
Physical literacy & the effect of teacher/learner interactions: insights from Secondary School teaching

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Abstract

Physical literacy is a concept which can be described as the ‘motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the life-course’ (Whitehead, 2011; p2). It has been suggested that people are the result of the interactions they have had with their surroundings, with a Monist view that explains humans as an ‘integrated whole’ (Whitehead, 2010). Therefore the richer these interactions are the more rounded the individual. This study investigated the interaction between three teachers and their mixed sex year seven pupils during a series of gymnastics lessons. A key focus was the effect of the teacher on the development of motivation and confidence in pupils and any progress in their physical competence.

Findings highlight the need for a pedagogical model based on respect for both teacher and learner, recognition of effort, progress and achievement and assessment for learning to ensure all learners move forwards on their individual physical literacy journeys. An environment which demonstrates a ‘successful ambience’ encourages pupils to take responsibility for their own learning, resulting in elevated confidence and motivation levels to be physically active (Whitehead, 2011; p167). Research into this field highlights the processes rather than the content, and it is this aspect that enables this research to be considered within a more generic higher education setting.

Keywords: Physical literacy; motivation; confidence; interaction; relationships

1. Introduction

Interest in physical literacy has emerged over the past two decades partly in response to widening debates about physical activity and its role as part of an individual’s holistic well-being and personal health. The term ‘physical literacy’ has been adopted to signify more than a competency- or mastery-view of physical activity - the ability ‘to do’. The perspective encompasses an ability to ‘read’ the environment and to respond effectively (Whitehead, 2001). Interest in the concept has increased particularly following the work of Whitehead (1993) in the context of physical education in schools.

This paper, located around the teaching of physical education in a secondary school setting, will focus on aspects of teaching which impact upon the physical literacy journeys of school aged children, with a view to highlighting teaching skill sets and appropriate pedagogies that might have relevance transferred to broader contexts such as university-level teaching.

1.1 Physical exercise and education

As a human capability, physical literacy is seen as a ‘disposition’ that is acquired by individuals (Almond & Whitehead, 2013). Proponents emphasise the specific aim of promoting lifelong physical activity through the development of not

only physical competence but motivation, confidence and knowledge and understanding. Physical literacy has sparked considerable interest and debate recently world-wide due to this holistic approach. The individuality and inclusiveness of physical literacy is an attractive element, as an individual's physical literacy journey is unique. As Whitehead (2011) suggests, irrespective of cultural or locational differences, the individual is on their own life-long physical literacy journey and along the way they will interact with a number of 'significant others' who will have a key influence.

Previous studies investigated physical literacy development of primary aged children with many focusing on the physical competence aspect. At this young age, children have a 'natural exuberance' (Whitehead, 2011; 160) in respect of physical activity and views are that teachers should foster and develop this further, using activities at the appropriate level while sustaining confidence and motivation.

At secondary school, physical education lessons play an influential part in the development of the whole child, particularly since research suggests that this is the only time many young people are physically active (Capel & Whitehead, 2010). Children have already experienced a number of changes as well as being influenced by friends, family and cultural expectations. Teachers have a vital role to play in children's holistic development.

Haydn-Davies (2005) states that it is not the amount of physical activity undertaken when young that influences the amount of activity in future years. Simply ensuring that all pupils are physically active during physical education lessons does not guarantee individuals will continue to be physically active throughout their life. Beyond compulsory schooling, the formal framework and requirement ceases to be and the attitude and motivation of the individual becomes all important. For example, a recent study in the United States demonstrated that 33% of college students are now classified as obese with only 41% of US college students regularly participating in vigorous sport or exercise (American College Health Association, 2008; Desai et al., 2008; Egli et al., 2011). Furthermore, research suggests that this is a critical period for weight gain, and weight gained during these years can significantly increase the likelihood of becoming obese in the future. As a

result these researchers have called on university health promotion services to encourage regular participation.

1.2 Teaching physical learning

Armstrong (2002) suggests that, in physical education at school, it is the curriculum content and promotion of enjoyment, rather than level of activity that should be of concern if positive attitudes towards physical activity are to be developed. It is imperative that teachers find the most appropriate pedagogical approach, which ensures all learners are successful, receive praise and reward for their progress and that encourages positive attitudes.

