(Reinforcing) factors influencing a physical education teacher’s use of the direct instruction model delivering games

Abstract
The purpose of this study was to explore how a Physical Education (PE) teacher employed the direct instruction model (DIM) teaching games in a United Kingdom secondary school. The research sought to identify how the teacher delivered the DIM and those factors that influenced his use of the model. Occupational socialization was used to identify the factors that encouraged his use of the DIM. Data were collected from interviews and lesson observations. Inductive data analysis showed that while the teacher presented a ‘full-version’ of the DIM, his limited content knowledge impacted on the use of the model in teaching cricket. Factors influencing his use of the model were a sporting perspective, a Post Graduate Certificate in Education mentor and the ability and behaviour of the students. These factors reinforced his undergraduate learning and subsequent use of the DIM. It is suggested that the comparable backgrounds of many PE student teachers may make the DIM an apt model to learn in undergraduate and postgraduate PE courses. However, effective use of the model requires students to be taught and possess in-depth content knowledge of the game(s)/activities being taught and learned.
Introduction

The occupational socialization framework (Lawson, 1986) has been used extensively to identify how Physical Education (PE) (student) teachers view and teach the subject (see, for example, Adamakis and Zounhia, 2015; Hemphill et al., 2015; Meek and Curtner-Smith, 2004; Richards and Templin, 2011; Sutherland and Stuhr, 2012; Zmundy, Curtner-Smith and Steffen, 2009). Examining teachers’ childhood involvement in PE and sport, their higher education experiences and the influence of the workplace has allowed researchers to identify what factors influence their teaching. Such research has also suggested how they might be better prepared and assisted to teach PE. The increasing popularity of innovative instructional models utilising student-centred learning among academics (Goodyear and Dudley, 2015), has resulted in a number of recent studies examining the influence of occupational socialization upon PE teachers’ interpretation and delivery of Teaching Games for Understanding (TGfU) (Bunker and Thorpe, 1982) (Li and Cruz, 2008; Light and Butler, 2005; Lund, Gurvitch and Metzler, 2008, O’Leary, 2014, 2015) and Sport Education (SE) (Siedentop, 1994) (Curtner-Smith, Hastie and Kinchin, 2008; Gurvitch, Lund and Metzler, 2008; McMahon and MacPhail, 2007; Stran and Curtner-Smith, 2009). In contrast, research examining those factors that influence teachers’ use of direct teaching approaches has been conspicuous by its absence. Therefore our purpose for completing this study was to better understand
those factors that influence a PE teacher’s interpretation and delivery of the direct instruction model (DIM) (Metzler, 2011).

**The direct instruction model**

In congruence with other instructional models the DIM is a planning ‘blueprint’ for teachers to facilitate learning. The DIM detailed by Metzler (2011) is based on the work of Rosenshine (1983) who delineated the design and teacher operations of the model. Teachers structure the learning by proceeding in small steps. They give detailed and repeated instructions and explanations. Teachers ask a large number of questions and provide active practice. They provide feedback and corrections. They should also divide tasks into smaller tasks and ensure a high student success rate throughout the learning process. The DIM is often incorrectly and frequently confused with didactic teacher-led instruction currently prevalent in PE (Hattie, 2009; Kirk, 2010). The teacher operations identified above and the teacher and student benchmarks shown in Table 1 clearly set out the structure of the DIM:

Insert Table 1 here

While didactic teaching approaches may include some of the teacher operations and benchmarks above, DIM instruction must incorporate *most or all* of the above teacher
operations to be classified as the DIM (Metzler, 2011). Although the model is teacher led, it is not authoritarian and necessarily rigid in nature. It should be flexible, supportive and positive offering students high levels of academic learning time (ALT), opportunities to respond (OTR) and performance feedback (Metzler, 2011). Nonetheless, it does require learners to follow closely the instructions of the teacher. For these reasons it has been suggested that the DIM is suitable for students who are avoidant, competitive and dependent in nature (Metzler, 2011).

Initial learning tasks within the DIM can include repetitive individual drill practices and low organisational games such as tag games. Advanced learning tasks can include partner practices, complex drills and mini-games (Metzler, 2011). The learning domain priorities for the model are psychomotor learning followed by cognitive and social learning (Metzler, 2011). The DIM has a very strong alignment with developing movement patterns/techniques. It is also highly appropriate for understanding tactics and strategies following the acquisition of the relevant techniques (Rink, 2013). Not surprisingly, the model is seen as ideal for games instruction with its technique-to-games progression (Metzler, 2011; Rink, 2013).
The use of the direct instruction model in teaching and learning games

Kirk and MacPhail (2002) identified that to play games competently students should possess knowledge of the rules (declarative knowledge), the ability to execute techniques (procedural knowledge), and when and where to use those techniques so they become efficient game skills (strategic knowledge) in the ever-changing environment that games present. The emphasis upon these requirements appears to be dependent on the type of game. For example, an invasion game such as soccer, while requiring all three types of knowledge, is heavily reliant on players making strategic decisions. In contrast, a striking and fielding game such as cricket requires a mixture of procedural and strategic knowledge. Previous and current United Kingdom (UK) National Curriculum for Physical Education (NCPE) documentation has recognised the need for strategic knowledge to be taught to overcome opponents in team and individual games (DFEE, 2013; QCA, 2007a, b). Despite such guidance and the nature of games themselves, UK teachers have been accused by academics and the Office for Standards in Education, Children's Services and Skills (Ofsted) of focussing on the acquisition of procedural knowledge to the detriment of acquiring strategic knowledge (Capel, 2007; Kirk, 2010; Ofsted, 2009). It has been suggested that such teachers’ beliefs and pedagogical approaches are a result of their childhood experiences of PE and sport, their higher education/teacher training and working as a qualified teacher (Canter, 2001; Meegan and MacPhail, 2006).
The occupational socialization framework

Occupational socialization “includes all of the kinds of socialization that initially influence persons to enter the field of PE and that later are responsible for their perceptions and actions as … teachers” (Lawson, 1986: 107). Lawson (1986) identifies four assumptions that compliment PE teachers’ socialization. Firstly, in contrast to conventional notions that teacher socialization begins in higher education (Fuller, 1969), Lawson suggests that PE teachers’ socialization is a life-long process. Secondly, pedagogical practices are institutionalised, resulting in newly qualified teachers reproducing the practices of their more experienced colleagues. Thirdly, socialization is problematic rather than automatic. While universities and schools may attempt to ‘mould’ teachers’ practices, they may reject or partially/fully accept the contents of this socialization process (Zeichner and Gore, 1990). Finally, socialization outcomes are likely to be the result of the fourth assumption that states PE teachers face three stages of occupational socialization (Lawson, 1986).

