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Investigating Physical Education Teacher Use of Models Based Practice in Australian Secondary PE

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Abstract

This paper reports research undertaken with seven secondary (Year 7-12) physical education (PE) teachers from different metropolitan schools to investigate the use of models based practice (MBP). A qualitative and interpretivist stance was taken to the interview data to examine the teachers' familiarity with, and implementation of, MBP. Following individual analysis of each data set, the shaping of meaning occurred by comparative analysis across interviews and identification of common themes representative of the total data set. Analysis revealed that the teachers were aware of the Game Sense and Sport Education models; however, in only one school were the models featured in the planned and enacted curriculum. The historically familiar directive model based on multi-activity curriculum design and teacher directed demonstrate-explain-practice pedagogy remained the common and dominant MBP. The study found that MBP had seemingly not displaced the dominance of the multi-activity model of curriculum for the teachers and the schools in which they work.

Key words: physical education, models based practice, game sense, sport education, curriculum

Résumé

Cet article présente une recherche réalisée auprès de sept enseignants d'éducation physique d'écoles secondaire urbaines (7è à 12è année) pour connaitre leur utilisation des différents styles d'enseignement ("models based practice"). La familiarité des enseignants et leur mise en oeuvre de ces différents styles sont décrites à partir d'entrevues analysées à partir d'une approche qualitative et interpretative. Une fois l'analyse des données de chaque enseignant réalisée, une analyse comparative transversale et l'identification de thèmes communs à l'ensemble des données ont permis de dégager la signification des réponses des enseignants. L'analyse révèle que les enseignants connaissent les styles "Game sense" et "Sport Education" mais que ces styles sont planifiés et mis en oeuvre dans une seule école. Le curriculum plus familier du genre multi-activité et le style d'enseignement dirigé par l'enseignant "démontre – explique – pratique" demeurent les approches les plus utilisées. La recherche montre que les enseignants participants utilisent très majoritairement dans leur école ce modèle de curriculum multi activité et que d'autres styles sont peu utilisés.

Mots clés: education physique, style d'enseignement, curriculum.

Introduction

Models based practice (MBP) has been advocated by some physical education (PE) theorists as a means of moving away from the well documented limitations of a traditional PE model. The traditional model is characterised as 'multi-activity' and is a content focused program enabling students to experience many different forms of physical activity. Internationally, the multi-activity model appears to persist as normalised curriculum design in secondary PE despite criticisms of it (Casey, 2014; Fletcher & Casey, 2014; Kirk, 2013; Metzler, 2011). The two main criticisms of the traditional persisting PE model suggested in the literature highlight that matters of curriculum and pedagogy are inter-twined in the debates. This 'traditional model' has been associated with too great an emphasis on directive teaching and the reproduction of prescriptive technical and stylised notions of movement performance, which are instructed within the short length units that comprise a 'multi-activity' curriculum. It is argued that consequently too many students leave compulsory secondary PE having not learnt or achieved a positive effect, such as an impact on regular levels of physical activity while at school or in the future (Green, 2014). O'Connor (2006) suggested that students are more likely to learn what they cannot do rather than their movement potential in PE due to insufficient time provided to any form of activity for competence to develop. Further, it is suggested that a multi-activity curriculum provides limited coherence and progression and consequently, achieves few 'real outcomes' and lacks accountability in relation to the outcomes typically described in curricula frameworks (Bunker & Thorpe, 1982; Crum, 1993; Locke, 1992; Penney & Chandler, 2000). Context and pedagogical variables are deterministic in any of the claimed benefits of PE being achieved (Bailey et al., 2009).

Relevant to the research reported in this paper, which was located in Australian secondary PE, Hickey (1994, 1995) asked if PE was more rhetoric than reality as it was not evident that the claims made for the subject were realised in its construction and delivery. Even though MBP has recently been offered as a 'solution' to the traditional curriculum, and with pedagogical and student learning problems identified as confronting PE since at least the 1960's (Casey, 2014; Kirk, 2013), it's uptake by teachers in Australia is largely unknown. In response, this research sought to explore the uptake of two of the arguably most established and well researched models; the Sport Education Model (SEM) (Siedentop, 1994; 2002) and the Teaching Games for Understanding (TGfU)-Tactical model (Bunker & Thorpe, 1982; Griffin, Mitchell, & Oslin, 1997; Metzler, 2011), better known in Australia as the Game Sense approach (den Duyn, 1997).