It is therefore worrying that many physical educationalists appear to have lost sight of the child and are more concerned with teaching the activity (Burgess, 2013). Whilst it can be argued that physical competence is important in developing self-worth and self-esteem (Fox, 2010), these are mostly developed through positive experiences, thus supporting an emphasis on environment rather than activity. This is exemplified by Haydn-Davies (2010), who argues that *how* teaching is conducted is more important than *what* is taught. By teaching physical education with a goal to develop physical literacy, there is a return to a focus on the process rather than the product (Burgess, 2013).

The concept of physical literacy stems from a more insightful understanding of the significance of our lived embodiment, whereby our human potential encompasses the embodiment-as-lived as well as the embodiment-as-object (Whitehead, 2010). As physical educationalists, it is difficult to accept a dualistic view, which separates the 'body' and the 'mind' and, furthermore, sees little value in bodily activity. Instead, it is almost essential that we hold a belief rooted in monism refusing to simply designate our embodiment as only an object rather to view the person as an indivisible whole (Whitehead, 2010). It is argued by Lloyd (2011; p17) that embodied ways of knowing and being stand in 'stark contrast to the dominant approaches to physical education pedagogy', with the majority being concerned with the 'scientisation of movement'. Kirk (2011; p95) supports this view claiming that movement is taught through an 'authoritarian pedagogy of

command response', outside of the natural contexts. Rink (2006) further highlights the need for physical educationalists to avoid lessons based on acquiring sport specific techniques that if perfected, may be applied to a game. Instead, there must be a focus on the body as lived, developing all aspects through a variety of learning experiences.

Intentionality promotes individuals to react and respond to everything and everyone in their environment. The experiences created by intentionality are key to the development of individual's uniqueness and plays a significant part in the creation of each human being. Physical literacy supports this view of existentialism, and should be used as a vehicle to enhance individuals' lives in many respects, based on the acceptance of individuals as a holistic being with their own tangible potential (Capel & Whitehead, 2013).

1.3 Towards a pedagogy of engagement

The ultimate goal of physical education is to 'promote positive attitudes to physical activity, in the interests of establishing exercise as a lifelong habit' (Capel & Whitehead, 2013; p41), and therefore lessons must aim to develop motivation and confidence, as well as physical competence. With the teacher as facilitator, it is necessary to understand their role in 'creating the opportunities for their learners to learn' (Almond and Whitehead, 2013; p68). Physical education must be taught by motivated and inspiring teachers if learners are to see it as an enjoyable and important part of their lives, and therefore motivate them to be physically active (Burgess, 2013).

The learning process can be very broad and varied, for different people and in different environments. In order to promote meaningful engagement with all learners, teachers need adequate knowledge to adapt the learning process based on informed pedagogies. Almond and Whitehead (2013) suggest that teachers should firstly have an understanding of the pedagogical process of working with young people, aiming to nurture them in developing a desire to be physically active.

Secondly, they argue, teachers must have a good knowledge of pedagogical skills; these will enable a

connection and engagement with their learners, therefore stretching their attitudes and abilities. Finally, teachers should build positive relationships with pupils; allowing them to both listen and communicate.

In order to ensure all learners move forward on their physical literacy journey, each learner must experience high quality lessons. Whitehead (2013) argues that a 'pedagogy of engagement' is necessary if teachers are to be successful in this challenge.

1.3.1 The importance of teacher-student interactions

Whitehead (2011) highlights four important dimensions to a teacher's role in creating an engaging learning environment. Firstly, teachers provide the only guaranteed opportunity for all children to develop their embodied confidence; secondly, they have expertise in working with young people; thirdly teachers are able to provide a rich variety of experiences and finally they are thought highly of by their pupils and are therefore influential in the development of attitudes.

With motivation at the heart of physical literacy, it is essential that every interaction between teachers and learners is positive, responsive and proactive in moving the learning forward. The motivation of learners will not develop, and may in fact decrease, if teaching approaches fail to develop self-confidence, self-esteem and self-respect (Whitehead, 2011). When pupils do not feel successful in an activity, they will lack confidence to carry on, become de-motivated and as a result fail to move forward. Teachers must therefore ensure that, irrespective of the activity or group being taught, all planning has motivation and self-esteem at its core. A key question which must therefore be asked is whether current practice provides such learning experiences (Haydn-Davies, 2005).