The acculturation stage refers to childhood experiences of PE and sport nurtured by family, teachers and sport coaches. Beliefs such as ‘it is the teachers role to tell students what to do’ become dominant and common sense in nature. It has been suggested that these subjective theories act as sieves screening out inconsistent perspectives while allowing consistent perspectives to be incorporated within the teacher’s existing view of
education (Richards, Templin and Graber, 2014). The professional socialization stage denotes the values, knowledge and skills deemed necessary by universities to teach PE. The influence of this stage is often seen as limited given the powerful perceptions of the teaching process formed in the previous stage (Capel, 2007; Stran and Curtner-Smith, 2009). The organisational socialization stage refers to teachers learning the values, knowledge and skills valued by the school (Van Maanen and Schein, 1979). While the inexperienced teacher can challenge existing teaching and learning strategies, the likelihood is that the teacher will adopt the instructional practices of their colleagues (Stroot and Ko, 2013; Zeichner and Tabachnik, 1981). Investigating those factors occurring within the three stages of the occupational socialization framework will assist in detecting and explaining the variations in PE teachers’ work perceptions and practices (Lawson, 1983, 1986).

Factors influencing teachers’ interpretation and delivery of instructional models

A growing body of literature indicates there are four factors across the occupational socialization framework that influence teachers’ use of instructional models such as SE (Curtner-Smith, Hastie and Kinchin, 2008; McMahon and MacPhail, 2007) and TGfU (Li and Cruz, 2008; O’Leary, 2015, 2014). Firstly, the influence of sport appears to be extremely powerful. Secondly, the beliefs of mentoring teachers during teaching
practices can be persuasive. Thirdly, school colleagues can impact upon pedagogical practices. Finally, students can influence the teaching and learning process.

The observing of PE teachers and sport coaches provides potential teachers with an understanding of what ‘good’ pedagogical practice might be and an attraction into sport itself (Capel, 2007; Lortie, 2002). Sport influences may have a more profound impact on student teachers than their PE background given time spent in PE lessons is likely to be minimal in comparison to extra-curricular sports clubs and voluntary sporting opportunities (Placek et al., 1995). Socialization into and via sport appear to significantly impact on the values underpinning PE teaching in the UK.

Investigating the values and beliefs of newly qualified PE teachers, Evans (1992) found what he called a ‘sporting perspective’ emphasising the development of practical skills, a love of sport for all and providing opportunities to further develop the elite child (O’Leary, 2015). Such a perspective focuses upon the acquisition of skills via progressive drills accompanied by numerous technical teaching points. This focus is likely to have been observed during the acculturation stage and reinforced during the professional phase by mentoring teachers during teaching practices. Research has indicated that student teachers value teaching practices and particularly the advice of the school mentor over university-based work particularly if the latter conflicts with their
acculturation experiences (Behets and Vergauwen, 2013; Capel, 2007). A concern is that student teachers and their school mentors often have limited understanding and ability to implement teaching skills to create an effective learning environment (pedagogical knowledge) (Tindall and Enright, 2013). Moreover, it has been suggested that many (student) teachers’ have only a basic content knowledge of the different activities or sports (Capel and Blair, 2007; Siedentop, 2002). As a result, student teachers often focus largely on the acquisition of sport techniques (Capel, 2007). This narrow approach can be emphasised by the need to teach some form of ‘content’ and students concerns about passing the teaching practice. The need for content knowledge or knowledge of activities for the immediate teaching situation is obvious. Moreover, the need for such knowledge across a wide range of activities means many PE students do not prioritise further learning in those activities in which they already consider themselves well-informed, such as games (Capel, 2007; Ward and Griggs, 2011). The need for immediate content knowledge is not limited to student teachers.

Examining a recently qualified teacher’s use of TGfU in a UK secondary school, O’Leary (2012) found the teacher’s lack of volleyball content knowledge resulted in her ‘scouring’ books and the internet for technique-based drills. She readily acknowledged techniques were easier to teach than their tactical application in (conditioned) games. Researching a pre-service teacher’s use of SE in a post primary school in Ireland,
McMahon and MacPhail (2007) found that the teacher’s lack of pedagogical content knowledge (the combining of content knowledge and pedagogical knowledge; Tindall and Enright, 2013) resulted in her relying heavily on her own experiences of PE and sport. Techniques were taught in isolation, tactical teaching was minimal and a number of non-instructional games took place. The fact that this ‘sport-as-techniques’ perspective (Kirk, 2010) is observed and ‘learned’ during the acculturation phase and subsequently reinforced during the professional and organisational phases can make it a consistent and dominant influence upon teachers’ practices.