Metzler (2011) identifies eight instructional models for PE. The models are characterised by a learning theory that conceptualises the ways in which models relate to curriculum emphasis, student interaction with content, and intended learning outcomes. The metaphor of "blueprint" is used to represent the idea that each model is a different type of plan from which PE teaching can be built and operationalized instructionally. Metzler (2011) determined nine features of an instructional model:

1. A theoretical foundation;
2. Stated learning outcomes;
3. Appropriate sequencing of outcomes;
4. Appropriate content knowledge;
5. Necessary teacher expertise;
6. Expectations on teacher and student behaviour;
7. Task structures specific to the model;
8. Measures of student learning; and
9. Mechanisms for assessing adherence to the model during implementation.

While not necessarily claiming to be 'radical', advocates of MBP suggest that the approach affirms the notion that PE contributes to the achievement of a range of beneficial outcomes for students. The benefits arise as models clearly state the learning outcomes, content and teaching strategies appropriate to achieve the learning outcomes, with the potential of that achievement able to be empirically confirmed (Kirk, 2013; Metzler, 2011). Metzler (2011) identified three central elements of a PE model: 1) Foundations based in learning theory providing a rationale for use of the model; 2) Teaching and learning structures explaining the conditions suited to the model; and 3) Implementation features. Casey (2014) recently commented that, "it appears to have been established beyond reasonable doubt that a models-based approach is the great white hope for teaching in the subject" (p. 19).

Models Based Practice

Metzler (2011) categorised eight instructional models for MBP in PE. They are - Direct Instruction, Personalised System for Instruction, Cooperative Learning, Sport Education, Peer Teaching, Inquiry Teaching, Tactical Games, and Teaching Personal and Social Responsibility (TPSR). There is variation in the extent to which these instructional models might be regarded as centering on curriculum and/or directing attention to pedagogy. Some of the models, however, seem more like teaching styles or approaches, and not unlike descriptions of teaching behaviours as explained by Mosston and Ashworth (2002). Further, Dauer and Pangrazzi (1975), and Haerens, Kirk, Cardon, and De Bourdeaudhuij, (2011) each suggested other standardised models. We have identified the following models in the literature and listed them in Table 1.

Table 1
List of MBP for PE

1. Direct Instruction (Metzler, 2011)
2. Sport Education Model (SEM) (also known as SEPEP – Sport Education in Physical Education model) (Alexander, Taggart, Medland, & Thorpe, 1995; Siedentop, 1994)
3. Personalised system of instruction (Metzler, 2011)
4. Cooperative learning (Metzler, 2011)
5. Reciprocal or Peer teaching (Metzler, 2011; Mosston & Ashworth, 2002)
6. Inquiry teaching (Metzler, 2011)
7. Tactical Approach (Metzler, 2011), which includes the Game Sense approach (GSA) (den Duyn, 1997), Tactical Games approach (Griffin et al., 1997) and TGfU (Bunker & Thorpe, 1982)
8. Teaching personal and social responsibility through physical activity (TPSR) (Hellison, 2003)
9. Health-Based PE (HBPE), which also goes by the name of health-orientated PE (HOPE) and health focused PE (HFPE) (Haerens et al., 2011)
10. Health-related fitness (Harris & Cale, 2006)
11. Dynamic PE (Dauer & Pangrazzi, 1975).

