



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

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Keywords:	Physical Education, occupational socialization, games teaching and learning, direct instruction model
Abstract:	<p>Abstract</p> <p>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.</p>

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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

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8 those factors that influence a PE teacher's interpretation and delivery of the direct
9 instruction model (DIM) (Metzler, 2011).
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12 13 14 15 **The direct instruction model**

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17 In congruence with other instructional models the DIM is a planning 'blueprint' for
18 teachers to facilitate learning. The DIM detailed by Metzler (2011) is based on the work
19 of Rosenshine (1983) who delineated the design and teacher operations of the model.
20 Teachers structure the learning by proceeding in small steps. They give detailed and
21 repeated instructions and explanations. Teachers ask a large number of questions and
22 provide active practice. They provide feedback and corrections. They should also divide
23 tasks into smaller tasks and ensure a high student success rate throughout the learning
24 process. The DIM is often incorrectly and frequently confused with didactic teacher-led
25 instruction currently prevalent in PE (Hattie, 2009; Kirk, 2010). The teacher operations
26 identified above and the teacher and student benchmarks shown in Table 1 clearly set
27 out the structure of the DIM:
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48 While didactic teaching approaches may include some of the teacher operations and
49 benchmarks above, DIM instruction must incorporate *most or all* of the above teacher
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9 operations to be classified as the DIM (Metzler, 2011). Although the model is teacher
10 led, it is not authoritarian and necessarily rigid in nature. It should be flexible,
11 supportive and positive offering students high levels of academic learning time (ALT),
12 opportunities to respond (OTR) and performance feedback (Metzler, 2011).
13 Nonetheless, it does require learners to follow closely the instructions of the teacher.
14 For these reasons it has been suggested that the DIM is suitable for students who are
15 avoidant, competitive and dependent in nature (Metzler, 2011).
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26 Initial learning tasks within the DIM can include repetitive individual drill practices and
27 low organisational games such as tag games. Advanced learning tasks can include
28 partner practices, complex drills and mini-games (Metzler, 2011). The learning domain
29 priorities for the model are psychomotor learning followed by cognitive and social
30 learning (Metzler, 2011). The DIM has a very strong alignment with developing
31 movement patterns/techniques. It is also highly appropriate for understanding tactics
32 and strategies following the acquisition of the relevant techniques (Rink, 2013). Not
33 surprisingly, the model is seen as ideal for games instruction with its technique-to-
34 games progression (Metzler, 2011; Rink, 2013).
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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

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9 education (Richards, Templin and Graber, 2014). The professional socialization stage
10 denotes the values, knowledge and skills deemed necessary by universities to teach PE.
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12 The influence of this stage is often seen as limited given the powerful perceptions of the
13 teaching process formed in the previous stage (Capel, 2007; Stran and Curtner-Smith,
14 2009). The organisational socialization stage refers to teachers learning the values,
15 knowledge and skills valued by the school (Van Maanen and Schein, 1979). While the
16 inexperienced teacher can challenge existing teaching and learning strategies, the
17 likelihood is that the teacher will adopt the instructional practices of their colleagues
18 (Stroot and Ko, 2013; Zeichner and Tabachnik, 1981). Investigating those factors
19 occurring within the three stages of the occupational socialization framework will assist
20 in detecting and explaining the variations in PE teachers' work perceptions and
21 practices (Lawson, 1983, 1986).
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37 *Factors influencing teachers' interpretation and delivery of instructional models*