For qualified teachers it has been suggested that their colleagues can have a significant effect upon teaching practices (Stroot and Ko, 2013). Investigating inexperienced American and British teachers’ use of SE, Curtner-Smith, Hastie and Kinchin (2008) found that the American teachers received little or no support in using the model. In contrast the British teachers received a good deal of encouragement and advice from other teachers in their departments. Such contradictory research findings have been highlighted elsewhere (O’Leary, 2015). While acceptance of their teaching approaches from their peers is important, in working independently, PE teachers tend to become their own assessors of good quality practice. While they appreciate assistance from their colleagues particularly as they gain experience, whatever they learn must still ‘work’ or ‘fit in’ with their perspectives of pedagogical practice (Capel, 2007). School students
may have a more immediate influence on pedagogical practices when working as a (student) teacher.

The isolation of PE teachers from their colleagues, together with the transient learning process of the subject may mean they are more susceptible to the influence of their students than teachers of other subjects (Lawson, 1988). Given the ‘learner-centred’ nature of innovative instructional models, students learning needs should have a positive impact on pedagogical practices. However, research indicates that effective use of instructional models is often inhibited by PE teachers’ negative beliefs about their students (Curtner-Smith, Hastie and Kinchin, 2008; Li and Cruz, 2008; McMahon and MacPhail, 2007; O’Leary, Longmore and Medcalf, 2014). The ‘Pygmalion effect’ or teacher expectancy theory (Rosenthal and Jacobson, 1966) may operate more publicly in PE than other subjects simply because most student responses are observable (Templin, 1979).

The development of cognitive and social learning through discussion and undertaking non-physical roles appear somewhat undermined by a desire to keep students ‘busy, happy and good’ (Placek, 1983). While the ‘need’ to maintain a high level of physical activity may arise from the desire to improve health and fitness, it appears the perceived challenging nature of the students also encourages teachers to keep students physically
active. O’Leary (2014) found an inexperienced teacher using TGfU reduced opportunities for student discussion in favour of physical activity despite the excellent behaviour of the group during such discussions. An experienced teacher using the same model at the same school also felt the need to ‘crack the whip’ and reduce student ‘thinking’ and discussion time despite also admitting the exemplary behaviour of his class (O’Leary, 2015). In contrast to a humanistic ideology emphasising a trustful view of students, PE teachers appear to favour a student control ideology highlighting a distrust of students favouring highly controlled settings concerned with the maintenance of order (Templin, 1979). While this ideology is not always dominant (see Curtner-Smith, Hastie and Kinchin, 2008), the teacher-led DIM offering high levels of ALT and OTR may be a suitable instructional approach for many PE teachers.

**Rationale and aims of the research**

The purpose of conducting this research was multi-faceted. Firstly, recognising that teacher socialization cannot be absolute given school cultures change, continuous research is warranted (Richards, Templin and Graber, 2014). Secondly, greater research is required into the impact of socialization upon the interpretation and delivery of instructional models (Richards, Templin and Graber, 2014). Thirdly, acknowledging the plethora of studies examining the influence of occupational socialization upon teachers’ interpretation and delivery of innovative instructional models, this research attempted to
examine those factors that influence a secondary PE teacher’s interpretation and
delivery of the DIM (Metzler, 2011) in teaching games.

Given the popularity of direct teaching approaches and games in UK PE (Kirk, 2010; Ward and Griggs, 2011), together with the learning benefits that such approaches offer (Metzler, 2011), research examining those factors influencing use of the DIM utilising OST is conspicuous by its absence. Such a deficiency may in part be due to the difficulty of identifying the DIM. Most or all of the teacher and student benchmarks underpinned by Rosenshine’s (1983) operations presented in Table 1 should prevent the DIM model being confused with the teacher merely placing themselves in control of the learning task(s) presented (Metzler, 2011). For these reasons this investigation attempted to understand those factors that influenced a secondary school teacher’s interpretation and delivery of the DIM in teaching cricket. Such a contribution may identify what support structures might be required for teachers wishing to, or already using, the DIM.

**Methodology**

A qualitative single participant case study design (Yin, 2013) was adopted. The theoretical framework underpinning this study was occupational socialization (Lawson, 1986). The research design and theoretical framework provided an opportunity to study
the teacher in his natural setting. In doing so, it provided multiple sources of in-depth data to investigate those factors that influenced his use of the DIM (Creswell, 2013; Gratton and Jones, 2009).

*The research setting*

The Old Towne School (a pseudonym), the case study setting, is a Department for Education (DfE) funded school located in the West Midlands, UK. During the study the school population was 819 students. Students are from a wide range of ethnic minority groups. Less than a fifth of students are from White British backgrounds. The proportion of disadvantaged students eligible for free school meals is above the national average (Ofsted, 2013) Students receive two PE lessons per week. A games unit of work consists of 12 one hour lessons. Lessons are expected to fulfil NCPE (DfEE, 2013) requirements and teachers can select their own pedagogical approaches. There is no formal mentoring of (new) teachers within the PE department.

The participating teacher and class were selected for the study for two reasons. Firstly, as a result of lesson observations and team teaching, the Head of Department (HOD) informed the lead author that the participating teacher “regularly used direct teaching styles.” Comments in the initial interview (see below) prior to the first lesson observation and the observation itself provided a more accurate ‘picture.’ The DIM
learned from his undergraduate studies was clearly being used given his theoretical understanding of the model and almost all of the required teacher and student benchmarks were seen (Metzler, 2011). Secondly, the class of 16 year eight mixed ability boys (aged 12-13 years) were accustomed to the participating teacher’s use of the DIM. During the data collection period the boys were being taught cricket.

The participant’s biography

Michael (a pseudonym), the participating teacher, is a British white male. He was raised in Wolverhampton, West Midlands. During the time of the study he was 25 years old. He described his primary school PE provision as “pretty poor, consisting of simple gymnastics” and secondary school PE as “merely playing a game.” From the age of six Michael attended a voluntary community football club. He was taught by coaches who he stated “provided sessions which were structured and much better than PE lessons.”