1.3.2 Providing rewarding and enjoyable experiences

Whitehead (2013) suggests that in order to enhance motivation, experiences should be rewarding and enjoyable. Activities need to be suitably varied (differentiated) to enable all learners the opportunity to experience success, and a positive and inspiring environment must be promoted to foster enjoyment and motivation.

Whitehead (2013) suggests that this can be done through the use of a stimulating teaching environment, good organisation and the teacher's overall presentation of the lesson. Arguably, the key aspect to any inspiring and motivational learning environment, where pupils are to achieve success, is the 'authentic relationship between students and teachers' (Bosco, 2013; p93).

1.3.3. 'Successful ambience'

Whitehead (2013) emphasises the importance for students to show respect to all learners. This creates an atmosphere grounded in trust and promotes empathy and care necessary for developing an individual's self-confidence and self-worth. Once established, teachers can create opportunities for learners to understand their individual potential while being noticed for their efforts and their progress made against previous achievements, however small. A challenge for creating this learner experience is that it requires the teacher to have knowledge of each individual learner, and of their stage along their physical literacy 'journey'. This dictates that initial planning is vital, as a need to ensure positive relationships with all learners are created.

Whitehead (2001) highlights the need to foster a 'successful ambience' and this requires that all pupils are challenged successfully by setting tasks and providing individual feedback and praise at the appropriate level.

1.4 Relevance to higher education?

Whilst the focus here is on physical literacy in the context of physical education in schools, at the heart are core principles for how we motivate learners in a way that has a sustained effect. This is a pedagogy for engagement, not just competency. Physical education can be particularly challenging for some individuals, especially in terms of confidence and motivation, and one does not need to look far to see opportunities for transferring these principles beyond this specific school context.

Secondly, physical education and physical literacy in the context of higher education has received little attention. So this article may stimulate thinking in terms of relevant applications in university contexts.

There are various ways in which the concept of physical literacy can have relevance to university teaching:

- reflections on 'whole body' education and physical awareness as part of the tertiary learning experience,
- improvement of physical skills and self-awareness in the development of motor skills – for example body language, technical motor skills
- where student learning involves skills in teaching or encouraging physical activity in others, such as sports, performance arts, music training, health studies, outdoor activity.
- developing awareness, reading and responding to different learning environments, for example challenges of field-based learning
- professional development of staff and developing an awareness and ability to relate and better understand our physical movement in the context of classrooms, lecture theatres and laboratory spaces.

The teaching approaches required to encourage the development of physical literacy brings to the fore issues of motivation, communication, positive feedback and more broadly teacher-learner interactions, so has relevance far beyond the confines of teaching physical education in schools.

2. Research Questions

This paper looks more deeply at issues of development of physical literacy and practical insights to help teaching. It focuses on the period of compulsory secondary education (in particular 11/12 year olds) investigating the impact and responsibility that teachers have on the development and fostering of physical literacy (Whitehead, 2011).

The two principal research questions are:

- Is there a specific 'pedagogical toolbox' which teachers can draw upon to create a successful ambience in physical education lessons?

- Does a successful ambience encourage pupil engagement in physical education and enhance progress on pupils' physical literacy journeys?

The study will conclude by considering outcomes or insights which have transfer value to higher education teaching contexts.

2.1 Delimitations

Delimitations of this study:

- Year 7 pupils and 3 teachers from one school in the North West of England
- Responses were reflections on one activity within the National Curriculum for Physical Education.

Limitations of this study:

- Purposeful sampling was used which may not be representative of the population
- Correlation studies do not determine causality
- Qualitative research is subjective

2.2 Significance of study

This study will contribute to the content literature on the relationship between physical literacy and pedagogy. The main significance will be the effect of teacher-learner interaction and its' effect on the development of physical literacy.

2.3 Methodology

This study used a sequential explanatory mixed methods design (Creswell et al., 2003) involving qualitative data collection and analysis to further explain the quantitative data. The purpose of this mixed method study was to investigate aspects of pupils' physical literacy development through the collection and analysis of quantitative data and then to examine teacher-pupil interaction using qualitative data collection and analysis. This integration involved the use of structured teacher and focused pupil observations by the researcher, to help explain the relationship between teacher-pupil interactions and its' impact on fostering physical literacy.

