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HOW TEACHER TRAINING CAN BEST SUPPORT EFFECTIVE PEDAGOGY IN PHYSICAL EDUCATION

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Abstract

There is little empirical evidence on how trainee teachers implement or change in their practice despite innovative and pedagogical initiatives in Physical Education. How can trainee teachers experiment with different models and pedagogies while they are training? The purpose of this study was to investigate final year prospective teacher's perceptions on the teaching styles and models that they have been exposed to during their 4 years in college and how much they have utilized them in practice. A qualitative approach (focus groups x3) on 35 undergraduates (f=15, m=20; $\bar{x}$ age= 23.5 years) over 3 years was used to integrate the findings of what teaching models trainee teachers use, when and in what context. The themes that emerged from the pre-service teachers were environment, implementation, leadership and assessment and organisation in relation to the use of model-based pedagogy. Other observations that emerged were initially positive in terms of experimentation with model-based pedagogy and methods especially on the relationship and social values. However, this was sometimes discontinued due to trainee assessment and the culture within the school. Students mostly believed that skill learning was the most important factor in the Physical Education context followed by student health. The solutions offered for trying out model-based pedagogy and hybrid models were more group work, peer assessment, mentor training and practice and generic feedback without penalty of grade. There appears to be little implementation of transferring theory into practice in pedagogical practice and very limited change in the teaching of Physical Education by future teachers. There is a resistance to change, a deficit attitude to experimenting with teaching methods due mainly to personal confidence and a fear of loss of autonomy. This may due to several factors but the mentors in schools and the perseverance of college staff to implement these models may lessen the pre-service teacher's fears and perceptions.

Keywords: Physical education, pedagogy, perception, training.

1. Introduction

'Interestingly, for the profession that educates all others, the teachers; there is no consensus about the body of knowledge to be a teacher' (Fernandez, 2014, p. 79).

There appears to be a vast difference between knowing about a topic, content knowledge and knowledge about the teaching and learning of that topic, pedagogical content knowledge (Bucat, 2005, p.2). There is little empirical evidence on how trainee teachers implement or change in their practice despite innovative and pedagogical initiatives in Physical Education. A feature of physical education in the last few decades has been the influx of pedagogies and models of instruction into physical education (Teaching Social and Personal Responsibility (TSPR); Teaching Games for Understanding (TGfU); Sport education (SE) and Co-operative Learning (CL)) (Hellison, 2011; Bunker & Thorpe, 1982, Light & Harvey, 2015; Siedentop 1994; Dyson & Casey, 2012) and how there may be a possible shift into one of these or a combination of those rather than the traditional skill-drill practice to the curriculum domain. This has been illustrated recently, where hybrid models which have been experimented with, had limited success in both execution and because of the teacher's philosophy (Casey & MacPhail, 2018).

The specific pedagogical models are based on instructional theory and practice and all offer the teacher and the student a way of learning different varieties of the curriculum. TSPR is based on moral and social development where cross curricular goals of the hidden curriculum of manners, respect, fair play and co-operation are hopefully transferred to other settings and contexts outside the gym. TGfU evolved from traditionally PE in the latter part of last century where students knew little about the activity and skill refinement and development were the goals of Physical Education at that time. TGfU is an inquiry approach to games teaching where the play of a game is taught before skill refinement. Appreciation, tactics and problem-solving are the key elements played through the game that differentiates itself from traditional skill-drill approaches. Sport education is aimed at students to become competent, literate, and enthusiastic players (Siedentop, 1994). It involves students in the Physical Education setting playing an active role in their own sport experience by serving in varied and realistic roles that we see in authentic sport settings such as captains, coaches, trainers, statisticians, officials, publicists, and members of a sports council. They can develop team and social cohesion by team names and uniforms. Co-operative learning focuses on students working together in small groups to successfully completing creative and interdependent tasks. This essentially gives the students the joint responsibility of both learning the content and ensures that their peers promote and develop interpersonal skills and social interaction. Hastie & Mesquite (2016) believe these pedagogies provide students with opportunities and challenges to become self-directed, which in turn, leads to higher levels of attainment in skills, perceived competence and physical activity – some of the goals of any Physical Education programme.