Michael enrolled onto a Bachelor of Arts Honours (B.A. Hons.) degree in PE and Sport Studies. The course was innovative in nature including a number of pedagogical modules that examined the full range of teaching styles, different learning theories and opportunities to learn and use instructional models including the DIM, TGfU and SE. It made Michael recognise that “command style isn’t the only way” and appreciative of non-traditional, student-centred ways of teaching and learning. Following his degree
Michael studied a Post-Graduate Certificate in Education (PGCE) in secondary PE. When teaching games he stated that “I took advice from my school mentor Jean” (a pseudonym). She encouraged him to use his “previous knowledge of games and direct teaching focusing on students learning techniques with plenty of teaching points.”

Currently, Michael is the youngest member of the Old Towne PE department. He is completing his second year of teaching. Michael identified that he did not receive too much advice or support from other teachers in his first year of teaching particularly since the HOD was absent for much of the year. He teaches on his own and occasionally with colleagues who “teach in a direct manner in one way or another.”

**Data collection methods**

In attempting to produce a reconstructed understanding of the participating teacher’s use of the DIM (Denzin and Lincoln, 1994), three sources of data were utilised: semi-structured interviews, informal interviews and lesson observations. Data were collected by the lead author over a four month period between April and July, 2014.

*Semi-structured interviews*

The participant was formally interviewed twice during this study. Both interviews took place in an empty classroom convenient for the participant. Each interview took
approximately 55 minutes and data were collected using a digital voice recorder. The initial interview (II) questions were based on Curtner-Smith, Hastie and Kinchin’s (2008, 115-117) investigation of the influence of occupational socialization upon beginning teachers’ interpretation and delivery of SE. These questions explored the specifics of the participant’s acculturation, professional and organisational socialization. The final interview (FI) was based on the preceding lesson observations. The questions aimed to identify why the themes observed in the lesson observations were present and who or what had encouraged such pedagogical practices.

*Informal interviews*

Informal interviews (IFIs) provided a further opportunity to obtain the participant’s perspective (Fontana and Frey, 2000). Although unstructured and conversational, they were not unfocused in nature. Questions were largely based on clarifying the teacher’s aims for the lesson and his perceived successes and limitations of using the DIM to teach cricket. Usually taking place after each lesson and recorded using a pen and note pad, it was hoped the data collected would further indicate how Michael interpreted teaching games using the DIM.
Lesson observations

Twelve one hour non-participant lesson observations (LOs) were conducted to allow the lead author to ‘experience’ the lessons (Cohen, Manion and Morrison, 2011). Although unstructured in nature, the LOs were based on the teacher and student benchmarks in Table 1. Acting as a sensitizing concept, the benchmarks provided an initial focus for the observation (Blumer, 1954). They also verify that the DIM for teaching games has been implemented faithfully. Reflective comments written by the researcher identifying emerging interpretations were also noted during and after the lessons. The field notes complemented and allowed comparison with the interview data.

Data analysis

Data were analysed by the lead author using a general inductive approach (Thomas, 2006) and constant comparison (Patton, 2002) guided by the occupational socialization framework (Lawson, 1986). Data from all sources were read multiple times to create specific units of text. These were labelled to create initial categories. To reduce overlap and redundancy these initial categories were reduced. They were then combined to produce summary themes (Creswell, 2013). During the development of the summary themes each unit of text was constantly compared to other data to confirm or disconfirm the finding. This process was completed firstly, to identify how the participant used the
DIM and secondly, how his occupational socialization had influenced these pedagogical practices.

**Research credibility**

Four approaches were utilised to establish research credibility. Firstly, the research process was made clear to the participant at the outset of the study (Lincoln and Guba, 1985). Secondly, during the analysis process, cross checking the accuracy of the data from the different data sets was completed by the first author (Markula and Silk, 2011). Thirdly, member checking asking the teacher to verify the accuracy of the interview and observational data was employed (Patton, 2002). The teacher agreed with the accuracy of the data. Finally, negative case analysis was utilised to reduce researcher bias (Padgett, 2008). Instances that contradicted initial beliefs were searched for to help refine tentative beliefs and themes (Patton, 2002).

**Ethical considerations**

The five ethical issues of deception, consent, privacy, disclosure and credibility from the British Educational Research Association guidelines (BERA, 2011) were addressed with the participant. The issue of credibility has been considered above. The teacher was informed that his participation in the study was voluntary; he could withdraw from the research at any time and all data would be treated as strictly confidential.
Throughout dissemination of the study, his entitlement to privacy and rights to confidentiality and anonymity were assured. An informed consent form incorporating these five ethical issues was signed by the participating teacher.

Results

*Interpretation and delivery of the direct instruction model*

Data indicated the teacher employed the ‘full version’ of the DIM. Almost all the teacher and student benchmarks in Table 1 were regularly seen in the 12 lessons. Outlining his typical lesson structure, Michael identified a number of the benchmarks prior to the first LO stating:

Typically it would have a warm up with some specifics in regards to the learning outcome; technique-based drills for the students to show progression and then a conditioned game … and we would finish with a cool down where you … go through what you have learnt in the lesson (II).

In the same interview he added that he used the model because “the direct model with its benchmarks works effectively in lessons because there’s always a clear progression in the lesson; you can inform the pupils of their progress and maintain their behaviour” (II). Lessons were based around specific techniques and their subsequent use in
(conditioned) games. These techniques included ground fielding (LO 1 and 2), catching (LO 3), basic bowling action (LO 4 and 5), bowling with a ‘run–up’ (LO 6), stance, grip and backswing of batting (LO 7) and a variety of batting strokes (LO 8 – 12).