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39 A growing body of literature indicates there are four factors across the occupational
40 socialization framework that influence teachers' use of instructional models such as SE
41 (Curtner-Smith, Hastie and Kinchin, 2008; McMahon and MacPhail, 2007) and TGfU
42 (Li and Cruz, 2008; O'Leary, 2015, 2014). Firstly, the influence of sport appears to be
43 extremely powerful. Secondly, the beliefs of mentoring teachers during teaching
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9 practices can be persuasive. Thirdly, school colleagues can impact upon pedagogical
10 practices. Finally, students can influence the teaching and learning process.
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15 The observing of PE teachers and sport coaches provides potential teachers with an
16 understanding of what ‘good’ pedagogical practice might be and an attraction into sport
17 itself (Capel, 2007; Lortie, 2002). Sport influences may have a more profound impact
18 on student teachers than their PE background given time spent in PE lessons is likely to
19 be minimal in comparison to extra-curricular sports clubs and voluntary sporting
20 opportunities (Placek et al., 1995). Socialization into and via sport appear to
21 significantly impact on the values underpinning PE teaching in the UK.
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33 Investigating the values and beliefs of newly qualified PE teachers, Evans (1992) found
34 what he called a ‘sporting perspective’ emphasising the development of practical skills,
35 a love of sport for all and providing opportunities to further develop the elite child
36 (O’Leary, 2015). Such a perspective focuses upon the acquisition of skills via
37 progressive drills accompanied by numerous technical teaching points. This focus is
38 likely to have been observed during the acculturation stage and reinforced during the
39 professional phase by mentoring teachers during teaching practices. Research has
40 indicated that student teachers value teaching practices and particularly the advice of the
41 school mentor over university-based work particularly if the latter conflicts with their
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9 acculturation experiences (Behets and Vergauwen, 2013; Capel, 2007). A concern is
10 that student teachers and their school mentors often have limited understanding and
11 ability to implement teaching skills to create an effective learning environment
12 (pedagogical knowledge) (Tindall and Enright, 2013). Moreover, it has been suggested
13 that many (student) teachers' have only a basic content knowledge of the different
14 activities or sports (Capel and Blair, 2007; Siedentop, 2002). As a result, student
15 teachers often focus largely on the acquisition of sport techniques (Capel, 2007). This
16 narrow approach can be emphasised by the need to teach some form of 'content' and
17 students concerns about passing the teaching practice. The need for content knowledge
18 or knowledge of activities for the immediate teaching situation is obvious. Moreover,
19 the need for such knowledge across a wide range of activities means many PE students
20 do not prioritise further learning in those activities in which they already consider
21 themselves well-informed, such as games (Capel, 2007; Ward and Griggs, 2011). The
22 need for immediate content knowledge is not limited to student teachers.
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42 Examining a recently qualified teacher's use of TGfU in a UK secondary school,
43 O'Leary (2012) found the teacher's lack of volleyball content knowledge resulted in her
44 'scouring' books and the internet for technique-based drills. She readily acknowledged
45 techniques were easier to teach than their tactical application in (conditioned) games.
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49 Researching a pre-service teacher's use of SE in a post primary school in Ireland,
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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

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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

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9 active. O’Leary (2014) found an inexperienced teacher using TGfU reduced
10 opportunities for student discussion in favour of physical activity despite the excellent
11 behaviour of the group during such discussions. An experienced teacher using the same
12 model at the same school also felt the need to ‘crack the whip’ and reduce student
13 ‘thinking’ and discussion time despite also admitting the exemplary behaviour of his
14 class (O’Leary, 2015). In contrast to a humanistic ideology emphasising a trustful view
15 of students, PE teachers appear to favour a student control ideology highlighting a
16 distrust of students favouring highly controlled settings concerned with the maintenance
17 of order (Templin, 1979). While this ideology is not always dominant (see Curtner-
18 Smith, Hastie and Kinchin, 2008), the teacher-led DIM offering high levels of ALT and
19 OTR may be a suitable instructional approach for many PE teachers.
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35 **Rationale and aims of the research**

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37 The purpose of conducting this research was multi-faceted. Firstly, recognising that
38 teacher socialization cannot be absolute given school cultures change, continuous
39 research is warranted (Richards, Templin and Graber, 2014). Secondly, greater research
40 is required into the impact of socialization upon the interpretation and delivery of
41 instructional models (Richards, Templin and Graber, 2014). Thirdly, acknowledging the
42 plethora of studies examining the influence of occupational socialization upon teachers’
43 interpretation and delivery of innovative instructional models, this research attempted to
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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

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9 the teacher in his natural setting. In doing so, it provided multiple sources of in-depth
10 data to investigate those factors that influenced his use of the DIM (Creswell, 2013;
11 Gratton and Jones, 2009).
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16 17 *The research setting*

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19 The Old Towne School (a pseudonym), the case study setting, is a Department for
20 Education (DfE) funded school located in the West Midlands, UK. During the study the
21 school population was 819 students. Students are from a wide range of ethnic minority
22 groups. Less than a fifth of students are from White British backgrounds. The
23 proportion of disadvantaged students eligible for free school meals is above the national
24 average (Ofsted, 2013) Students receive two PE lessons per week. A games unit of
25 work consists of 12 one hour lessons. Lessons are expected to fulfil NCPE (DfEE,
26 2013) requirements and teachers can select their own pedagogical approaches. There is
27 no formal mentoring of (new) teachers within the PE department.
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42 The participating teacher and class were selected for the study for two reasons. Firstly,
43 as a result of lesson observations and team teaching, the Head of Department (HOD)
44 informed the lead author that the participating teacher “regularly used direct teaching
45 styles.” Comments in the initial interview (see below) prior to the first lesson
46 observation and the observation itself provided a more accurate ‘picture.’ The DIM
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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