These model-based pedagogies have received considerable support and research in the last 20 years and students, teachers and teacher trainers have enjoyed advocating these pedagogies and models so that development and progression of both knowledge and evidence can take place (Casey 2014; Harvey & Pill, 2016; Goodyear & Dudley, 2015). Despite this surge of research into the pedagogy within the Physical Education environment, there has been little conceptualising about when such models are

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appropriate, with whom and in what context. When they should be introduced to students and in what activities and in what form are questions that have elude the research base on model-based pedagogy in Physical Education. Instead, what has evolved is the delivery of a single model and the difficulties with them (McCaughtry, Sofo, Rovengo & Curtner-Smith 2005; Metzler, 2011).

The problem of any educational change, not just in Physical Education but predominantly in teacher education, is first a problem of dealing with the natural emotional reactions of human beings to the threat of losing certainty, expectedness, or stability (Korthagen, 2010). In teacher behaviour, this is no different when faced with change or unpredictability. As Rovegno (1994) stated, teachers fall back to the 'curricular zone of safety', to old habits and patterns and try to survive. This is how they were taught and their experience and their preliminary training phase and observations that are used as reflective processes in their training years affects their perception and practice. Experimentation, investigation into pedagogies and what influence they may have are, unfortunately, sometimes disregarded and, upon entry into the profession, can potentially negate the influence of college training. Teaching may be and is possibly too closely linked and replicated with that of their previous experience and that of their former mentors. If a variety of experiences shapes teaching, then learning about teaching is facilitated and enhanced when the teaching and learning approaches advocated in the program are modelled by the teacher educators in their own practice (Lunenberg, Korthagen & Swennen, 2007).

Change then can be a fruitless task as the influences that attracted one to that vocation is often ingrained on the way we look at the profession and career. Hattie (2003) suggested that pedagogical content knowledge was more important than subject specific content knowledge; that is the way in which knowledge is used in teaching situations to facilitate student learning. However, while many trainee teachers identify pedagogical content knowledge as significant, the knowledge identified by the majority focuses largely on the knowledge required to teach the six practical areas of activity of the National Curriculum for Physical Education in Ireland and theoretical aspects of examinations to pupils between 14 and 18 years, i.e. content knowledge (Capel & Blair, 2007). Pre-service teachers rarely prioritise areas where they identify themselves as good on entry and as a result, their knowledge cannot be but somewhat be distorted. Anecdotally, this may be especially true in games and competitive team players but there is no evidence to support what strengths can displace their training or what training or type of development promotes and facilitates their weaknesses. However, if their training in certain areas has been narrow and performance focused, they may not explore different methods of teaching and research displays that trainee physical education teachers are likely to teach this content the way they were taught themselves (Capel & Blair, 2007).

Thus, early in their school placements, trainee teachers are predominantly concerned about getting through and surviving. Trainee teachers are faced sometimes being unable to respond appropriately to questions pupils might ask. They are concerned about accumulating school-based practical experience of teaching to help them learn to cope with the day-to-day realities of teaching and with having enough content knowledge for the lesson (Tinning, 2008). Capel (1997) suggests that the new environment of each school placement results in trainee teachers refocusing first on self-concerns and then on content. Trainee teachers, it would seem, focus on the immediate practical concerns of self and content and most

are not able or ready in teacher training to prioritise the development of knowledge either content or pedagogical to enable them to meet the needs of individual pupils.

If what they practice or do in physical education lessons in schools and what they are taught in teacher training are different or conflicting, trainee teachers are likely to accept, or prioritise, the school-based and dismiss the university-based parts of the programme as not relevant to their work in schools. They may therefore, believe that the theory (such as pedagogy, teaching approaches or curriculum models) they are taught in the university-based part of the programme is necessary to qualify as a teacher, but is not relevant to them on school placement or later as a teacher (Behets & Vergauwen, 2006; Capel & Blair 2007).