Inductive analysis from the interviews and LOs provided three themes from his interpretation and delivery of the DIM: a high emphasis upon technical proficiency; a tendency to use reproductive teaching styles; and an inconsistent emphasis upon tactical learning. These themes, their sub-themes and factors influencing this use of the DIM are summarised in Table 2 below:

Insert Table 2 here

A high emphasis upon technical proficiency. Michael focused on the acquisition of techniques believing that “getting the foundations into students as soon as possible is very important” (FI). This was achieved in three ways. Firstly, he consistently used progressive technique-based drills. For example, in lesson seven Michael “encouraged students to strike the ball off a stationary cone” (LO 7). This was developed by hitting the ball off a two bounce underhand feed followed by a one bounce underhand feed. Finally, students were encouraged to hit the ball from overarm bowling feed. Such drills were initiated by Michael but there were occasions when he allowed the students to
develop the drills themselves. He also gave ample opportunities for practice “in order to reinforce their techniques” (FI).

Secondly, the students were given teaching points to provide technical feedback. When teaching overarm bowling Michael told the boys to “stand sideways on; point your non-throwing arm to the batsman; release the ball at its highest point and follow through with your bowling arm” (LO 4). Reflective comments following this learning episode identified that the drill and accompanying teaching points were not always developmentally appropriate for the less-able students. A few of the boys appeared to need to ‘master’ the fundamental movement skill of throwing prior to focussing upon the specialised movement skill of the overarm bowling action (Gallahue and Donnelly, 2007).

Finally, a number of students were given additional responsibility to ‘coach’ their peers. When asked why he selected the most practically gifted students for this role, Michael stated he wanted “those with the best knowledge of the techniques so they could go through the teaching points with the less able kids” (FI). Although it appeared to raise a few behavioural issues, reflective comments indicated this was effective. For example, when learning to play a defensive batting stroke, manual guidance, the use of teaching
points and technical corrective feedback from their ‘expert’ peers helped students struggling to perform this technique (LO 8).

_A tendency to use reproductive teaching styles._ The requirements that learners are expected to follow closely the teacher’s instructions in using the DIM (Rosenshine, 1983) vindicated Michael’s use of reproductive teaching styles such as command and practice styles (Mosston and Ashworth, 2001). As the ‘instructional leader,’ knowledge largely emanated from him. He believed that “if the students need to learn something, I need to tell them” (FI). Michael also believed it necessary to provide the class with teacher demonstrations. Asked why he preferred to model techniques himself Michael replied:

To show the students the perfect example. If I can’t do something usually I get one of the kids to model it but I think it’s more powerful if the teacher models it for them. While it can be quite a powerful tool for those kids that are modelling it, I think as a teacher you need to model it as much as possible so kids know the correct way to do things (FI).

The requirement to ask a large number of teacher questions (Rosenshine, 1983) accompanied the teacher’s demonstrations and was present throughout the lessons.
While Michael stated “I use a range of questioning strategies” (FI), in congruence with many PE teachers he predominantly utilised closed questions to develop technical knowledge and understanding (Curtner-Smith, Hastie and Kinchin, 2008; O’Leary, 2014). Questions such as “what is the best grip to use when bowling the ball?” (LO 4) and “how do we hold the bat?” (LO 7) were commonplace. In contrast, tactical learning was more variable in nature.

An inconsistent emphasis upon tactical learning. Knowing where to hit and bowl the ball; when to run and where to place fielders was somewhat inconsistent. The varying importance given to tactical learning during the LOs was seen in two guises. There was varying use of conditioned game situations and erratic use of tactical feedback.

Conditioned games were evident in eight of the 12 lessons. These usually took the form of a smaller numbers of players in the games, modification of the playing area and additional runs or points to encourage students to hit or bowl the ball in specific places. However, Michael did not modify the game in four lessons. The benchmarks in Table 1 require teachers to condition games to suit the learners’ abilities. This should help turn technique(s) into game skills thereby improving students’ strategic knowledge and understanding. Michael was aware that he did not always modify the games effectively and he was aware of these shortcomings. Following lesson nine he commented “that I should have used some different rules in the game situation. Some of them were finding
it difficult to hit the ball for six. I should have changed that rule” (IFI). He also thought it appropriate to give the students experience of the full 11-versus-11 game during three lessons.

The fact that Michael, like many other PE teachers (Kirk, 2010), felt that “the kids need to have the techniques in place first to implement them in the game” (FI) is not problematic. The DIM emphasises technique-to-games progression (Metzler, 2011). However, the varying use of conditioned games restricted tactical feedback. When tactical feedback was offered it was rather generic in nature. Comments such as “don’t just whack it, it’s a defensive shot” (LO 2), and “a cover drive would have been useful there” (LO 3) lacked specificity. Moreover, the tactical decisions students did take or could have taken were rarely explored.

**The factors influencing the teacher’s interpretation and delivery of the direct instruction model**

Michael utilised a ‘full version’ of the DIM incorporating the relevant design, and teacher and student benchmarks (Rosenshine, 1983; Metzler, 2011). Seven of the nine teacher benchmarks were consistently observed. Conditioned games and tactical feedback were also present but used somewhat inconsistently. The student benchmarks were present in each lesson although tactical feedback was rather erratic in nature.
Given he had only been teaching for one year it is not surprising that his previous experiences largely influenced his pedagogical practices. Inductive analysis of the data sources suggests there were three prominent themes that impacted upon Michael’s interpretation and delivery of the DIM: his sporting perspective, a PGCE mentor and the ability and behaviour of the students.

A sporting perspective. A ‘sporting perspective’ (Evans, 1992) impacted on Michael’s emphasis upon technical proficiency, use of reproductive teaching styles and the inconsistent prominence given to tactical learning. Observing and working with performance-orientated football coaches encouraged the acquisition of techniques through the use of drills. Michael commented:

All my football coaching was clearly structured. There was a warm-up, technique drills and a hypothetical game situation. Sessions were always technique-driven using drills. They wanted you to get better. I felt this was the best way of teaching and learning, as opposed to PE where we would often be thrown into a game (FI).

