionals work with young people for whom their body-image can be central to their self image.

There has been considerable debate about the relationship between the body-for-self and the body-for-others-as-perceived-by-the self which is of considerable interest to us in the movement world. In his writing Sartre indicates both that there is absolutely no relationship between the body-for-self or lived body and the body-as-object, and he also puts forward a strong case in respect of the notion that any reflection on our body-as-object will result in our alienation from this aspect of our being. Both these views need detailed examination in the context of our work.

However to return to the issue of propositional knowledge and physical literacy, and taking Burkitt's advice that the nature of existence is inescapably related to the culture within we live, it has to be acknowledged that the body-as-object is an established part of contemporary discourse. We have moved a long way from this pre-medieval culture. We are acutely aware of our body-as-object and, in fact, this has made it hard for people to appreciate that there is more to the body than just a machine to be managed. We are undoubtedly locked into a culture in which articulated knowledge of the body is integral to existence. Knowledge and understanding has increased and reference to the body-as-object permeates much of our language.

Sadly, it is the fact that we can and do objectify our embodiment, and this has been the stumbling block for the appreciation of the multi-dimensional role of embodiment in existence. It is the case that this dualist approach and habitual reference to our embodiment only as an object, in the mode of the body-for-others-as perceived-by-the-self, has made acceptance of the approach I and others are taking, almost impossible. Whenever we talk about 'the body' we are in one breath objectifying, mechanising and devaluing this dimension of ourselves - hence my effort to use the word embodiment rather than body. Burkitt has both pessimistic and optimistic views of the situation. Pessimistically he writes (1999 p 146):-

It appears that modernity has created the division between mind and body, cognition and emotion, rationality and irrationality, and that we are forced to jump one way or the other at various times and places. The basic dualistic notion of the body as the seat of irrational, emotional and pre-social forces (as opposed to the orderly mind) also seems to be accepted.

While optimistically he says (1999p 145):- 'The body is becoming an issue because, in an increasingly fragmentary world, there is a growing desire for wholeness, for integration and for healing'. He continues 'the body becomes a point of focus because it is around the body, as it is located in relational networks, that individuals can

integrate the various aspects of themselves into a whole person, and can demand to be treated as such'.

And so while I do not want to up-play the role of propositional knowledge in a concept of physical literacy, the articulation of this understanding of our body-as-object forms an integral part of contemporary attitudes to physical activity. There is much debate about, for example, the amount of exercise we should take, the nature of the food we should eat and the types of medication we should use.

And so to ignore this aspect of embodied existence, notwithstanding my monist commitment, is out of the question in our culture. I think it is perhaps easier to answer question 4 than question 3. In relation to question 4, I would propose that to be physically literate in our culture, with its sophisticated knowledge of all aspects of health, would include an understanding of the principles of embodied health with respect to such basic aspects as exercise, sleep and nutrition. Question 3 is more difficult as it begins to confront the relationship between the body-for-self and the body-for-others-as-perceived-by-the-self, as alluded to above. How far is it an essential component of physical literacy to be able to articulate embodied capacities? The NCPE (DfEE 1999) Strands:-

Selecting and applying skills, tactics and compositional ideas
Evaluating and improving performance

would indicate that it is important and valuable to stand back from one's engagement in an activity and reflect on the nature of one's performance. This seems to point to an effort to describe embodied experience in order to enhance or improve it. It is very much our role as teachers to be able to articulate all aspects of movement to guide our pupils. This is surely essential if we are to promote learning. It would follow from this that if we want our pupils to take responsibility for their own learning, both within our lessons and outside the educational setting, we would want them to be able to employ an approach similar to ours. This would enable them to identify why they are more or less successful and to take steps to improve their performance - at whatever level they are working. To be physically literate therefore would need to include reference to a basic ability to appreciate the nature of one's embodied activity, being able to identify aspects that enable a particular end to be achieved and elements that need attention for the movement to be more effective. This might be expressed as an ability to identify the essential qualities that influence the effectiveness of his/her own movement performance. Relevant here is proprioception. I feel that there is work for us to do with respect to this capacity, not least in the context of Sherringham's view (quoted in Wider (1997 p 143) that proprioception is our 'sixth sense'.

