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Learning, in, through and about movement – Teaching research methods and research skills, engaging the imagination to develop creative and reflective thinkers

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Abstract

This paper has evolved out of a much larger doctoral thesis. It explores firstly the value of placing the learner at the heart of their own learning. Secondly, it examines as a means of trying to do something different when exploring innovative practice, the concept of learning in, through and about movement, in order to teach undergraduates about research methods, research skills and notions of fair testing, and repeatability in a practical environment outside the traditional classroom. The idea explored is that through movement, students would creatively find solutions to the open-ended problems that were set, and then reflect on their own and others learning.

Introduction

The notion of the learner as having a key role to play in their own learning (Fielding 2004b, 2008) is not a new pedagogical approach, but can be re-formulated as a way of addressing the tired and dated idea that learners are often 'blank slates' or 'empty vessels' learning best through knowledge being transmitted to them. In this article it is argued that effective teaching and learning has to start at the place where the learners are, not the place where the teacher or lecturer is. In order to do this, the learner has to be central to the intended learning outcomes, fully engaged with their own learning and have an understanding of why they are doing it. This article examines this process and relationship through working with a group of 32 Bachelor of Arts (BA) students at a University on the outskirts of London in the UK.

The group comprised a mix of males and females, ages and cultural backgrounds typical of a London satellite town. I was the lecturer for a programme module entitled Developing Research Methods and Research Skills. Earley (2014: 248) draws attention to some of the challenges faced by those teaching research methods in higher education contexts and suggests that teachers need 'to be aware that students are not necessarily coming into the course with positive emotions, attitudes, conceptions, or views regarding research methods'. Following a review of literature in this area, he reflects that 'teachers need to use active learning approaches to teaching the course, in a way that provides hands-on

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exposure to research methods'. Reflecting on Earley's (2014) suggestions, the question arose, 'What could be done differently?'. It was decided to begin with something common to us all as human beings and that comes quite naturally to all of us irrespective of age, gender, nationality or culture – movement and the primacy of it. The terms used are defined below.

Movement

Our body in movement is essentially how we experience the physical world indeed our environments, in which the roles of perception and cognition play a significant part. Self-movement is fundamental to life and its meaning. As Almond and Myers (2017) have argued, as humans, we are attracted to movement and meaning from the moment we are born. We have a curiosity and a desire to move, to not only make sense of the world, but also to be able to interact and engage with it. Bonwell and Elson (1991) have long advocated the notion of active learning, and more recently many have promoted the not dissimilar ideas of embodied learning (Lindgren & Johnson-Glenberg 2013, Payne 2017, Skulmowski & Rey 2018) in order to create exciting learning inside and outside of the traditional classroom. Elsewhere Snyder and Snyder (2008) have stated the core value of teaching critical thinking and problem-solving skills through movement.

Additionally, movement is one of the ways we have of affecting the world around us, for example manipulating objects to change environments for good and bad depending on the individuals positioning. As infants, we move to explore, move to learn (and to learn how to learn), and move to make sense of our world and environments. Movement is an innate behaviour and came naturally to all of us. Consequently, the notion of self-regulated learning through movement is worth exploring further. Whatever our physical fitness or abilities we move every single day of our lives. Arnold's (1979a, 1979b, 1988) makes distinctions between a) learning in movement, b) learning through movement and c) learning about movement. Examples of what these may look like in a physical sense, but also linking them to cognitive learning are provided in the following three sub-sections. This is important because these distinctions are employed later in this article to analyse students learning.

a) Learning in movement

The learner acquires new knowledge and understanding whilst participating during a game or activity. For example, the rock climber has to change climbing techniques as the terrain changes, or the rugby scrum-half has to change or adapt tactics because the original idea is not working.

b) Learning through Movement

In this context, the learner gains a deeper understanding of, for example levels of fitness and gains new knowledge of, for example the rules of the game, through participation in a game or activity, as a result of having participated in a game or activity. To cite another example, the rock climber or rugby player may cognitively increase their understanding of psychological coping strategies when performing in sight of an audience, or develop a deeper knowledge of performance, the application of tactics or even aesthetics.

c) Learning about Movement

Here, the learner develops a greater understanding as a result of studying and participating in a game or physical activity. For example, the climber has learnt and understands how to deal with oxygen debt while ascending / descending, the rugby player has learnt and understands that dehydration will have a severe impact on performance and there is a need to consume liquids at regular intervals.