Research for this paper suggests that MBP has been complicated by terminology, definition and expectation. For example, the SEM (Siedentop, 1994) has been described as a curriculum model (Alexander & Luckman, 2001; Sinelnikov, 2009), a pedagogical model (Penney, 2003) and an instructional model (Dyson, Griffin, & Hastie, 2004; Metzler, 2011) by different authors. The Cooperative Learning model (Dyson & Casey, 2012) has also been described as "not really a model by itself" but a set of teaching strategies sharing key

attributes (Metzler, 2011, p. 229). Teaching Games for Understanding (TGFU) (Bunker & Thorpe, 1982) may have started as a distinctly different "model" characterised by the 6-step progression from modified game-to-game performance, however, it has arguably evolved to be something that many people would see as a pedagogical approach. Models have been embedded within models. For example, the Tactical Games model (a variant of TGfU) (Griffin et al., 1997) has been included for use within the SEM to achieve one of the core aims of the SEM, competent players (Siedentop, Hastie, & van der Mars, 2011). The SEM also contains key features of the Cooperative Learning model through its pedagogy of team and individual role responsibility, and intentions in the development of personal and social competencies similar to the Cooperative Learning model and Tactical models like TGfU (Dyson et al., 2004). Research into MBP has raised concerns regarding differing interpretation and application of models, and thus about fidelity to the model and to what extent a teacher can modify the model and still claim to 'be doing' the model (Hastie & Casey, 2014; Jarrett & Harvey, 2014a, 2014b).

In summary, each model describes an exemplar or 'blueprint' (Metzler, 2011) for organising aspects of the learning and teaching required to be covered by the curriculum document (for example, Department of Education and Children's Services (DECS), 2004) to prioritise content and to achieve specified learning outcomes. In some instances, the description extends explicitly to matters of pedagogy. The purpose of the study was to explore teachers' experience with MBP. More specifically, the study also sought to extend insight into the multiple factors influencing the adoption of 'alternative' models as replacements for the traditional multi-activity model. Little is known about the strategies for overcoming the obstacles to widespread adoption of evidenced-based PE provided by adoption of MBP for PE or curriculum planning through MBP (McKenzie, Sallis, & Rosengard, 2009), and so further research like that reported upon in this paper is necessary. The discussion pursues the implications of findings for future policy development, curriculum support, teacher education and research.

Dominant Discourses and MBP in PE

Research has repeatedly pointed to 'sport' and more specifically PE as sport techniques (Kirk, 2010) as the dominant, if not defining, feature of PE curriculum and pedagogy. Siedentop (2002) referred to students being recipients of the same game or sport experience "again and again and again" (Siedentop, 2002, p. 247) with an emphasis on students as busy, happy and good - compliant (Placek, 1993). While historically and currently sport often dominates secondary PE and is championed as providing social, emotional as well as physical benefits from participation (see for example, DECS, 2004) a body of critical research has highlighted that 'sport based PE' is not necessarily a positive experience for all students (Bunker & Thorpe, 1982; O'Connor, 2006; Siedentop, 1994). It is frequently those with specialised sport movement skills who prosper in PE (Ennis, 1996) and whom official curriculum (curriculum frameworks) seemingly privileges (Penney, 2000). Amidst the suggested dominance of sport-based PE, a repeated concern has been that many students leave compulsory secondary PE with little evidence of skill acquisition, game understanding, or any other learning of substance (Alexander, Taggart & Medland, 1993; Bunker & Thorpe, 1982; Siedentop et al., 2011). The multi-activity model is frequently sighted as a main contributor to this educational deficit. It has led Kirk (2010) to identify "radical reform" as not merely desirable, but essential to the educative future of PE.

Clarifying Terms

At this point it is important to provide clarity for the reader with respect to our use of the terms curriculum and pedagogy in this paper. In saying this we acknowledge that varied

definitions of these terms exist within the PE literature and similarly, broader education literature. For example, Metzler (2011) has described TGfU as pedagogical model, while Bunker and Thorpe (1982) indicated it could be understood as a curriculum model by its guiding pedagogical principles. Curriculum is generally associated with content (skills, knowledge and understandings) and learning intentions. Therefore, it is about what is taught and expectations relating to student achievement or attainment. Thus, the expression "curriculum model" is used here to describe a guide to teachers about subject matter that is taught. Pedagogy, as used here, focuses on *how* teaching is styled and enacted, and is therefore about the process of instruction and the student role in, and experience of, the teaching and learning process. We use the terms curriculum and pedagogical model to reflect that models as presented in literature have spanned matters of curriculum and pedagogy.