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9 Michael studied a Post-Graduate Certificate in Education (PGCE) in secondary PE.
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11 When teaching games he stated that “I took advice from my school mentor Jean” (a
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13 pseudonym). She encouraged him to use his “previous knowledge of games and direct
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15 teaching focusing on students learning techniques with plenty of teaching points.”
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20 Currently, Michael is the youngest member of the Old Towne PE department. He is
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22 completing his second year of teaching. Michael identified that he did not receive too
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24 much advice or support from other teachers in his first year of teaching particularly
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26 since the HOD was absent for much of the year. He teaches on his own and occasionally
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28 with colleagues who “teach in a direct manner in one way or another.”
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32 33 **Data collection methods**

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

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48 The participant was formally interviewed twice during this study. Both interviews took
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50 place in an empty classroom convenient for the participant. Each interview took
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9 approximately 55 minutes and data were collected using a digital voice recorder. The
10 initial interview (II) questions were based on Curtner-Smith, Hastie and Kinchin's
11 (2008, 115-117) investigation of the influence of occupational socialization upon
12 beginning teachers' interpretation and delivery of SE. These questions explored the
13 specifics of the participant's acculturation, professional and organisational socialization.
14 The final interview (FI) was based on the preceding lesson observations. The questions
15 aimed to identify why the themes observed in the lesson observations were present and
16 who or what had encouraged such pedagogical practices.
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28 *Informal interviews*

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

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9 DIM and secondly, how his occupational socialization had influenced these pedagogical
10 practices.
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12 13 14 15 **Research credibility**

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17 Four approaches were utilised to establish research credibility. Firstly, the research
18 process was made clear to the participant at the outset of the study (Lincoln and Guba,
19 1985). Secondly, during the analysis process, cross checking the accuracy of the data
20 from the different data sets was completed by the first author (Markula and Silk, 2011).
21 Thirdly, member checking asking the teacher to verify the accuracy of the interview and
22 observational data was employed (Patton, 2002). The teacher agreed with the accuracy
23 of the data. Finally, negative case analysis was utilised to reduce researcher bias
24 (Padgett, 2008). Instances that contradicted initial beliefs were searched for to help
25 refine tentative beliefs and themes (Patton, 2002).
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40 **Ethical considerations**

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

18 *Interpretation and delivery of the direct instruction model*

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20 Data indicated the teacher employed the ‘full version’ of the DIM. Almost all the
21 teacher and student benchmarks in Table 1 were regularly seen in the 12 lessons.
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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

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9 (conditioned) games. These techniques included ground fielding (LO 1 and 2), catching
10 (LO 3), basic bowling action (LO 4 and 5), bowling with a ‘run-up’ (LO 6), stance, grip
11 and backswing of batting (LO 7) and a variety of batting strokes (LO 8 – 12).
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17 Inductive analysis from the interviews and LOs provided three themes from his
18 interpretation and delivery of the DIM: a high emphasis upon technical proficiency; a
19 tendency to use reproductive teaching styles; and an inconsistent emphasis upon tactical
20 learning. These themes, their sub-themes and factors influencing this use of the DIM are
21 summarised in Table 2 below:
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35 *A high emphasis upon technical proficiency.* Michael focused on the acquisition of
36 techniques believing that “getting the foundations into students as soon as possible is
37 very important” (FI). This was achieved in three ways. Firstly, he consistently used
38 progressive technique-based drills. For example, in lesson seven Michael “encouraged
39 students to strike the ball off a stationary cone” (LO 7). This was developed by hitting
40 the ball off a two bounce underhand feed followed by a one bounce underhand feed.
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42 Finally, students were encouraged to hit the ball from overarm bowling feed. Such drills
43 were initiated by Michael but there were occasions when he allowed the students to
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9 develop the drills themselves. He also gave ample opportunities for practice “in order to
10 reinforce their techniques” (FI).