2.3.3. Research Design

The research placed equal weight on the quantitative and qualitative data collection and analysis methods. The rationale for this mixed method approach was to create a better understanding of teacher-learner interaction and the promotion of physical literacy. The use of this design allowed the qualitative results to connect with and expand on the quantitative findings in order to strengthen the research questions.

2.3.2 Research Participants

Purposive sampling was utilised for this study with a total of 92 year seven pupils (aged 11/12), three teachers (two female and one male) and three mixed ability focused observation groups (three higher ability and three lower ability pupils in each class). Year seven pupils were selected because this was their first experience of physical education in a secondary school and pupils for the focused observation groups were selected by ability to ensure a representative spread. The teachers were selected because they were timetabled to teach year seven.

2.3.3 Variables in the Study

Variables in this study included teaching styles and physical literacy development. For the dependent variable, physical competence, pupils' national curriculum attainment levels were used. For the dependent variable, physical literacy, intrapersonal factors such as motivation, confidence and self-efficacy were measured through pupil questionnaires and researcher observations of both the teacher and the pre-determined pupils. These factors were identified from the literature and used to design the questionnaire.

2.4. Quantitative research

2.4.1 Quantitative instrument

Questionnaires were distributed to year seven pupils at the end of a gymnastics unit of work (six lessons) and completed during lesson time. Instructions were given to pupils regarding the correct way to complete the questionnaire and sufficient time was allocated. The questionnaire consisted of seven structured, rating questions, which pupils answered using a five point Likert scale approach. The scale ranged from one (Strongly agree) to five (Strongly disagree).

This questionnaire was developed as a method to measure the effect that learner/teacher interaction had on a number of attributes of physical literacy; motivation, self-esteem, confidence and empathetic interactions with others. Questions required pupils to reflect on their attitude towards physical education lessons, focusing on intrapersonal influences. Question 1 and 2 asked pupils to reflect on their motivation during physical education lessons based on the enthusiasm of their teachers and how praise and feedback was given to individuals. Question 3 and 4 focused on pupils confidence during lessons with regards to; firstly the rewarding of achievement, progress and effort and secondly the opportunities provided to take responsibility in lessons. Questions 5 and 6 required pupils to reflect on the development of self-efficacy within lessons; with regards to feeling valued and experiencing success. The final question asked pupils to reflect on empathetic interaction with others with regards to the teacher listening to the views of pupils.

2.4.2. Quantitative data analysis

In order to analyse the data from questionnaires, participants were ranked according to overall scores achieved, with any score between 7-16 being classed as having a positive experience of physical education, scores between 17-26 ranked as having a neutral experience and scores between 27-35 having a negative experience of physical education.

Pupils' physical competence was derived from the school tracker system which enables teachers to provide levels for all pupils (4-8), and in addition sub levels of a, b and c.

This information was used to define physical ability levels. Teachers provided a level at the beginning of the term and at the end of the unit for each pupil. For the purpose of this study, pupils were ranked in terms of 'lower or higher ability' according to their National Curriculum grade (which was determined prior to their first lesson of gymnastics). Pupils on or above level 4a were classed as higher ability and those below 4a were classed as lower ability.