Pre-service physical education teachers and their mentors prioritise the development of subject knowledge (practical) and teach much content on school placement in the way they have been taught or the way their mentor teaches it. Thus, the focus of their teacher training is on developing content knowledge and technical expertise to teach a specific activity in a specific school. Whilst knowledge for teaching, including subject knowledge, is important for teaching physical education, attention needs to be given to a range of interacting factors to take account of the complex nature of teaching and learning, if physical education is to justify its place in the school curriculum. In fact, contextual intelligence (Brown, Gould & Foster 2005, p.51) is more applicable for trainee teachers to learn 'knowing what works for which person in which situations…it is more than knowing what to do; it is knowing how to get it done'. Contextual intelligence in this domain promotes all knowledge bases: content, knowledge of all students, subject matter, pedagogy, environment and culture, curricular and above all learning, a concept that has many definitions but as Bingham & Conner (2010) state

"We define learning as the transformative process of taking in information that—when internalized and mixed with what we have experienced—changes what we know and builds on what we do. It's based on input, process, and reflection. It is what changes us" (2010, p.3).

2. Problem Statement

There is a plethora of literature on these model-based instructional concepts but there has been little exploration of how prospective teachers use them or even adopt them in training and experience (Bechel & O'Sullivan, 2007). The main objective of this paper is to investigate the experience of Irish pre-service Physical Education teachers on their practise of model-based pedagogies. Another related area would be to gather feedback on how best to improve how third level teaching could enhance the model-based evidence and facilitate this research into application.

3. Research Questions

The primary research question is to investigate final year prospective teachers' perceptions on their use or lack of use of pedagogical models in Physical Education

4. Purpose of the Study

The purpose of this paper, therefore, is to find out if pre-service teachers use pedagogical models in their practice and if so which models they use. Additionally, the study will attempt to provide reasons

why pre-service trainee teachers use pedagogical content on model-based approaches and investigate barriers that prevent them integrating it into their practice.

5.   Research Methods

The purpose of this study was to investigate final year prospective teachers' perceptions on their use of pedagogical models in Physical Education that they have been exposed to during their 4 years in college. A qualitative approach (3 focus groups) with 35 undergraduates from a purposive sample from the south West of Ireland (f=15, m=20; $\bar{x}$ age= 23.5 years) in 2015, 2016 and 2017 was used to integrate the findings of the teaching pedagogies trainee teachers use, when they use them and in what context. The final year students were asked to volunteer for a focus group session on model-based curriculum models in Physical Education after their final placement. The group is focused in the sense that involves group discussions organised to explore a specific set of issues and they have a collective unity. Collective unity is where themes are generated by collective discussion and conversation. The way the focus group is conducted is seen as exploring issues and practice so that one can connect teaching and learning more fully (Kitzinger, 1994).

'Theme identification in qualitative research' and the variation and methods of thematic analysis in the literature are wide and at times somewhat mysterious. Rarely are they illustrated in the literature (Ryan & Bernard, 2003). Themes and analysis of data generated was based on the principles of grounded theory (Charnaz, 2006). Questions to generate discussion were 'I noticed on teaching practice that some instructional models were used? Which ones? How did you find them? What advantages did they provide? Were there any difficulties? The prompts allowed the discussion to move to other areas at times due to the nature and dynamics of the group.

The data from the focus group was transcribed and subjected to initial coding (line to line, incident to incident). All codes were written down before being systematically categorised into themes. For example, within the theme Leadership, the initial code included: control, authority, roles, mentor, and college from quotations from the focus groups. Once identified, these were rendered into focused coding: more directed, selective and conceptual codes (Charmaz, 2006, p. 4).

Studies of this nature cannot be constructed from a theoretical *tabula rasa*, hence the knowledge of the researcher is of paramount to this framework. The research employed both inductive and deductive content analysis (Weber, 1985).