The emphasis upon technical proficiency underpinned his use of reproductive teaching styles, demonstrations, closed questioning and teaching points. Asked why he used reproductive teaching styles and closed questioning Michael replied that “it was the
approach I was taught during my football coaching. Sessions were predominantly command style, without any player-led situations or creativity” (FI). When questioned about his use of demonstrations and technical teaching points, Michael commented that his coaches used “a lot of show and tell modelling the correct way to do it. I really excelled in my performance from getting that technical support” (FI). Like many PE students who are often competitive and primarily concerned with their own performance (MacDonald, Kirk and Braiuka, 1999), Michael felt “it was the best way to learn, where I could do something which I couldn’t do before. I really try to teach the way I felt at that moment” (FI). However, tactical learning does not appear to have been a priority for his football coaches.

Inconsistent tactical feedback was not aided by a limited understanding of striking and fielding games. He stated “I did a baseball leadership course and a cricket Level 1 coaching award, which were both completely alien to me. I was even picked on the school cricket team, but it was mainly to fill another body” (II). Asked what he thought the purposes of games teaching were, he never mentioned the need for strategic knowledge and understanding required in the ever-changing environment that games present. It was clear that Michael lacked strategic knowledge of games and had limited content knowledge of striking and fielding games such as cricket. Moreover, like many
other teachers (Ward, 2012), he believed that technical learning should precede tactical learning stating:

My year eight lessons that you are observing are completely different from my year 10 lessons. The year 10’s have their techniques in place. Therefore, I look more at the tactics. You can develop those tactics because the techniques are already in place (FI).

Despite providing conditioned games in most lessons, Michael candidly admitted that this was not always effective and he preferred to use full-sized games:

I never liked small sized games. Others prefer small sided games but I like full sized games which give students a life skill. We only have these kids for five years and we need to influence their participation after they leave. They will only continue with a sport if they know they are good at it. Full-sized games give them that indication (FI).

A sporting perspective emphasising performance via technical learning and the fact that he “always played full-sized games and … saw the positive impact it had on other people” (II), resulted in limited use of tactical feedback and inconsistent use of
conditioned game situations. Indeed, Michael tellingly commented that the variable emphasis upon tactical learning was a result of “the kids being able to develop these aspects by just playing the game” (FI). This foregrounding of technical over strategic learning was inadvertently reinforced by his PGCE mentor.

The Post Graduate Certificate in Education mentor. In congruence with previous research Michael valued the teaching-based experiences more than the theoretical aspects of the PGCE course (Behets and Vergauwen, 2013; Capel, 2007). He commented that “you’ve really got to experience it yourself and see what ‘sticks,’ observing good teachers and putting that into practice” (FI). During his second teaching placement Michael was heavily influenced by Jean, the PGCE mentor. She emphasised technical proficiency in three ways. Firstly, Michael was persuaded to follow the lesson structure of warm-up, technique drills and a conditioned game that he had ‘acquired’ during his acculturation and that had been reinforced during his degree studies. She did not foster the non-traditional, student-centred pedagogies of TGfU and SE that he had also learned during his undergraduate degree. In congruence with many postgraduate PE students, Michael was also required to rely on his previous knowledge of games (Capel, 2007).
Secondly, in being urged to perpetuate technique-based drills throughout his lessons, Michael was compelled to use teaching points. He stated “my lesson plans had to be very detailed with teaching points. The teaching points even had to be colour coded for emphasis. If they were not, she would hand them back to me to correct” (II). Jean assumed that Michael had sufficient content knowledge to teach games and technical acquisition was of paramount importance.

Finally, having observed Jean demonstrate the use of peer-coaches in other classes, Michael applied this approach but it caused some behavioural problems. Michael acknowledged that Jean had shown him the use of peer-coaches but not discussed how such learning episodes should be managed. Reflective comments indicated there was a need to improve the students’ social skills to provide effective instructions and feedback to their peers. Merely demonstrating a piecemeal trick of the trade (Lortie, 2002) such as the use of peer-coaches without considering how they might be effectively deployed impacted on his use of the DIM.

*The ability and behaviour of the students.* The nature of the year 8 class prompted Michael to put an emphasis upon technical proficiency and use of reproductive teaching styles. The use of technique-based drills, demonstrations, technical teaching points, closed questioning and peer coaching were heavily influenced by his beliefs and
expectations of the class (Rosenthal and Jacobson, 1966). He believed the class had limited practical ability and were capable of inappropriate behaviour.

The perceived low practical ability of the boys persuaded Michael to put a high emphasis upon technical proficiency. He argued that “the majority of students are low in technique and need to improve this aspect” (FI). The accompanying demonstrations, teaching points and corrective feedback allowed Michael to reinforce the learning structure, provide the students with high rates of OTR and ALT and receive high levels of technical feedback (Metzler, 2011). He commented that demonstrations, teaching points and feedback would “improve the kids’ technique. By seeing it and doing it regularly they would know what to do next time” (FI). He also argued that the emphasis upon technical proficiency allowed him to “identify those who are not good and I can adapt my teaching for them” (FI). He also recognised that the consistent nature of the DIM could aid behavioural management.

It was clear that Michael favoured a student control ideology emphasising order using a structured teaching environment (Templin, 1979). He explained that “working in an inner city, urban school you need behaviour management where kids know the boundaries” (II). He acknowledged the use of three teaching strategies to help with behaviour management. Firstly, he recognised that the structured nature of whole class
technique practices means “they know how the lesson is going to look and this set way helps me control them” (II). Secondly, he acknowledged that his use of reproductive teaching styles was influenced by the boys, suggesting “command style was needed because they needed to be told what to do and their behaviour would have deteriorated without it” (IFI, following LO 1). Finally, in congruence with O’Leary (2014, 2015), Michael recognised that his use of closed questioning “reduced student thinking time and stopped them being silly” (FI).