2.5. Qualitative research

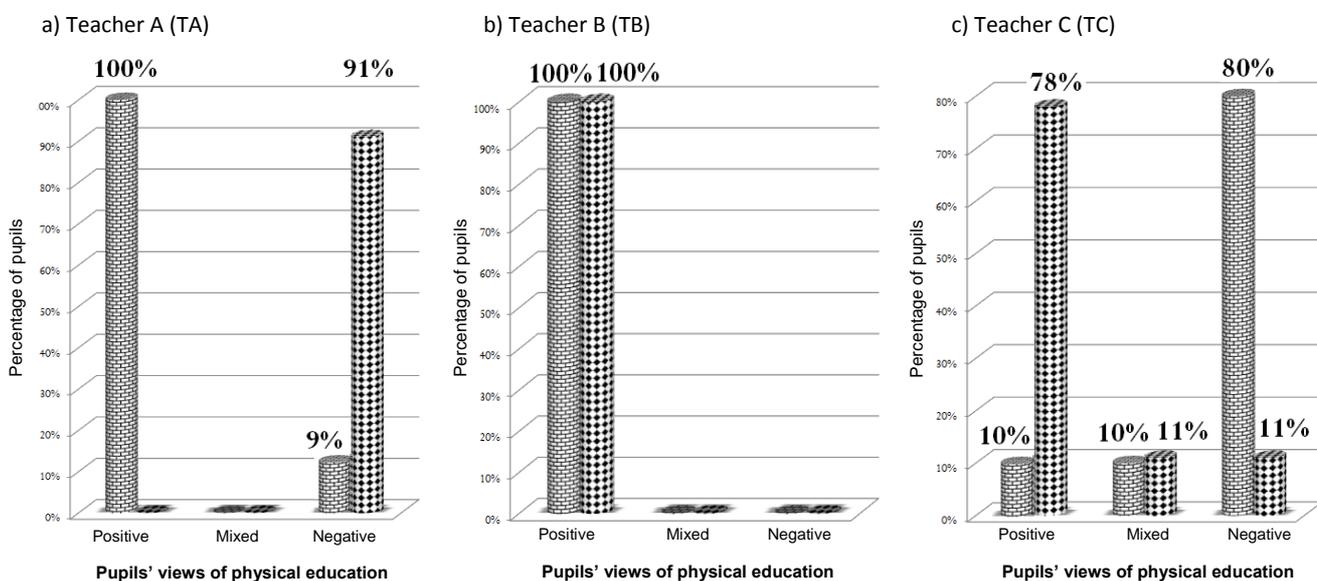
2.5.1 Teacher observation

The researcher observed three teachers for six consecutive lessons of year seven gymnastics. These observations were recorded in a field note book with a focus on the following key themes; teacher-learner interaction, lesson structure and focus, differentiation, praise and rewards and assessment for learning. Teachers were unaware of this focus and were instructed to teach their lessons as normal.

2.5.2 Focused pupil observations

In each class six pupils, three higher and three lower ability, were observed by the researcher to ensure a varied sample.

Figure 1. Percentage of pupils' reporting positive, mixed or negative experiences of physical education for each of the three teachers. a) Teacher A; b) Teacher B; c) Teacher C. Higher ability students shown by 'brick' shading. Lower ability students shown by checker-board shading.



2.5.3. Qualitative Data Analysis

The process of qualitative analysis involved a number of steps. Firstly, teacher observations were transferred into a table to enable codes to be allocated based on themes that emerged. This qualitative data was then evaluated alongside the quantitative results to enable a deeper understanding of the research.

3. Results

For the purpose of reporting on teachers TA, TB and TC has been allocated and in addition for pupils in each of the focused observation groups, higher ability pupils are P1, P2 and P3 and lower ability pupils are P4, P5 and P6. To correlate teachers with their pupils both numbers and letters have been incorporated, for example PA1 would relate to a higher ability pupil in Teacher A's class.

3.1. Teacher A (TA) - Lessons which appeared to be aimed at higher ability pupils

TA was seen to have a positive and motivating relationship with pupils of higher ability; the researcher observed a fun rapport with higher ability pupils and it was evident that significantly less time was given to pupils of lower ability. Figure 1a shows that 100% of higher ability pupils had a positive experience of physical education, whilst 91% of lower ability pupils reported a negative experience of physical education.