Having looked briefly at the four questions the definition of physical literacy could be re-defined in the following way:-

Physical literacy can be described as the ability to capitalise on our motile potential to make a significant contribution to the quality of life. As humans we all exhibit this potential, however its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed.

An individual 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.

In addition the individual has the ability to identify the essential qualities that influence the effectiveness of his/her own movement performance and has an understanding of the principles of embodied health with respect to basic aspects such as exercise, sleep and nutrition.

Implications for work in school

An identification of a concept of Physical Literacy as a goal in education rather than being physically educated would seem to have implications not only of **what** is taught in school in England, but also **how** pupils are taught.

Notwithstanding the inclusion of the strands in the NCPE in England and the potential for freeing the curriculum from work specifically on certain defined activities, ways of achieving the Strand aspirations via named activities are given in a variety of official documents (e.g. DfEE 1999), and consequently most teachers still approach movement work in school from the perspective of teaching pupils different activity based skills. This is particularly the case in Secondary Schools where there is a tendency to focus on teaching activities rather than teaching pupils. There is some evidence of this approach in primary schools but in the main those involved with younger children do consider movement education of the child 'in the round', rather than always linking this to becoming proficient in named activities.

If we are to re-align the work in school to help pupils to reach their potential in respect of physical literacy, we need to look carefully at what type of programme, (i.e. content and teaching approaches) will be appropriate in respect of enhancing:-

- particular motile capacities
- the range of environments with which we need to relate effectively, including those involving other people
- the cognitive grasp of aspects of our embodied potential

This is likely to result in a comprehensive review of the movement experiences in which we involve pupils and the contexts within which we work.

The outcome will be far less focused on pupils becoming proficient at specific activities and more concerned with pupils realising their potential in respect of physical literacy in a range of physically challenging contexts. I have begun to discuss the nature of these contexts in an earlier paper.(Whitehead 2001b)

The realisation of this potential will be related both to the cultural context in which they live and to their personal motile attributes. In respect of the latter it will be crucial to look carefully at the individual nature of each pupil's potential in the area of physical literacy and consider how curriculum organisation and delivery can be made more individually relevant.

Each individual will have their own areas of greater potential with which they are endowed genetically. With the possibility of significant fulfilment through challenging motile interaction with the world, it is important that all pupils are helped to reach their full potential with reference to their motility. Those who display problems in motility during their time at school need early identification and appropriate programmes to help them to overcome difficulties and capitalise fully on the extent of motility with which they have been endowed. The fostering of motor development is critical not only to function effectively within one's parent culture but also to realise the human capacities that rely on motility as their basis.

Also included in this consideration of the programme must be a determination that alongside developing the motile and cognitive aspects of physical literacy pupils should be nurtured to grow in confidence in respect of their motile ability. This will only be achieved if appropriate teaching methods are used. In many ways **how** we interact with pupils is as important as **what** we teach them. Sensitive teaching which caters for the needs of each child is essential as pupils work in the movement area. Without the development of a positive attitude towards physical activity, physical literacy will not be achieved. Low self confidence in respect of engagement in physical activity will result in any potential in physical literacy being under used. I have written elsewhere (Whitehead 1990b and 2002) about the importance of nurturing self-esteem in physical education lessons. In enabling young people to

develop physical literacy it is of paramount importance that the guidance they receive from others is supportive, positive and encouraging.

That physical literacy should have elements of the motile, the cognitive AND the affective should not be surprising in a monist context and this notion was well expressed by a colleague in our discussion about the nature of physical literacy. "Oh" she said " you are talking about the acquisition and life-long expression of the JOY OF MOVEMENT".