The learner at the heart of their learning

White (2004, 2007), Lawton (1996, 2000), Simons (1987, 1999), as well as Fielding (2004a, 2008) Apple (1995), and Ball (1993) have all argued, that the learner must be included to a much greater extent in their own learning, if education is to be successful in the 21st century (Figure 1). In a democratic society, however one interprets it, the learner has a stake in what is taught. If the learner is not central to the process, the questions arise of for whom and for what is education for? At the heart of White's narrative (2004, 2007) where he explores what education fit for the 21st century might look like, is a call for imaginative thinking instead of the kind of tired thinking that condemns learners to years of study which may benefit no-one at all. As Figure 1 demonstrates, all the researchers emphatically make this point although their expertise emanates from very diverse and academic fields of enquiry. To summarise the key points from their work, White argues that philosophically it would be invidious not to include the learner, and Apple and Ball argue that as future adult citizens, the young learners have a vested interest in their education. Simons as a humanist, in summation of her work, rhetorically asks the question 'Why as human beings, would we not want to listen to the voices of our learners?'. Fielding (2004b, 2008) in turn contends that 'pupil voice' is a worthwhile and valuable pedagogical tool in its own right, and Lawton from an educational perspective argues that listening to the learner, can only improve one's teaching.

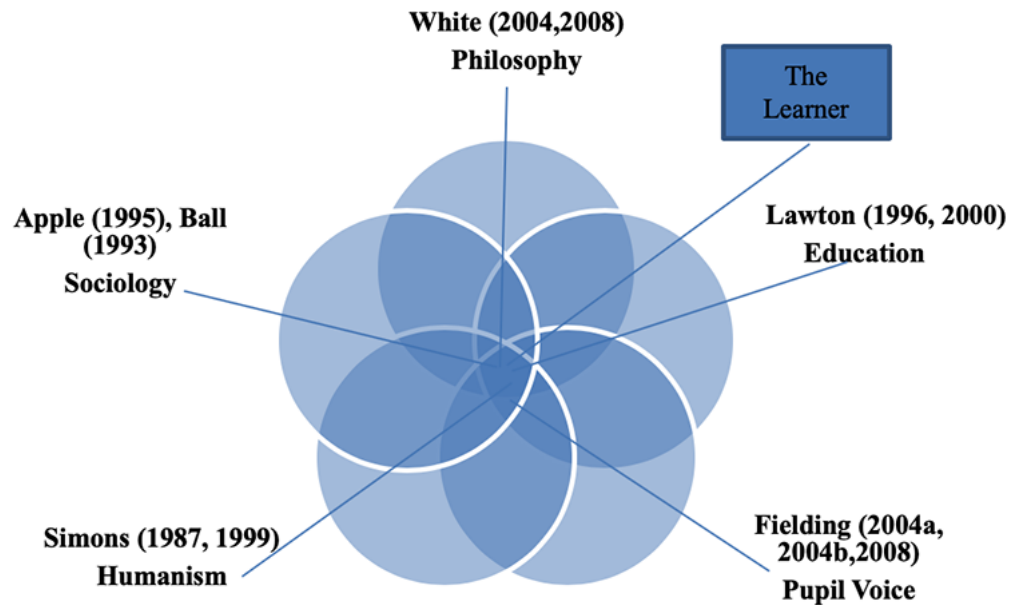


Figure 1. The learner at the heart of their own learning Costas (2011)

The argument made is that in education we need to move away from seeing the learner as a passive recipient of knowledge, and to place them at the heart of their own learning.

Bonwell and Elson (1991), Snyder and Snyder (2008), and James and Brookfield (2013, 2014) have all proposed a greater engagement in using the imagination, learning through play in a meaningful way to develop creative, reflective and thoughtful individuals. James (2016), even goes so far as to argue that creativity and play are essential to university learning.

So, to summarise, I took the idea of the learner being central to their own learning, linked this to our innate desire to move, and used Arnold's (1979a, 1979b, 1988) learning in, through and about movement to teach the module Research Methods and Skills, with the idea of trying to do something different to encourage the development of creative reflective young people. Some reflections follow on the process as experienced by myself as researcher, and as a teacher for the module follow.

The first session

The BA students were all informed via email that their first session was going to be practical in nature and would not take place in the traditional lecture theatre.

As we began the session in the Sports Hall, anticipated outcomes were explained in relation to developing research methods and early research skills. I explained to the students, that a number of throwing games had been set up, in which there would be winners and losers. The class was divided into groups randomly with 4 groups of 5, and 2 groups of 6 and which were mixed in terms of gender.

The throwing games were deliberately designed to be unfair and varied in terms of difficulty in physical endurance. Variables included the numbers of students per group (5 or 6), individual ability, and fitness levels, space/distance, time, body parts used (left or right hand – preferred or non-preferred hand), types of throws permissible (overarm, underarm, pitch, toss, lob etc.) and objects to be thrown (bean-bags, tennis balls, basketballs, quoits, javelins, discus and Frisbees). Equally the targets, the throws were aimed at, also varied in difficulty, and included buckets, hoops, boxes, skittles, coloured cones and markers.