The Australian tactical model called the Game Sense approach (GSA), and the Sport Education model (SEM) were chosen as the foci for this research as they are the examples of MBP frequently referred to in Australian PE curricula frameworks as alternatives to the more historically common "traditional" model of instruction (Pill, Penney, & Swabey, 2012).

Theoretical Framework

We acknowledge the socially and politically constructed nature of all subjects, and that the structure and content of a subject are products of previous and on-going struggles and contests of ideas within and between subject communities (Ball & Goodson, 1984). Ball's (1993) writing and his more recent work with colleagues (Ball, Maguire, Braun, & Hoskins, 2011; Ball, Maguire & Braun with Hoskins & Perryman, 2012) provides insights that help explain the apparent contradiction between the implicitly suggested and explicitly stated directions of curriculum documents towards MBP and the continued dominance of the multi-activity model in PE. While "textual authority" and "political authority" (Ball, 1993) may be tied together in the directions stated and implied in the curriculum documents produced by education authorities (for example, and relevant to this research is DECS, 2004) it is teachers who are central players when we consider the context of influence over design and enactment of the curriculum (Ball, 1993). Indeed, Ball et al.'s (2012) use of the language of enactment, rather than implementation, is intended to foreground this centrality of teachers in shaping what transpires from policy pronouncements or curriculum 'reforms' (see also, Penney, 2013). Further, Ball (1993) suggested that educational "modernisers" (such as academics) involved in policy-making frequently find themselves confronted by a (PE) teacher community of practice that is conservative and traditional, emphasizing continuity and frequently suspicious of 'trendy progressive views'. Ball (1993) suggested that the teaching community of practice can be "a community of the past" deferential to its heritage as a cultural rallying point (p. 210).

We recognise that there are persuasive structures in place, such as a 'traditional practice', that simultaneously express and reaffirm dominant discourses. Structure and culture can thereby be seen as working to systematise and normalise particular thinking about curriculum and pedagogy. Yet, later work by Ball et al. (2011) indicates, and other work in PE reaffirms (Alfrey, O'Connor, & Jeanes, 2016), that we also need to be cautious in implying uniformity in regard to the ways in which teachers engage with curriculum texts, and recognise that many aspects of context influence the practice of PE curriculum in schools. Drawing insight from Ball et al.'s (2012) analysis of policy enactment the discussion will give further insight into the ways in which teachers' personal professional values combine with other contextual influences to shape approaches to PE curriculum and more specifically, engagement with models-based practice.

Method

This research consisted of semi-structured interviews with seven PE teachers in different metropolitan secondary schools. Data collection occurred after ethics approval for the research had been granted. The teachers were purposefully sampled from a larger set of PE teachers supervising final year pre-service PE teaching placements in government and non-government (private), coeducational and single gender schools (see Table 2) in one state in Australia. Interviews occurred on site at a time agreeable to the teacher. Each teacher was de-identified and a numerical code (Teacher 1, Teacher 2, etc.) allocated in order to refer to illustrations of themes from individual teacher interview data sets. The research was underpinned by an interpretivist epistemology leading to a qualitative research methodology. Inductive logic was applied to interpret the specifics of the individual experiences reflected in the descriptive text and discursive data that ensued. The interpretative stance adopted came with a critical orientation toward the construction of meaning seeking insights about the participant experience of MBP and why PE takes a particular form, which groups benefit and how PE is used (Coakley, 2007; Curtner-Smith, 2002).

The semi-structured interviews were conducted with the aim of generating epistemological conversations with author 1 and PE teachers supervising pre-service teachers who had recently completed a methods course focused on GSA and the SEM. The purpose of the interviews was to gain a sense of the experience with, and perceived value of, GSA and the SEM in secondary PE. Author 1 took notes during the interview and these notes formed the data set. During the interview, author 1 shared the notes to enable the participant to check and validate that they accurately reflected what had been said. This process also permitted the participant to reflect on whether they had communicated what it was they had they had meant to convey. The potential benefits of this process are that it: (a) enables checking for ambiguous meaning with the participant during the interview; and (b) there is time for participants to change their responses; and 3. There is time for participants to supplement or improve their responses. This type of 'free form' note taking leads to different data recorded than if one records and then transcribes. It is necessary to balance the refinement of the data possible via note taking during the interview with participant checking in situ as the interview progresses to ensure the notes don't become refined and reduced to the point of bias by the interpretation of the note taker (Polgar & Thomas, 2013). In addition to note taking, the interviews were recorded in order to enable checking of the accuracy of the notes by the researcher.