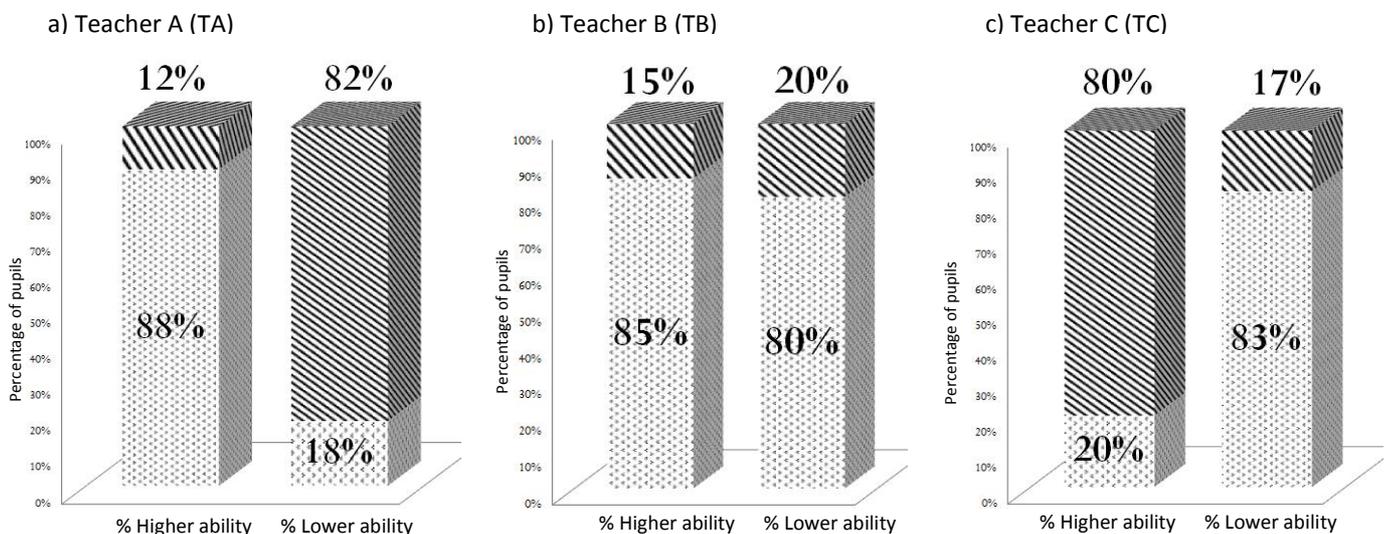
Researcher observations highlighted that Teacher A predominantly gave praise in response to achievement, with only one example of praise for effort being observed.

In a study by Mueller and Dweck, (1998) it was concluded that praise can have differential effects on the meanings that pupils assign to their performance. PA2 was told he performed a 'perfect' sequence, however mistakes were made during the sequence in relation to the learning outcomes. Pupils who were praised for ability were found to be firstly under pressure to reproduce these 'good' performances, and secondly it led to pupils believing that praise was at times insincere. From this, it became clear that it is imperative to ensure pupils effort and individual progress is noticed and suitably rewarded if confidence and motivation are to be improved. Lower ability pupils reported feelings of low self-worth as they could not produce a 'perfect' sequence. One pupil (PA4) was told his sequence was "fantastic" by TA, but was heard to comment to another pupil:

'how can it be fantastic when I can't even do a forward roll?' (PA4)

There is a strong body of research which suggests that providing positive feedback to pupils results in 'intrinsically motivated, free choice persistence' as well as higher enjoyment and interest in activity (Deci, 1971; Harackiewicz, 1979; Butler, 1987).

Figure 2. Improvement in pupils' physical competence for each of the three teachers. A) Teacher A; b) Teacher B; c) Teacher C. Improvement in physical competence shown by stippled shading. No Improvement in physical competence shown by diagonal striped shading.



Although feedback and knowledge of how to feed forward is essential, it must be appropriate and positive feedback will not only enhance intrinsic motivation but also physical competence as a result. Pupils of higher ability showed significant development in their physical competence throughout the unit, with 88% of pupils improving their performance by three National Curriculum sub levels (Figure 2a).

Feedback was evident during TA's lessons, however feedback given was often negative and sarcastic towards the lower ability pupils performance with comments such as:

'is that supposed to be a backward roll?'
(TA)

These pupils reported low motivation and self-confidence levels and this could indicate the reason for only 18% of lower ability pupils improving their physical competence significantly (Figure 2a). In addition lower ability pupils appeared to be aware of the divide between higher ability pupils, with PA5 reporting:

'what is the point in trying when she only gives merits to the sporty people.'
(PA5)

With confidence and motivation being at the heart of physical literacy, it is 'absolutely critical' that this element of the learners embodied dimension is nurtured (Whitehead, 2013)