While I am tempted to write my next paper on the Joy of Movement rather than physical literacy I regret that there may be little mileage in trying to persuade educationalists to give precious time in school to fostering JOY. (On the other hand I do know those who would want to extend the concept of JOY to many other, or all, school subjects - and I would think that all of us here would understand the implications and significance of the working to a notion of the life-long joy of movement.) (See also Whitehead 1988b)

However the importance of a positive attitude to embodied activity prompts me to add reference to this in the current provisional definition. The first part of this would now read:-

Physical literacy can be described as the ability and **motivation** to capitalise on motile potential in such a way as to make a significant contribution to the quality of life. As humans we all exhibit this potential, however its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed.

Motor Development

Much has been written about the ways in which motor development underpins many aspects of young people's development (e.g. Maude 2001). Indeed there is accumulating evidence that this is the case. My reading in relation to physical literacy provides unequivocal support for the key role that motor capacities play in realising human life as we know it. For example Johnson (in Weiss and Haber 1999 p93) writes

The point in all of this so far is that the infant makes sense of and reasons about her world via structures that emerge in her embodied experience, and these are neither propositional nor linguistic in their first appearance. These patterns of her corporeal logic are schematic, cross-modal, and blended with affect contours that depend on the nature of our bodies and brains. When the child begins to use

language, these embodied modes of understanding do not simply cease to exist; on the contrary, they are what situate, make possible, and give meaning to what we call our higher-level propositional operations and linguistic performances. Without this embodied meaning, there would be no propositional contents or propositional attitudes.

Similarly Clark (1997 p 36) expresses the view that

Cognitive development, it is concluded, cannot be usefully treated in isolation from issues concerning the child's physical embedding in, and interactions with, the world. A better image of child cognition (indeed of *all* cognition) depicts perception, action, and thought as bound together in a variety of complex and interpenetrating ways.

and furthermore he writes (p153) 'The difference lies in the way the child's behaviour patterns are seen *not* as under the control of a fixed inner resource but rather as emergent out of "a continual dialogue" involving neural, bodily, and environmental factors.'

From my standpoint motor development is the vital first step to becoming physically literate - with all the potential this has for enriching life. In the early years of childhood there needs to be support, guidance and encouragement for all young people to enable them to develop the wide range of motile capacities mentioned above. These should be experienced in a rich variety of environments and their nurturing should be as exciting for the youngster as the teacher.

Talent Identification

Talent in the physical domain does not have such an easy relationship with physical literacy as does motor development and I have argued elsewhere (Whitehead 1990) that a highly specialised athlete might not, in my terms, be physically literate in the rounded and essentially versatile sense in which I am defining the concept. I accept this is likely to be controversial and I am happy to debate this.

However I have no problem with talent identification at an early age where the potential being identified is in respect of evidence of the ready mastery of a broad range of motile capacities such as those referred to above.

A programme designed to promote physical literacy (as being piloted in England by Dominic Haydn-Davies) would, in my view, both support this critical development in

all young people and be an ideal context in which to identify those with particular potential in respect of their embodied motile capacities.

Physical literacy while having characteristics shared by all, is person specific, in that its realisation is relative to an individual's innate capacities. We owe it to those with special talents in this domain to help them to reach their unique and exceptional potential in respect of their physical literacy.

Notes

1. The Strands from the Physical Education National Curriculum (DfEE1999)

Acquiring and developing skills

Selecting and applying skills, tactics and compositional ideas

Evaluating and improving performance

Knowledge and understanding of fitness and health

2. The way in which the achievement of Physical Literacy can enhance the quality of life can be simply expressed through considering it alongside the aural ability. The basic level of human ability to interact physically with the environment can be compared to the basic ability to hear. Physically, most humans readily acquire the basic abilities to, for example, walk, sit, grasp and reach. In respect of hearing at a basic level an individual can simply pick up sounds and hear speech. However for those individuals fortunate to have good hearing, it is generally accepted that the fulfilment achieved in differentiating between a wide range of subtly different sounds is profound. This would include, for example recognition of many types of music and bird song. This experience would add hugely to the quality of a life, previously lived only using hearing to pick up the most mundane of sounds. In a sense individuals can manage without developing their physical capacities, as individuals can manage without refining their sense of hearing, but this denies the enormous potential all individuals have of realising aspects of human nature and appreciating facets of the world.

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