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15 Secondly, the students were given teaching points to provide technical feedback. When
16 teaching overarm bowling Michael told the boys to “stand sideways on; point your non-
17 throwing arm to the batsman; release the ball at its highest point and follow through
18 with your bowling arm” (LO 4). Reflective comments following this learning episode
19 identified that the drill and accompanying teaching points were not always
20 developmentally appropriate for the less-able students. A few of the boys appeared to
21 need to ‘master’ the fundamental movement skill of throwing prior to focussing upon
22 the specialised movement skill of the overarm bowling action (Gallahue and Donnelly,
23 2007).

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37 Finally, a number of students were given additional responsibility to ‘coach’ their peers.
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39 When asked why he selected the most practically gifted students for this role, Michael
40 stated he wanted “those with the best knowledge of the techniques so they could go
41 through the teaching points with the less able kids” (FI). Although it appeared to raise a
42 few behavioural issues, reflective comments indicated this was effective. For example,
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44 when learning to play a defensive batting stroke, manual guidance, the use of teaching
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9 points and technical corrective feedback from their ‘expert’ peers helped students
10 struggling to perform this technique (LO 8).
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15 *A tendency to use reproductive teaching styles.* The requirements that learners are
16 expected to follow closely the teacher’s instructions in using the DIM (Rosenshine,
17 1983) vindicated Michael’s use of reproductive teaching styles such as command and
18 practice styles (Mosston and Ashworth, 2001). As the ‘instructional leader,’ knowledge
19 largely emanated from him. He believed that “if the students need to learn something, I
20 need to tell them” (FI). Michael also believed it necessary to provide the class with
21 teacher demonstrations. Asked why he preferred to model techniques himself Michael
22 replied:
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35 To show the students the perfect example. If I can’t do something usually I get
36 one of the kids to model it but I think it’s more powerful if the teacher models it
37 for them. While it can be quite a powerful tool for those kids that are modelling it,
38 I think as a teacher you need to model it as much as possible so kids know the
39 correct way to do things (FI).
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48 The requirement to ask a large number of teacher questions (Rosenshine, 1983)
49 accompanied the teacher’s demonstrations and was present throughout the lessons.
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9 While Michael stated “I use a range of questioning strategies” (FI), in congruence with
10 many PE teachers he predominantly utilised closed questions to develop technical
11 knowledge and understanding (Curtner-Smith, Hastie and Kinchin, 2008; O’Leary,
12 2014). Questions such as “what is the best grip to use when bowling the ball?” (LO 4)
13 and “how do we hold the bat?” (LO 7) were commonplace. In contrast, tactical learning
14 was more variable in nature.
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24 *An inconsistent emphasis upon tactical learning.* Knowing where to hit and bowl the
25 ball; when to run and where to place fielders was somewhat inconsistent. The varying
26 importance given to tactical learning during the LOs was seen in two guises. There was
27 varying use of conditioned game situations and erratic use of tactical feedback.
28 Conditioned games were evident in eight of the 12 lessons. These usually took the form
29 of a smaller numbers of players in the games, modification of the playing area and
30 additional runs or points to encourage students to hit or bowl the ball in specific places.
31 However, Michael did not modify the game in four lessons. The benchmarks in Table 1
32 require teachers to condition games to suit the learners’ abilities. This should help turn
33 technique(s) into game skills thereby improving students’ strategic knowledge and
34 understanding. Michael was aware that he did not always modify the games effectively
35 and he was aware of these shortcomings. Following lesson nine he commented “that I
36 should have used some different rules in the game situation. Some of them were finding
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9 it difficult to hit the ball for six. I should have changed that rule” (IFI). He also thought
10 it appropriate to give the students experience of the full 11-versus-11 game during three
11 lessons.
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17 The fact that Michael, like many other PE teachers (Kirk, 2010), felt that “the kids need
18 to have the techniques in place first to implement them in the game” (FI) is not
19 problematic. The DIM emphasises technique-to-games progression (Metzler, 2011).
20 However, the varying use of conditioned games restricted tactical feedback. When
21 tactical feedback was offered it was rather generic in nature. Comments such as “don’t
22 just whack it, it’s a defensive shot” (LO 2), and “a cover drive would have been useful
23 there” (LO 3) lacked specificity. Moreover, the tactical decisions students did take or
24 could have taken were rarely explored.
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37 **The factors influencing the teacher’s interpretation and delivery of the direct** 38 **instruction model** 39