Data Analysis

Author 1 undertook initial familiarisation with, and organisation of, the individual data sets before the data was analysed. Both processes led to data reduction. It involved a pragmatic selection from the data from reading the notes and a key word search to gain an initial sense of what might be recurring themes (Pope, 2006). Following confirmation of agreement with the initial coding by authors 2 and 3, further coding by author 1 focused on looking for regularities, patterns, topics and the notation of words or phrases to represent themes within each interview as identified through open coding of the interviews. This coding provided a means for category conceptualisation (Strauss & Corbin, 1990), which was followed by the grounding of this data into themes for each interview. Author 1 continued to compare themes across interviews using the constant comparative analysis to test for similarities and differences, further refining the categories to generate the themes representative of the data as a collective sample. Authors 2 and 3 provided continual checking and testing of the developing themes during the process of analysis. The individual

data-sets were then combined and re-analysed through open-coding and then reduction occurred to generate final themes that could then guide the development of an explanatory theory; these are listed in Table 2.

Table 2
Interview Themes

Themes	**Description**
Awareness	Teachers were aware of the GSA and SEM models as alternatives to a common traditional model.
Non Acceptance	In all but one school the GSA and SEM models were not a feature of the planned PE curriculum.
Multi-Activity Preference	The multi-activity curriculum model still dominates program design with a focus on exposure and experience to a broad range of sports and physical activities.
Curriculum Document	The curriculum document did not direct the teaching and programming in an informed way
Difficulties	GSA pedagogy was problematised as more difficult to implement
Time	Curriculum time for PE was seen to limit the use of the SEM

Results

Awareness

All of the teachers were aware of the GSA and the SE models, however, in only one school one of the models featured as a planned inclusion in the PE curriculum. This model was the SEM, which was a required program inclusion for a term at each year of compulsory PE at the school (Year 8-12). Teacher 5 commented that having tried the SEM they found it "*logistically difficult*". However, Teacher 5 also noted that the SEM would have difficulty finding its way into the PE curriculum "*with a conservative PE staff and students used to skill and drill*". Teacher 6 believed GSA and the SEM were suitable only when the teacher and students "*had a high degree of familiarity with the sport"*, and that use of GSA was consequently more likely to be relevant as a model used in senior years PE. Teacher 7, however, described having "*experimented*" with GSA but found it confronting as the students' response to the model was not positive. Teacher 7 believed that the students' response was not positive as they had not previously experienced PE constructed this way and did not see other teachers enacting their sport teaching in a similar manner. Teacher 7 was thus confronted with questions from students as to why their class was "different".

Non Acceptance

While Teacher 7 reflected that colleagues did not overtly denigrate the use of the GSA, it was perceived a lack of interest existed in what Teacher 7 was attempting and the

more common directive approach to PE teaching at the school, and this did not encourage Teacher 7 to persist with the GSA "experiment." The perception that most PE teachers were blasé about GSA and the SEM was also commented upon by Teacher 6, who believed existed due to teachers favouring "*lots of sports and activities.*"

Multi-Activity Preference

All the teachers interviewed commented that the PE coordinator establishes the PE program: "*the PE coordinator sets and monitors the curriculum*" (Teacher 4). The impression of a custodial emphasis on a traditional positioning by PE teachers of skill as techniques (Kirk, 2010) and a content rather than teaching focus experienced across a multi-activity program was evident. Teacher 5 suggested that "*it is difficult to use anything other than a skill focused approach due to the tradition of the schools' PE program and the expectation from the other PE teachers and students who are acculturated into expecting skill and drill*". Teacher 2 indicated that it would be "*difficult to convince the coordinator to allow a change of structure so something like the SEM could be used*".