6.   Findings

Firstly, final year students do use pedagogy in their practice but had reservations with them and how to implement and organise this knowledge appropriately. Thirty-two teachers over the three years alluded to this evidence (94%). When asked how they used any of the Model based Pedagogies, four distinct themes emerged from the conversations and discussions. These pertained to Environment, Leadership, Implementation, and Assessment and Organisation. Although the trees display the full range of issues, it would be lost if the data was restricted to them in isolation. For this reason, the results are reported based on a selection of direct quotations, which allows the quotes 'speak for themselves' (Woodman & Hardy, 2001).

The four distinct themes that emerged from the conversations and discussions applied to the Teaching Environment, Leadership, Implementation of the model-based pedagogies and Assessment and Organisation from a personal pre-service teacher's perception.

The full range of Environmental issues is illustrated in Figure 1. There were mostly positive remarks about how students engaged in their class when using model-based pedagogy such as Creativity, level of versatile ideas on certain elements and a good relationship amongst the groups taught. There were some negative comments about the level of engagement and sociability amongst some students as the focus groups believed that students use their independence as a chance to go 'off-task'.

One teacher responded that he thought that 'when the students were given some responsibility to engage and create ideas that it worked' and this 'was an added bonus' for the lesson, creating a positive learning environment for all concerned. A positive learning environment where 'students can openly express' and 'have autonomy' to communicate and respond is facilitative for any setting or context, not just in educational domains.

'students responded positively' (10)
'lots of different warm-ups and ideas' (7)
'team work evidenced'   (6)
'Too much engagement' (9)   Social   ENVIRONMENT
'connected really good' (4)
'influenced student respect for each other' (3)

Figure 01. Environment issues (the number of comments made in focus groups)

The full range of Leadership issues is illustrated in Figure 2. The quotations and comments were mainly negative as they involved the inability of the pre-service teachers to follow through with the pedagogy because of a lack of confidence in their management skills. Hence, many went back to 'skill teaching' as opposed to the pedagogy they were implementing in class. They were afraid of giving students too much autonomy as they 'were uncertain of the consequences and the outcomes'. They were afraid of 'losing control' because of their lack of experience and pedagogical knowledge.

'difficult to let them at it' (11)
'easier to bring them back to skills' (21)
'Transitions hard to manage' (8)   Confidence   LEADERSHIP
'Lost authority/control' (22)
'unsure of where it was going' (19)

Figure 02. Leadership Issues (the number of comments made in focus groups)

The third theme that emerged significantly was one of Implementation. The responses were varied but what developed significantly were the nearly full affirmation of pre-service teachers that when they were in doubt, they went back to 'the way they were taught'. Isolated comments on each model-based

pedagogy was common, with time, planning, structure and providing 'a different perspective or different outlook' to how to provide a Physical Education class. Hybrids of the models were common amongst the respondents but while many of the pre-service teachers wanted to produce a better-quality experience for their students, they struggled with the logistics of the models.

'I tried TGfU for a lesson as they did not really participate 100% in the previous lesson. It worked great to start but when I tried to implement a tactical approach to the game, I realised that my skill set was limited and had really only prepared for the first 2 lessons of my unit of work and the group differed to what skill or tactic I should pose or set' (Focus Group 2016). Nearly 66% agreed that the co-operating teachers or mentors in schools did not really appreciate these model-based approaches and in fact ridiculed them or dismissed them 'as a waste of time' or 'no point in those' or 'they have little relevance'.

'too much wasted time in SE' (7)

'difficult to plan in TGfU (13)

'TPSR had no structure'   (5)

'did a bit of each of them' (9)

'given me a different outlook' (6)

'my mentor said the theories were a waste of time' (23)   Pedagogy   IMPLEMENTATION

'I use them but not exclusively as 1 model' (4)

'prefer convey the teaching points rather than the pedagogy' (11)

'takes too long' (6)

'preparation tricky' (11)

'skills -it was the way I was taught' (26)

Figure 03. Implementation issues (the number of comments made in focus groups)