Discussion

In contrast to many PE teachers who merely use a range of direct teaching strategies (Kirk, 2010), Michael implemented a ‘full-version’ of the DIM. He consistently demonstrated Rosenshine’s (1983) design and all of Metzler’s (2011) teacher and student benchmarks to a greater or lesser extent. Three factors significantly influenced his use of the DIM: a sporting perspective, a PGCE mentor and the ability and behaviour of the students. Viewed through the lens of occupational socialization it is clear that the three stages of this framework contributed to his teaching of games using this model. In contrast to other studies (O’Leary, 2015; Stran and Curtner-Smith, 2009) the findings of this study support Lawson’s (1986) first assumption that the socialization of PE teachers is a life-long process. Since Michael had completed only one year of teaching and the HOD was absent for much of that year, the influence of his
colleagues were not significant up to this point. As a result, it is not possible to support or refute Lawson’s second assumption that pedagogical practices are institutionalised in the school setting. The research findings appear to contradict Lawson’s third assumption that socialization is problematic rather than automatic. He accepted the use of the DIM as a result of the reinforcing influences of a PGCE mentor and the current students. In doing so, he largely re-accepted the contents of his acculturation sporting background.

While research indicates that acculturation can negatively impact on the use of innovative instructional models (McMahon and MacPhail, 2007; O’Leary, 2014), this study provides further evidence of the powerful, and in some ways, positive influence of this stage upon use of the DIM. In congruence with previous studies examining the influence of occupational socialization upon the learning and/or use of SE (Curtner-Smith, Hastie and Kinchin, 2008; Curtner-Smith and Sofo, 2004; Stran and Curtner-Smith, 2009), the participant’s acculturation was compatible with many aspects of the DIM. The emphasis upon psychomotor learning via technique drills and the inherent teacher-centeredness of the model (Metzler, 2011) aligned with Michael’s sporting perspective (Evans, 1992). In this respect, Michael’s acculturation experiences of sport appear to have acted as relatively stable filters (Richards, Templin and Graber, 2014;
Schempp, 1989) reinforcing his emphasis on learning techniques and use of reproductive teaching styles.

This traditional pedagogical approach was reinforced since Michael was taught to use the DIM during his B.A. Hons. degree in PE and Sport Studies. Although he acknowledged that he had been taught to use the model during his undergraduate studies Michael preferred to emphasise the influence of a PGCE mentor, seemingly valuing school placement learning over university-based learning (Behets and Vergauwen, 2013; Capel, 2007; Forland Standal et al., 2014). The influence of the PGCE mentor was seen in two guises. Firstly, Jean promoted the use technique-based drills and associated teaching points. Secondly, she encouraged him to rely on his previous experiences of games. This appears to have contributed to his inconsistent emphasis upon tactical learning.

Although Michael did include conditioned games in eight of the 12 lessons observed, tactical learning outcomes and tactical feedback were erratically used. Despite the professional stage offering Michael the opportunity to learn about the problem-solving nature of games via TGfU lectures, for example, this knowledge and understanding appears to have been ‘lost.’ It would seem sensible to ensure that undergraduate and postgraduate PE students are ‘games educated’ via practical and theoretical lectures. A
good starting point would be to teach the three types of knowledge required to be competent games players (Kirk and MacPhail, 2002) and current NCPE games requirements (DfEE, 2013). Ideally undergraduate and postgraduate lecturers must provide similar ‘messages’ regarding games teaching and learning. Both must be ‘games educated’ and PGCE lecturers must also avoid the temptation to focus solely on the ‘correct’ teaching of techniques merely to ensure students pass the course (Capel et al., 2011). Furthermore, given the influence of PGCE school mentors upon postgraduate students (Capel, 2007) and their emphasis upon technical proficiency as opposed to skilled performance in games (O’Leary, 2012), university lecturers must communicate and educate sound games pedagogy to school mentors.

While there was an inconsistent emphasis upon tactical learning, reflective comments from LOs indicated Michael improved students’ technical ability using the DIM. He was heavily influenced by his beliefs and expectations of the class (Rosenthal and Jacobson, 1966). Recognising that his students had low technical abilities and were capable of inappropriate behaviour, Michael successfully prioritised the acquisition of techniques utilising predominantly whole-class technique practices. Such a structured learning environment also allowed him to maintain student control and good behaviour (Butler, 2005; Templin, 1979). In short, Michael recognised that his students were
‘developmentally ready’ for technique work and ‘receptive’ to the learning structure of the DIM (Metzler, 2011).

While Michael recognised the DIM was suitable for his students, his limited content knowledge of cricket meant he struggled to improve students’ tactical learning. The benefits of improved content knowledge have been well documented. Kim (2015) suggests that such improvement can aid task progressions, integrated skill practices, error detection and, critically in this context, the effective use of small-sided games. To improve his variable use of conditioned game situations and tactical feedback, three suggestions are offered. Firstly, he could attend a cricket course. The England Cricket Board ‘Cricket for Secondary Teachers’ course develops knowledge, understanding and application of appropriate games and practices within the NCPE (ECB, 2015). Secondly, recognising that such short courses can have a limited impact on teacher learning (Armour and Yelling, 2007) and they can ignore the contextual features that teachers face (Stolz and Pill, 2014), informal learning amongst colleagues could be considered. Working alongside and receiving support from experienced colleagues has been found to be successful in improving pedagogical practices using other instructional models (Butler, 2006; Nash, 2009; O’Sullivan, 2007). Finally, if such experienced colleagues are not available, one or more teachers could attend an external course and mentor other teachers to improve their use of the DIM.
Conclusion