Curriculum Document

In two of the seven schools, the teachers indicated that standards and learning outcomes described for expected student achievement in the curriculum document (DECS, 2004) were evident in the schools PE program documentation as the school had 'mapped' the curriculum. However, all of the teachers interviewed believed that the PE curriculum standards and outcomes (DECS, 2004) did not meaningfully direct teaching, curriculum design or the enactment of teaching in their schools. That is, the mapping process had not changed the pedagogical intentions of the teachers, or the content of the curriculum.

The curriculum focus for these teachers was exposure to and experience of a broad range of sports and physical activities through a multi-activity curriculum design. There was no obvious vertical (Years 8-12) or horizontal (during the year) curriculum continuity or coherent complexity explicitly developed. Typical of the interview responses, in reply to the question, "What is most important in your PE lessons?" Teacher 1 replied; "*For students to experience a range of sports and activities"* and Teacher 2 stated "*Providing the students with lots of experiences and giving them some skills*".

There was little evidence that the curriculum document had served to influence the teaching practices of those participating in this research. For example, Teacher 5 stated that "*SEPEP is the only way of properly achieving Outcome 5.1 at Year 9 and 10, and also the Personal and Social Development Strand outcomes*", but they were unlikely to use the model as it is "*logistically difficult*" (Teacher 5 interview). Further, they were unlikely to attempt the integration of SEPEP and GSA models as implementing one "*is challenging enough*".

Difficulties

Regardless of age or experience/years of teaching, the teachers problematised GSA pedagogy around the supervision of multiple games or activities and the capacity of the teachers to "trust" students when not under their direct supervision. GSA pedagogical emphasis on inquiry through well considered questions was not considered unique to a GSA and part of the normal 'toolkit' of teaching strategies used by PE teachers. When teachers provided examples of the use of a GSA it was described as the use of small-sided and modified games. While modified and adapted or constrained games are typified with a GSA the pedagogy of small-sided games is not unique to the GSA.

The PE Coordinator was positioned as the key actor in the curriculum design process, either constraining or enabling models based practice. The one teacher who identified the SEM as part of their program stated that it was a required program inclusion for a term at

each year level (Years 8-10) because:

> The Head included Sport Education as a program feature when establishing the current program at the school. The Head had tried Sport Education during the 1990‘s when the SEPEP program was distributed by the Australian Sports Commission, and found it to be an inclusive and powerful curriculum model (Teacher 3 interview)

Order and control of classes was important to these PE teachers. The perception of the GSA and the SEM as essentially characterised by small-sided modified or conditioned games problematised the teachers' adoption of the models. For example, Teacher 4 noted that *"it is difficult to trust students to behave and engage appropriately when multiple games or activities are in use during a lesson".* Kirk (2010) has explained the emphasis on order, control and replication of movement performance in PE as an historical legacy of the early origins of PE in state schools as fitness drills and gymnastics.

Time

The constraint of time while positioned as an institutional constraint (and therefore positioned outside of the control of the individual teacher) by the teachers in this study is more likely an example of a teacher-related barrier – where the institutional constraint is being used so as not to have to confront the comfort of the existing reality of the practice of their school PE. This point is illustrated in Teacher 1's comment that it was not possible to use the SEM in the school because;

> "The Year 8's only do a sport for 4 -5 weeks. There are three lessons a week but the sport is only covered for one 90-minute lesson. The other –45-minute lesson is aimed at promoting active lifestyles. I also have not witnessed SEPEP in action and would like to do so before attempting it as it appears overwhelming when reading the literature" (Teacher 1 interview)

Generally, the feeling from the teachers was that there wasn't sufficient time in the PE program to run the SEM, as the emphasis in all settings was on encouraging student participation in lots of experiences.