40 Michael utilised a ‘full version’ of the DIM incorporating the relevant design, and
41 teacher and student benchmarks (Rosenshine, 1983; Metzler, 2011). Seven of the nine
42 teacher benchmarks were consistently observed. Conditioned games and tactical
43 feedback were also present but used somewhat inconsistently. The student benchmarks
44 were present in each lesson although tactical feedback was rather erratic in nature.
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9 Given he had only been teaching for one year it is not surprising that his previous
10 experiences largely influenced his pedagogical practices. Inductive analysis of the data
11 sources suggests there were three prominent themes that impacted upon Michael's
12 interpretation and delivery of the DIM: his sporting perspective, a PGCE mentor and the
13 ability and behaviour of the students.
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22 *A sporting perspective.* A 'sporting perspective' (Evans, 1992) impacted on Michael's
23 emphasis upon technical proficiency, use of reproductive teaching styles and the
24 inconsistent prominence given to tactical learning. Observing and working with
25 performance-orientated football coaches encouraged the acquisition of techniques
26 through the use of drills. Michael commented:
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35 All my football coaching was clearly structured. There was a warm-up, technique
36 drills and a hypothetical game situation. Sessions were always technique-driven
37 using drills. They wanted you to get better. I felt this was the best way of teaching
38 and learning, as opposed to PE where we would often be thrown into a game (FI).
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46 The emphasis upon technical proficiency underpinned his use of reproductive teaching
47 styles, demonstrations, closed questioning and teaching points. Asked why he used
48 reproductive teaching styles and closed questioning Michael replied that "it was the
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9 approach I was taught during my football coaching. Sessions were predominantly
10 command style, without any player-led situations or creativity” (FI). When questioned
11 about his use of demonstrations and technical teaching points, Michael commented that
12 his coaches used “a lot of show and tell modelling the correct way to do it. I really
13 excelled in my performance from getting that technical support” (FI). Like many PE
14 students who are often competitive and primarily concerned with their own performance
15 (MacDonald, Kirk and Braiuka, 1999), Michael felt “it was the best way to learn, where
16 I could do something which I couldn’t do before. I really try to teach the way I felt at
17 that moment” (FI). However, tactical learning does not appear to have been a priority
18 for his football coaches.
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33 Inconsistent tactical feedback was not aided by a limited understanding of striking and
34 fielding games. He stated “I did a baseball leadership course and a cricket Level 1
35 coaching award, which were both completely alien to me. I was even picked on the
36 school cricket team, but it was mainly to fill another body” (II). Asked what he thought
37 the purposes of games teaching were, he never mentioned the need for strategic
38 knowledge and understanding required in the ever-changing environment that games
39 present. It was clear that Michael lacked strategic knowledge of games and had limited
40 content knowledge of striking and fielding games such as cricket. Moreover, like many
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9 other teachers (Ward, 2012), he believed that technical learning should precede tactical
10 learning stating:

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15 My year eight lessons that you are observing are completely different from my
16 year 10 lessons. The year 10's have their techniques in place. Therefore, I look
17 more at the tactics. You can develop those tactics because the techniques are
18 already in place (FI).
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26 Despite providing conditioned games in most lessons, Michael candidly admitted that
27 this was not always effective and he preferred to use full-sized games:
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33 I never liked small sized games. Others prefer small sided games but I like full
34 sized games which give students a life skill. We only have these kids for five
35 years and we need to influence their participation after they leave. They will only
36 continue with a sport if they know they are good at it. Full-sized games give them
37 that indication (FI).
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46 A sporting perspective emphasising performance via technical learning and the fact that
47 he “always played full-sized games and ... saw the positive impact it had on other
48 people” (II), resulted in limited use of tactical feedback and inconsistent use of
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9 conditioned game situations. Indeed, Michael tellingly commented that the variable
10 emphasis upon tactical learning was a result of “the kids being able to develop these
11 aspects by just playing the game” (FI). This foregrounding of technical over strategic
12 learning was inadvertently reinforced by his PGCE mentor.
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20 *The Post Graduate Certificate in Education mentor.* In congruence with previous
21 research Michael valued the teaching-based experiences more than the theoretical
22 aspects of the PGCE course (Behets and Vergauwen, 2013; Capel, 2007). He
23 commented that “you’ve really got to experience it yourself and see what ‘sticks,’
24 observing good teachers and putting that into practice” (FI). During his second teaching
25 placement Michael was heavily influenced by Jean, the PGCE mentor. She emphasised
26 technical proficiency in three ways. Firstly, Michael was persuaded to follow the lesson
27 structure of warm-up, technique drills and a conditioned game that he had ‘acquired’
28 during his acculturation and that had been reinforced during his degree studies. She did
29 not foster the non-traditional, student-centred pedagogies of TGfU and SE that he had
30 also learned during his undergraduate degree. In congruence with many postgraduate PE
31 students, Michael was also required to rely on his previous knowledge of games (Capel,
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9 Secondly, in being urged to perpetuate technique-based drills throughout his lessons,
10 Michael was compelled to use teaching points. He stated “my lesson plans had to be
11 very detailed with teaching points. The teaching points even had to be colour coded for
12 emphasis. If they were not, she would hand them back to me to correct” (II). Jean
13 assumed that Michael had sufficient content knowledge to teach games and technical
14 acquisition was of paramount importance.
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24 Finally, having observed Jean demonstrate the use of peer-coaches in other classes,
25 Michael applied this approach but it caused some behavioural problems. Michael
26 acknowledged that Jean had shown him the use of peer-coaches but not discussed how
27 such learning episodes should be managed. Reflective comments indicated there was a
28 need to improve the students’ social skills to provide effective instructions and feedback
29 to their peers. Merely demonstrating a piecemeal trick of the trade (Lortie, 2002) such
30 as the use of peer-coaches without considering how they might be effectively deployed
31 impacted on his use of the DIM.
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44 *The ability and behaviour of the students.* The nature of the year 8 class prompted
45 Michael to put an emphasis upon technical proficiency and use of reproductive teaching
46 styles. The use of technique-based drills, demonstrations, technical teaching points,
47 closed questioning and peer coaching were heavily influenced by his beliefs and
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9 expectations of the class (Rosenthal and Jacobson, 1966). He believed the class had
10 limited practical ability and were capable of inappropriate behaviour.
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15 The perceived low practical ability of the boys persuaded Michael to put a high
16 emphasis upon technical proficiency. He argued that “the majority of students are low in
17 technique and need to improve this aspect” (FI). The accompanying demonstrations,
18 teaching points and corrective feedback allowed Michael to reinforce the learning
19 structure, provide the students with high rates of OTR and ALT and receive high levels
20 of technical feedback (Metzler, 2011). He commented that demonstrations, teaching
21 points and feedback would “improve the kids’ technique. By seeing it and doing it
22 regularly they would know what to do next time” (FI). He also argued that the emphasis
23 upon technical proficiency allowed him to “identify those who are not good and I can
24 adapt my teaching for them” (FI). He also recognised that the consistent nature of the
25 DIM could aid behavioural management.
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42 It was clear that Michael favoured a student control ideology emphasising order using a
43 structured teaching environment (Templin, 1979). He explained that “working in an
44 inner city, urban school you need behaviour management where kids know the
45 boundaries” (II). He acknowledged the use of three teaching strategies to help with
46 behaviour management. Firstly, he recognised that the structured nature of whole class
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9 technique practices means “they know how the lesson is going to look and this set way
10 helps me control them” (II). Secondly, he acknowledged that his use of reproductive
11 teaching styles was influenced by the boys, suggesting “command style was needed
12 because they needed to be told what to do and their behaviour would have deteriorated
13 without it” (IFI, following LO 1). Finally, in congruence with O’Leary (2014, 2015),
14 Michael recognised that his use of closed questioning “reduced student thinking time
15 and stopped them being silly” (FI).
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26 **Discussion**