This study aimed to add to the dearth of teacher socialization research regarding the use of direct pedagogical approaches and specifically the DIM. In order to judge the reported outcomes more effectively, this paper has responded to the fidelity requirements of Hastie and Casey (2015). It has provided a description of the teaching that took place and a detailed validation of model implementation. The previous pedagogical experiences of the teacher including models-based practice and the DIM specifically have been described. This research identified that an emphasis upon technical proficiency, use of reproductive teaching styles and an inconsistent emphasis upon tactical learning was the result of a sporting perspective, a PGCE mentor, and the ability and behaviour of the students. Each stage of the occupational socialization framework impacted on and/or reinforced the teacher’s previous experiences of direct pedagogical approaches. The ‘sporting perspective’ (Evans, 1992) focusing on the acquisition of techniques and use of reproductive teaching styles was observed during the acculturation stage and reinforced during the professional and organisational stages. In contrast to research examining the application of ‘innovative’ instructional models such as TGfU (Li and Cruz, 2008; O’Leary, 2015, 2014), these traditional sporting experiences served as positive and relatively stable filters in learning to use the DIM effectively (Richards, Templin and Graber, 2014). What is somewhat surprising is that in identifying factors that influenced his use of the DIM, the participating teacher placed
little emphasis on his actual learning of the model during his undergraduate studies. Instead, he primarily prioritised teaching experiences (the advice of his PGCE mentor and the ability and behaviour of the students) over university-based work (Behets and Vergauwen, 2013; Capel, 2007). The factors identified appear to have reinforced his use of the DIM in contrast to using other innovative models such as TGfU and SE. Given the effectiveness of the DIM in teaching games and many PE (student) teachers having similar occupational socialization experiences (Capel, 2007; McMahon and MacPhail, 2007), this research strongly suggests that this model could be learned effectively in undergraduate and postgraduate courses that do not currently advocate use of instructional models.

While the socialization experiences of many potential student teachers may make the DIM an appropriate model to learn, this study has also indicated a potential weakness of such experiences in teaching games. The participating teacher lacked a sufficient grounding in tactical knowledge and understanding of this striking and fielding game. A lack of content knowledge particularly around tactical learning impacted on the effective use of the DIM. Similar findings have been reported with a beginner teacher attempting to teach tactics using TGfU (O’Leary, 2014). Irrespective of the model used, competent teaching of games requires the teacher to possess sound tactical knowledge. Higher education institutions must provide knowledge of the nature of games, teach
tactical appreciation of various game-types and ensure school-based mentors are knowledgeable and supportive of tactical learning. Student teachers (and qualified school teachers) can also attend external (coaching) courses and consider the use of informal learning amongst their peers.

Acknowledging that the findings above are based on a relatively short timescale from a single participant case study, care should be taken in drawing conclusions from this research. Nevertheless, the similarities of PE (student) teachers’ previous and current experiences mean they are likely to be able to make ‘moderatum generalisations’ (Williams, 2002). In other words, recognise and identify with certain findings that have influenced their interpretation and delivery of games using direct pedagogical approaches. However, the authors recognise that socially constructed definitions of PE and the role of the teacher are negotiated within the school setting. In using occupational socialization theory to underpin this study we recognise that this framework may not totally capture how such negotiated definitions and subsequent role definitions are developed and how teachers respond to such definitions (Richards, 2015; Richards et al., 2013). Nonetheless, this exploratory study has indicated that the socialization backgrounds of many PE student teachers make the DIM a suitable model to learn and utilise. It also recognises that effective use of the DIM is closely aligned with in-depth content knowledge of the activity being taught. For this reason, further
research examining how occupational socialization influences teachers’ use of the DIM with different activities appears to be warranted.
References


Author biographies

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Table 1. Direct instruction model benchmarks for teaching games

<table>
<thead>
<tr>
<th>TEACHER BENCHMARKS</th>
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<tr>
<td>Previously learned material is reviewed</td>
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<tr>
<td>Developmentally appropriate content to be learned is verbally and/or visually presented</td>
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<tr>
<td>Teaching points are provided to facilitate students’ acquisition of the technique(s)</td>
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<tr>
<td>A clear learning structure to learn the technique(s) is provided, usually in the form of a drill</td>
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<tr>
<td>Development of the initial learning task incorporating a range of progressive tasks</td>
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<tr>
<td>High rates of technical feedback are provided to reinforce the learning of the technique(s)</td>
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<tr>
<td>Conditioned game situations are provided allowing students to develop technique(s) into game skills and acquire strategic knowledge and understanding</td>
</tr>
<tr>
<td>High rates of tactical feedback are provided to facilitate the learning of strategic knowledge and understanding</td>
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<tr>
<td>Review of the lesson material learned is provided</td>
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<tr>
<th>STUDENT BENCHMARKS</th>
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<tr>
<td>Students are able to understand the learning structure in which to acquire the technique(s)</td>
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<tr>
<td>Students have high rates of academic learning time and opportunities to respond</td>
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<tr>
<td>Students receive high levels of technical and tactical feedback</td>
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<tr>
<td>Students are given directed and independent practice opportunities</td>
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<tr>
<td>The majority of students have mastered the learning material (prior to undertaking further progressive tasks)</td>
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(Adapted from DfEE, 2013; Kirk and MacPhail, 2002; Metzler, 2011: 189-190; Rosenshine, 1983)

Table 2: The teacher’s delivery of the direct instruction model and factors influencing its use

<table>
<thead>
<tr>
<th>DELIVERY OF THE DIRECT INSTRUCTION MODEL</th>
<th>SUB-THEMES</th>
<th>FACTORS INFLUENCING DELIVERY OF THE DIRECT INSTRUCTION MODEL</th>
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</table>
| A. A high emphasis upon technical proficiency | 1. Technique-based drills 2. Teaching points 3. Peer-coaching | • A sporting perspective  
• The ability and behaviour of the students  
• Post Graduate Certificate of Education mentor |
| B. A tendency to use reproductive teaching styles | 1. Demonstrations 2. Closed-questions | • A sporting perspective  
• The ability and behaviour of the students |
| C. An inconsistent emphasis upon tactical learning | 1. Variable use of conditioned game situations 2. Erratic use of tactical feedback | • A sporting perspective |