What happened?

At the end of the first part of the session in the Sports Hall, the winning groups and the losing groups were announced. Pandemonium broke out, and there were heated debates taking place between the groups on a wide variety of issues and subjects. Cries of "That wasn't fair?"; "Cheats!"; "Our game was ten times harder than yours?"; "Well you try throwing with your left (non-preferred) hand?"; "Yeah, well you try throwing a Frisbee into a bucket?"; "What? You think that that was hard? You try throwing a basketball and keeping it in a flat hoop?"; "So you could have rolled it maybe, that is a kind of throw I think?" - And that was the point, the students had got it! They had understood that the games were all different and were testing different things and were unfair when compared with each other.

The groups were then requested to creatively set up their own games and challenges, and teach them to another group, and specifically detail what they were teaching and testing for. In follow up sessions over the next four weeks, the student groups created and made up games and challenges, where they had to collect data, and record their findings. This in turn led into discussions about fair-testing, repeatability, and debates about both quantitative and qualitative data. Notions of speed, height, level, distance, heart rate, volume of oxygen uptake, physiology and fitness all surfaced at various stages for the students. We then had to look at analysing and interpreting their data, and summarising their findings, with recommendations and conclusions. The point is it was the students' data that they generated and were working with, it was not mine, and they engaged enthusiastically throughout. So far from feeling estranged, worried and a

little apprehensive about doing a series of sessions on movement in the sports hall, they had embraced the idea that movement was being used to explore and find out new things. The groups had learnt in movement, through playing the games, that there were a number of unfair variables at work. As student M commented “I get it now, coz I realised when I was throwing that a lob was better than an overarm throw”. The groups had learnt through movement that the tests and games had to be fair and the same for all if it was to be called a fair and reliable test. As student B stated “Yeah I get it, and I need to get a bit fitter too, as I never thought you could get so tired just throwing things. Some of those games were hard work”. The groups had learnt about movement in the sense that they had explored a number of different throwing techniques, and some were more suitable to specific challenges. For example, throwing a Frisbee was very different from throwing a javelin or basketball. Student Y said, “I can see now that as a result of playing the games, I never really thought about the different types of throws”.

As has been demonstrated so far, the learners involved in this project were willing and able to hold informed debates on a range of issues relating to research methods and skills. The evidence offered by the learners suggests that they are able to play a greater role in their own education and learning if given the opportunity. As Lawton (1996, 2000), Fielding (2004a, 2008) Simons (1987, 1999) and White (2004, 2007) argued so forcibly, it does appear to be the case that there is a mismatch in terms of pedagogical approaches. Moreover, as White (2004, 2008) states, the real problem lies in the lack of clarity regarding the basic aims that underpin education. White asks, what common goals and aspirations are we striving for? Should they include the views and active engagement of the learner? In this instance the students fed back positively that they had “learnt lots”, “had lots of fun” and that the session(s) “were very different”. Should the students have a role to play in their own learning and should they be encouraged to enact this role and be given greater responsibility? They were certainly capable when given the opportunity and appeared to flourish when devising challenges, and tests, and when measuring and assessing their own and others learning.

Conclusion

It has been argued in this article that as a means of taking education forward into the 21st century, the learner must be central to the process. Building on our innate relationship with movement as a primary function of what it is to be human. It has been shown that learning in through and about movement can be used to teach both research methods and research skills, (and for that matter probably anything else too.) Throughout the students were encouraged to create, make and develop their games and activities and then to reflect on their own and others learning.

Indeed, vast areas of learning are inseparable and intrinsically linked in the learner's mind. (See for example Vygotsky's (1962) notion of the transferability of learning skills, and Bernstein's (1971a, 1971b) conceptualisation of 'weak classification'.) Notwithstanding the limitations of this research in terms of the size of the cohort, we did have lots of engagement, and in what is becoming an ever-increasing sedentary society, the learners in this context also did a little physical activity learning much in the process they said.

Learner centred education is the approach by which individuals are supported in endeavouring to reach their own unique learning potential through developing a wide range of human learning capabilities with which each is endowed (Whitehead 2013, Dewey 1922, Claxton 1984). If one of these capabilities is learning in, through and about the physical, whether we term it embodied learning or active learning, or movement, it is proposed that it impacts upon other human capabilities such as cognition, aesthetic appreciation, musicality and interpersonal and ultrapersonal skills.

[Read 'Experiential teaching practice and reflections'](#)

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