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28 In contrast to many PE teachers who merely use a range of direct teaching strategies
29 (Kirk, 2010), Michael implemented a ‘full-version’ of the DIM. He consistently
30 demonstrated Rosenshine’s (1983) design and all of Metzler’s (2011) teacher and
31 student benchmarks to a greater or lesser extent. Three factors significantly influenced
32 his use of the DIM: a sporting perspective, a PGCE mentor and the ability and
33 behaviour of the students. Viewed through the lens of occupational socialization it is
34 clear that the three stages of this framework contributed to his teaching of games using
35 this model. In contrast to other studies (O’Leary, 2015; Stran and Curtner-Smith, 2009)
36 the findings of this study support Lawson’s (1986) first assumption that the
37 socialization of PE teachers is a life-long process. Since Michael had completed only
38 one year of teaching and the HOD was absent for much of that year, the influence of his
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9 colleagues were not significant up to this point. As a result, it is not possible to support
10 or refute Lawson's second assumption that pedagogical practices are institutionalised in
11 the school setting. The research findings appear to contradict Lawson's third
12 assumption that socialization is problematic rather than automatic. He accepted the use
13 of the DIM as a result of the reinforcing influences of a PGCE mentor and the current
14 students. In doing so, he largely re-accepted the contents of his acculturation sporting
15 background.
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26 While research indicates that acculturation can negatively impact on the use of
27 innovative instructional models (McMahon and MacPhail, 2007; O'Leary, 2014), this
28 study provides further evidence of the powerful, and in some ways, *positive* influence of
29 this stage upon use of the DIM. In congruence with previous studies examining the
30 influence of occupational socialization upon the learning and/or use of SE (Curtner-
31 Smith, Hastie and Kinchin, 2008; Curtner-Smith and Sofo, 2004; Stran and Curtner-
32 Smith, 2009), the participant's acculturation was compatible with many aspects of the
33 DIM. The emphasis upon psychomotor learning via technique drills and the inherent
34 teacher-centeredness of the model (Metzler, 2011) aligned with Michael's sporting
35 perspective (Evans, 1992). In this respect, Michael's acculturation experiences of sport
36 appear to have acted as relatively stable filters (Richards, Templin and Graber, 2014;
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9 Schempp, 1989) reinforcing his emphasis on learning techniques and use of
10 reproductive teaching styles.
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15 This traditional pedagogical approach was reinforced since Michael was taught to use
16 the DIM during his B.A. Hons. degree in PE and Sport Studies. Although he
17 acknowledged that he had been taught to use the model during his undergraduate studies
18 Michael preferred to emphasise the influence of a PGCE mentor, seemingly valuing
19 school placement learning over university-based learning (Behets and Vergauwen,
20 2013; Capel, 2007; Forland Standal et al., 2014). The influence of the PGCE mentor
21 was seen in two guises. Firstly, Jean promoted the use technique-based drills and
22 associated teaching points. Secondly, she encouraged him to rely on his previous
23 experiences of games. This appears to have contributed to his inconsistent emphasis
24 upon tactical learning.
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39 Although Michael did include conditioned games in eight of the 12 lessons observed,
40 tactical learning outcomes and tactical feedback were erratically used. Despite the
41 professional stage offering Michael the opportunity to learn about the problem-solving
42 nature of games via TGfU lectures, for example, this knowledge and understanding
43 appears to have been 'lost.' It would seem sensible to ensure that undergraduate and
44 postgraduate PE students are 'games educated' via practical and theoretical lectures. A
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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

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9 ‘developmentally ready’ for technique work and ‘receptive’ to the learning structure of
10 the DIM (Metzler, 2011).
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15 While Michael recognised the DIM was suitable for his students, his limited content
16 knowledge of cricket meant he struggled to improve students’ tactical learning. The
17 benefits of improved content knowledge have been well documented. Kim (2015)
18 suggests that such improvement can aid task progressions, integrated skill practices,
19 error detection and, critically in this context, the effective use of small-sided games. To
20 improve his variable use of conditioned game situations and tactical feedback, three
21 suggestions are offered. Firstly, he could attend a cricket course. The England Cricket
22 Board ‘Cricket for Secondary Teachers’ course develops knowledge, understanding and
23 application of appropriate games and practices within the NCPE (ECB, 2015).
24 Secondly, recognising that such short courses can have a limited impact on teacher
25 learning (Armour and Yelling, 2007) and they can ignore the contextual features that
26 teachers face (Stolz and Pill, 2014), informal learning amongst colleagues could be
27 considered. Working alongside and receiving support from experienced colleagues has
28 been found to be successful in improving pedagogical practices using other instructional
29 models (Butler, 2006; Nash, 2009; O’Sullivan, 2007). Finally, if such experienced
30 colleagues are not available, one or more teachers could attend an external course and
31 mentor other teachers to improve their use of the DIM.
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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