Table 3
Individual Interview Portraits

Interviewee	**Models Based Practice**	**Use of the Curriculum Document**	**Curriculum Focus**
Teacher 1 ●Male ●1-5 years teaching ●Independent coeducational secondary school	●Not enough time to implement the SEM in a curriculum organised on 4- 5 week units of work. ● Favoured the use of questions to prompt students thinking about the play.	●The curriculum framework Standards and Outcomes were referenced in curriculum documents, but the teacher did not believe they were influential in the way the PE program was constructed and enacted.	●The students having lots of sport and physical activity experiences.
Teacher 2 ●Female ●1-5 years teaching ●DECS metropolitan coeducation secondary school	●Favoured the use of small sided modified games to teach sport. ●Not enough curriculum time to justify the use of the SEM.	● The curriculum framework Standards and Outcomes were not considered to be influential in the way the PE program was constructed and enacted.	●The provision of lots of experiences with some skill learning.
Teacher 3 ●Male ●31-35 years teaching ●Independent coeducational secondary school	●A term length unit using the SEM programmed at each year level (8-10) ● GSA not used.	●The curriculum framework Standards and Outcomes were not influential in the way the PE program was constructed and enacted.	●The students having lots of sport and physical activity experiences.
Teacher 4 ●Female ●0-5 years teaching ●DECS metropolitan	●The PE curriculum was constructed around 3-4 week units so there wasn't time for a SEM	●The curriculum framework Standards and Outcomes were referenced in curriculum	●The students to have fun and learn basic sport skills.

coeducation secondary	● GSA problematised on the basis of student ability to behave and engage appropriately when multiple games were in use during a lesson.	documents but the teacher did not believe they were notably influential in the way the PE program was constructed and enacted.	
Teacher 5 ●Male ●6-10 years teaching ●Boys independent secondary school	●SEM "logistically difficult" ●Ability to trust student participation in multiple games was a constraint on using GSA.	●The teacher did not believe the curriculum framework Standards and Outcomes influenced the way the PE program was constructed and enacted.	●"Getting the students to participate" and experience a wide range of activities while learning a few skills.
Teacher 6 ●Male ●31-35 years teaching ●DECS coeducation secondary school	●Time allocated to each sport, and the number of lessons for PE each week, were identified as the limitations preventing the adoption of the SEM and GSA.	●The teacher did not consider the curriculum framework Standards and Outcomes to be influential in the way the PE program was constructed and enacted.	●Students experience lots of sports and physical activities.
Teacher 7 ●Female ●21-25 years teaching ●Girls independent school	●The teacher had experimented with 'game sense' pedagogy but found it confronting. ●The teacher had constructed sport learning programs that expected students to assume role responsibilities such as coaching, umpiring and scoring.	●The curriculum framework Standards and Outcomes were not influential in the way the PE program was constructed and enacted.	●Students experiencing lots of sports and physical activities.

Discussion

From the above results, it is apparent that at the time of this research a traditional PE model grounded substantially on a direct instructional style and a multi-activity curriculum described in the PE literature remained the familiar PE construction for these teachers. Awareness of alternatives to the model existed, but understanding of the alternatives and experience with the GSA and SEM as alternative models was limited.

The PE Subject Coordinator was problematised as a constraint on the enactment of alternatives. According to the teachers, the coordinator generally approves, either directly or indirectly, the design and enactment of the curriculum. The impression was, therefore, of the PE Coordinator adopting the roles of what Ball et al. (2011, p. 626) term "narrators" (filtering and selecting what can be done in the name of PE curriculum) and "transactors" (focused on monitoring and accountability). In the one instance where the SEM was deliberately included in the PE curriculum it occurred at the insistence of the PE coordinator who advocated and championed for the model, openly acting as an "entrepreneur" (Ball et al., 2011, p. 626).

The curriculum framework Standards and Outcomes (DECS, 2004) did not appear to direct the teaching and programming in an informed way. Rather, the impression was that official curriculum policy had been accommodated within established practice and discourses, indicative of what Ball (1994) termed "creative nonimplementation" (p. 20). While the local curriculum document (DECS, 2004) did not suggest pedagogical or curriculum models the wording of the student learning outcomes are suggestive. For example, at Year 8 the learning outcome for sports skills was; *Reflects on the use of specialised skills in various in social contexts (including teams) and is able to modify skills to improve performance* and evidence of this outcome was described as, *Analyses performance and provides feedback on skills and performance of themselves and others* (DECS, 2004). We would argue that a focus on directive and 'drill' teaching requiring performance reproduction of prescribed movement responses (Light, 2013) typical of the historically common 'traditional' PE model would not be considered aligned to a learning context asking students to be reflective and analytical. Whereas, a model of practice grounded on the pedagogical propositions of the GSA is more likely to result in an aligned teaching and learning environment with the curriculum intention. Further, for Year 9 level to be demonstrated by the end of Year 10 (the last year of compulsory PE in Australian schools) the learning outcome for sports skills was; *Participates in a range of physical activities while planning and evaluating various roles they can take in the community to develop their interests and assist others* (DECS, 2004). Again we would argue that a focus on directive teaching typical of the historically common 'traditional' PE model where the product is sport as sport-techniques (Kirk, 2010) would not be considered aligned to the educative intent to plan and evaluate various roles students can take in community sport to assist others, but a SEM could be.