3.2. Teacher B (TB) - lessons which appeared to be differentiated for all pupils

It is the role of teachers to foster and develop learners' motivation and confidence in realising their embodied capability (Whitehead, 2013). They have a responsibility to create the most effective environment for the promotion of physical literacy. TB was observed demonstrating a positive and inspiring relationship with all pupils, which helped to create a happy and welcoming environment. TB had high expectations of all pupils, demanding quality in performance. Figure 1b shows that all pupils (100%) reported a positive experience in lessons taught by TB, with pupils stating that they felt fully valued and responsible for their own learning. TB demonstrated a calm and friendly

approach from which pupils clearly wanted to learn. Focused pupil observations highlighted that an equal amount of time was spent between higher and lower ability pupils.

Respect for both the teacher and the learner is at the heart of this successful environment, but this can be difficult at times, especially in a mixed ability group where teaching is 'challenging and needs to be carefully presented and managed' (Whitehead, 2013; p46). To promote this mutual respect, teachers should endeavour to treat each individual uniquely, with the aim of enabling pupils to reach their own tangible potential. In order to do this, teachers must show support and give attention and individual guidance to all learners. TB began the unit of work with fun, challenging activities from which he was able to complete a diagnostic assessment which informed future planning. Pupils had a clear understanding that they were at different levels to one another, with PB5 explaining:

'My sequence must include two different rolls because then it will look better because I can do two really good, he (referring to PB2) has to include three rolls because he knows how to do a backward roll well. When I practice my backward roll lots, I will have three rolls in my sequence.' (PB5)

Only when learners begin to feel respected in the environment, will confidence be nurtured and instilled. Pupils were given responsibility for their own learning; during each plenary they were asked to create a learning objective for the following lesson. PB1 explained the positive of this:

'I like deciding what to do in next week's lesson, it means we can work on things that we need to get better at and sir always listens to what we think.' (PB1)

This not only showed pupils that they were respected within the lesson, but also that the teacher had confidence in the pupils understanding and knowledge of practical tasks, resulting in pupils being motivated to further improve.

As previously discussed, feedback is essential in developing intrinsic motivation. However, Henderlong and Lepper (2002) further this claim by

suggesting that motivation will be enhanced more so if; praise is perceived as honest, if success is attributed to effort, if it avoids social comparison and if the objectives are clear, specific and at the correct level. TB was seen to give praise for effort and progress, with all pupils being able to explain what they needed to improve on and what they had done to improve previously;

TB commented to PB2:

'That was an excellent attempt at a head stand, your hands were in the correct position but you over rotated. How do you think you could improve this further?'

and to PB6:

'That was a massive improvement on your last effort, you demonstrated much better control and fluency, well done. How can you make it even better?'

Each lesson observed incorporated effective differentiated tasks which challenged every learner individually and ensured that praise could be earned by all pupils.

Peer and self-assessment tasks were incorporated, which allowed pupils to further develop their knowledge and understanding and to apply their skills throughout lessons. Whitehead (2013) highlights the importance of self-assessment in relation to developing intrinsic motivation which encourages pupils to work and make progress both now and throughout their physical literacy journey.

All of these aspects appear to have impacted on performance with Figure 2b showing that over three quarters of all pupils irrespective of ability levels made progress over the unit of work. Only 15% of high ability and 20% of low ability pupils made little progress.

3.3. Teacher C (TC) - lessons which appeared to be aimed at lower ability pupils

Figure 1c shows that over three quarters of lower ability pupils (78%) had a positive physical education experience. However the researcher observed that TC failed to differentiate tasks to extend higher ability pupils and they quickly demonstrated apathy and boredom in the lessons, ultimately becoming disengaged. A higher ability

pupil was observed attempting a head stand on a piece of equipment which he had been told to use to travel over. TC raised her voice and punished the pupil when this could have been used to challenge the higher ability pupil successfully. A lack of differentiation within lessons will instil boredom in pupils and it will manifest itself in poor behaviour at times (Morgan, 2005), which was evident from this episode. Over three quarters (80%) of higher ability pupils reported negative experiences in physical education with Teacher C (Figure 1c). However, results show that lower ability pupils had a positive experience of physical education and felt confident and motivated to take part. This could be attributed to the praise and rewards given to lower ability pupils; TC gave encouragement to pupil PC6 following a travelling routine:

'That was excellent, absolutely fantastic.' (TC)

Interestingly 11% of lower ability pupils had a neutral experience of physical education (Figure 1c). This could be attributed to the type of praise given, with pupils being aware that their performance wasn't 'fantastic', thus making the praise insincere and demotivating pupils.