The final theme that ascended from the data was their uncertainty of the activity in pedagogical terms yet fully prepared in skill terms. One pre-service teacher remarked that 'if curriculum activities (practicals) were taught through different pedagogies, then he would have been able to deliver'. Others believed that the time required to prepare and evaluate student learning 'would take away the value of the lesson'. On further prompts, many believed that 'teaching the skills were enough'. On reflection many of these comments illustrate what is widespread in school and society today; a certain inability to transfer. Transfer is prevalent in all definitions of learning, yet the inability of some pre-service teachers to transfer and combine content knowledge into and with pedagogy knowledge is something educators will have to challenge. On a personal issue, many trainee teachers suggested that 'if pedagogical issues were not assessed, then we would use them more in our lessons' (2017) and 'enable us to prepare more efficiently'. Hellison's (2011) model of assessment on effort, moral and social rules, a few respondents believed, was a good way of applying 'a different type of assessment instead of performance-related skills'.

'need a focus' (7)		
'prefer teaching skills' (26)		
'not enough preparation time' (16)		
'unsure of lesson without plan' (12)	Knowledge	ASSESSMENT &
'impossible to teach pedagogy if being assessed'(10)	Personal	ORGANISATION
'hard to evaluate student's learning' (11)		
'liked Hellison's assessment tool' (3)		

Figure 04. Assessment & Organisation (the number of comments made in focus groups)

Qualitative themes that emerged were both positive and negative in terms of model-based pedagogies. The samples firmly believed that skill learning was the most important factor in the Physical Education context followed by student health. This is interesting in that the philosophies established and developed over the four years at college are still grounded in the skill learning approach, because of previous induction into it from their past experience in schools or the community. They learn this and then transfer it into their own practice. At the end of each focus group, respondents are asked to provide solutions to the challenges they identified and while an 'enabling' strategy was suggested by them by asking for 'model-based pedagogy lessons on their practical strand areas. This would not facilitate learning, but in fact, by taking more responsibility for the actions of that person than the person is taking for themselves is counter-productive as it allows the enabled person to be irresponsible.

Other solutions offered were more group work, peer assessment in teaching and teaching practice generic feedback without penalty of grade on teaching practice.

7. Conclusion

The themes identified over the three years from undergraduate prospective teachers highlight a progressive direction to models but a limited experience of implementation and a negative mentoring attitude about theory into practice or evidenced based practice. The minimal impact of the more theoretical aspects of teacher training may be attributed to students' link of PE & Sport and the practical nature towards their training and practice (Capel, 2007). It may also be because of their previous experience of being taught and from their college experience, where many PETE courses are concerned with the learning, acquisition and teaching of skills which may reflect why trainee teachers still revert to this method in their training phase and in their lifelong career (Moen & Green, 2012). This is amplified in the findings of this study where pre-service teachers revert back to the 'curricular zone of safety' (Rovengo, 1994) possibly because of the threat of losing control, certainty and stability (Korthaeng, 2010). Perhaps, the research and practice has not highlighted the benefits of such model-based practice, or as in this study, the pre-service teachers do not feel competent in implementing these 'new' approaches. As McCaughtry et al. (2005) state, 'what good is sound curriculum that leads to optimal student learning, if teachers routinely struggle in learning to teach it' (2005, p. 136). There appears to an attempt at implementing, applying and transferring theory into practice in pedagogical practice but a very limited change in the teaching of Physical Education by prospective future teachers. This, despite the

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positive environmental quotes and dimensions on social ability, teamwork, respect and connecting with each other under some of the pedagogies attempted.

There is a resistance to change, a deficit attitude to experimenting with model-based pedagogies, due mainly to lack of confidence and a fear of loss of autonomy. The focus groups illustrated that if pedagogy was not assessed then there would be more implementation, but this is also dependent upon the culture of the school and the co-operating mentor.

8. Implications

It has been demonstrated that good teaching can transform lives and contributes to the wellbeing and mental health of the nation. The focus group showed that while skills are dominant, student health is of vital significance, yet there is little literature to promote this philosophy. There are also implications for teacher training, where a closer relationship with co-operating schools and teachers need fine-tuning and that both subject specific knowledge and pedagogical knowledge need to be combined into a tighter 'fit' for students and families alike.

Acknowledgements

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