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9 little emphasis on his actual learning of the model during his undergraduate studies.
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11 Instead, he primarily prioritised teaching experiences (the advice of his PGCE mentor
12 and the ability and behaviour of the students) over university-based work (Behets and
13 Vergauwen, 2013; Capel, 2007). The factors identified appear to have reinforced his use
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15 of the DIM in contrast to using other innovative models such as TGfU and SE. Given
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17 the effectiveness of the DIM in teaching games and many PE (student) teachers having
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19 similar occupational socialization experiences (Capel, 2007; McMahon and MacPhail,
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21 2007), this research strongly suggests that this model could be learned effectively in
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23 undergraduate and postgraduate courses that do not currently advocate use of
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25 instructional models.
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33 While the socialization experiences of many potential student teachers may make the
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35 DIM an appropriate model to learn, this study has also indicated a potential weakness of
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37 such experiences in teaching games. The participating teacher lacked a sufficient
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39 grounding in tactical knowledge and understanding of this striking and fielding game. A
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41 lack of content knowledge particularly around tactical learning impacted on the
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43 effective use of the DIM. Similar findings have been reported with a beginner teacher
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45 attempting to teach tactics using TGfU (O'Leary, 2014). Irrespective of the model used,
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47 competent teaching of games requires the teacher to possess sound tactical knowledge.
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50 Higher education institutions must provide knowledge of the nature of games, teach
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9 tactical appreciation of various game-types and ensure school-based mentors are
10 knowledgeable and supportive of tactical learning. Student teachers (and qualified
11 school teachers) can also attend external (coaching) courses and consider the use of
12 informal learning amongst their peers.
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19 Acknowledging that the findings above are based on a relatively short timescale from a
20 single participant case study, care should be taken in drawing conclusions from this
21 research. Nevertheless, the similarities of PE (student) teachers' previous and current
22 experiences mean they are likely to be able to make 'moderatum generalisations'
23 (Williams, 2002). In other words, recognise and identify with certain findings that have
24 influenced their interpretation and delivery of games using direct pedagogical
25 approaches. However, the authors recognise that socially constructed definitions of PE
26 and the role of the teacher are negotiated within the school setting. In using
27 occupational socialization theory to underpin this study we recognise that this
28 framework may not totally capture how such negotiated definitions and subsequent role
29 definitions are developed and how teachers respond to such definitions (Richards, 2015;
30 Richards et al., 2013). Nonetheless, this exploratory study has indicated that the
31 socialization backgrounds of many PE student teachers make the DIM a suitable model
32 to learn and utilise. It also recognises that effective use of the DIM is closely aligned
33 with in-depth content knowledge of the activity being taught. For this reason, further
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research examining how occupational socialization influences teachers' use of the DIM with different activities appears to be warranted.

For Peer Review

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Table 1. Direct instruction model benchmarks for teaching games

TEACHER BENCHMARKS
Previously learned material is reviewed
Developmentally appropriate content to be learned is verbally and/or visually presented
Teaching points are provided to facilitate students' acquisition of the technique(s)
A clear learning structure to learn the technique(s) is provided, usually in the form of a drill
Development of the initial learning task incorporating a range of progressive tasks
High rates of technical feedback are provided to reinforce the learning of the technique(s)
Conditioned game situations are provided allowing students to develop technique(s) into game skills and acquire strategic knowledge and understanding
High rates of tactical feedback are provided to facilitate the learning of strategic knowledge and understanding
Review of the lesson material learned is provided
STUDENT BENCHMARKS
Students are able to understand the learning structure in which to acquire the technique(s)
Students have high rates of academic learning time and opportunities to respond
Students receive high levels of technical and tactical feedback
Students are given directed and independent practice opportunities
The majority of students have mastered the learning material (prior to undertaking further progressive tasks)

(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

DELIVERY OF THE DIRECT INSTRUCTION MODEL	SUB-THEMES	FACTORS INFLUENCING DELIVERY OF THE DIRECT INSTRUCTION MODEL
A. A high emphasis upon technical proficiency	<ol style="list-style-type: none"> 1. Technique-based drills 2. Teaching points 3. Peer-coaching 	<ul style="list-style-type: none"> • A sporting perspective • The ability and behaviour of the students • Post Graduate Certificate of Education mentor
B. A tendency to use reproductive teaching styles	<ol style="list-style-type: none"> 1. Demonstrations 2. Closed-questions 	<ul style="list-style-type: none"> • A sporting perspective • The ability and behaviour of the students
C. An inconsistent emphasis upon tactical learning	<ol style="list-style-type: none"> 1. Variable use of conditioned game situations 2. Erratic use of tactical feedback 	<ul style="list-style-type: none"> • A sporting perspective