It became evident from researcher observations that learners felt respected when two specific elements were in place; firstly when responsibility was given to pupils for their own learning and their effort was recognised and secondly when goals were set along with advice on how to achieve their goals. With regard to the latter point, assessment for learning should be adopted at all times to promote physical literacy (Whitehead, 2013). It was evident in TC's lessons that assessment for learning was lacking throughout and as a result of this, the learners (particularly the higher ability) became de-motivated and could be seen to have low expectations of themselves, failing to take pride in their work and showing little physical development. Figure 2c shows that only 20% of higher ability pupils developed physical competence significantly.

As discussed earlier, the use of praise and reward is important in promoting motivation and confidence. The researcher observed TC using praise regularly and giving rewards in conjunction with the school reward system, with a high

percentage of lower ability pupils being rewarded each lesson. However this was due to low expectations and inadequate challenge which were easily achievable. Learners were fully aware of the effort they put into lessons and activities and rewarding casual efforts did not have the desired effect, since it highlighted to learners that praise doesn't have to be earned (Whitehead, 2013). This has been seen to be detrimental in the fostering of motivation and confidence in pupils (Deci, 1971).

The study aimed to answer the following questions:

- Is there a specific 'pedagogical toolbox' which teachers can draw upon to create a successful ambience in physical education lessons?
- Does a successful ambience encourage pupil engagement in physical education and enhance progress in pupils' physical literacy journeys?

It is evident that there are clear pedagogical requirements for pupils to make progress on their physical literacy journeys and emerging findings from this study confirm the requirement for a 'pedagogical toolbox' which incorporates the following considerations:

- respect for both the teacher and learner
- recognition of progress and achievement
- assessment for learning
- targeted positive and accurate feedback and praise
- devolving responsibility to the pupil

In addition a successful ambience created in this study did encourage pupil engagement and ensured that every pupil made progress on their own individual physical literacy journeys.

4. Conclusion

When considering a pedagogical model with the aim of promoting physical literacy, it is clear that a positive classroom environment is imperative. Classroom environment can be effected by a number of fundamental characteristics which are primarily altered by the teacher. A classroom which demonstrates a successful ambience shows mutual teacher and pupil respect, recognition of effort, progress and achievement, assessment for

learning, targeted positive and accurate feedback and praise and pupils taking responsibility for their own learning (Whitehead, 2011). Additionally, observations in this study highlighted that a positive start to a lesson, with good and consistent routines promote an effective environment which impacts on the remainder of the lesson.

In line with research by Whitehead (2011) results confirm that an environment which demonstrates a 'successful ambience,' encourages pupils to take responsibility for their own learning, resulting in increased confidence and motivation to be physically active (Whitehead, 2011; p167). In lessons where this successful ambience was created all pupils were treated uniquely and challenged appropriately to reach their potential. In addition, regular, individual and targeted feedback and praise created a positive environment in which all pupils felt confident and motivated to participate. In contrast, lessons in which the teacher focused on pupils with Special Educational Needs (both upper and lower ability), failed to promote a successful ambience resulting in a number of pupils lacking motivation. Progress reports indicated that pupils in the lessons in which the teacher created a successful ambience made greater progress over a three month period.

Physical education lessons play an influential role in the development of the whole child, particularly when research suggests that this is the only time many young people are active (Capel & Whitehead, 2010; p42). Lessons must therefore aim to develop the motivation and confidence, as well as the physical competence of learners.

These findings have far wider implications with regards to education and the need for a teacher or lecturer, irrespective of subject being studied, to create a successful ambience. At the heart of this are core principles focused on the need to motivate students and this can be achieved by utilizing a pedagogy of engagement. The very nature of higher education programmes, which see lecture theatres crammed full with 200+ students, needs to be reconsidered in light of these findings, if we are to have a long lasting impact upon student learning and experience.

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