Shulman (1987) suggested that teaching "begins with a teacher's understanding of what is to be learned and how it is to be taught" (p. 7). In this research, it was apparent that teacher engagement with the local curriculum document was limited and as exposure to GSA and SEM theoretical and applied practical pedagogical perspectives was nominal, there was minimal understanding of how the models could assist achievement of student learning outcomes indicated in the curriculum document for secondary PE. While educational objectives and student outcomes (or performance standards) may be defined by curriculum documentation, it appears teachers have 'blurred vision' in relation to the educational aims and objectives suggested by the formal curriculum for secondary PE, and the pedagogical perspectives that emerge from the educational ambitions of the document. It was clear from the interviews that sport teaching in PE was largely designed and enacted based on long

established expectations of highly structured and directive teaching as the expected norm in secondary PE. There appeared to be little or no awareness of contemporary discourses about approaches, models and methods of games and sport teaching. Research would suggest that internationally this is not unusual for PE (MacPhail, Kirk, & Griffin, 2008).

In this study, an absence of depth to teachers' pedagogical and content understanding about models based practice generally, and the tactical GSA and SEM models specifically, acted to constrain curriculum design and enactment through the tenets of either model. Teacher comprehension of purpose, form and function of the models did not lead them to conclude that GSA or the SEM would enhance student learning outcomes. It was clear that the objectives for PE espoused by the teachers were for an experiential curriculum and did not include objectives that might be considered central to the curriculum, such as further development of skill acquisition to competency and confidence in sport related game involvement, nor did it include objectives around personal and social development. The teachers seemed uncertain of their goals and lacked clarity with regard to purpose. Work by Ball et al. (2012) highlights the impact that professional culture has in policy enactment, influencing what are seen as legitimate and appropriate readings and responses of official curriculum. Data from teachers pointed to a professional culture characterised by ongoing dominance of historically familiar discourses and practices, with teachers seemingly accepting of and reliant upon discourses of multi-activity, sport and direct instruction in their 'enactment' (or as Ball (1994) termed it, "nonimplementation") of official curriculum that can be seen to prompt engagement with other discourses and practices.

These approaches to PE curriculum and to official curriculum policy certainly need to be seen as reflecting multiple influences. Ball et al. (2012) highlight that contextual influences encompass four factors:

1. *Situational* factors specific to a given student demographic and school history;
2. *Professional* context including, for example, support for exploration of contemporary developments in curriculum and pedagogy, and professional leadership of curriculum development;
3. *Material* considerations, such as time allocations, facilities and equipment; and
4. *External* factors producing or reinforcing particular expectations in relation to what PE curriculum will 'look like' and focus on (see also Penney, 2013).

Professional culture and pedagogic knowledge and understandings within that, were at the fore of this research. Butler, Oslin, Mitchell and Griffin (2008) noted that PE curriculum and pedagogical change requires struggle and effort as it deals with the unfamiliar and that this is enough to dissuade many teachers from an initial attempt. This observation appears to be confirmed in this research. Ball's (1993) suggestion that contradictions between the implicitly suggested and explicitly stated directions of curriculum documents and the continued dominance of the canon's of traditional practice privileging "a community of the past" also appears palpable in the context of this research.

Policy and pedagogic processes are undeniably complex and as we discuss below, further research is needed to pursue the conditions that facilitate and support teachers to creatively engage with the curriculum and pedagogic possibilities that are presented by both official curriculum texts and contemporary developments in PE including MBP. The data from this research indicates that at least in part, limited engagement with models and practices that are still perceived as 'alternative' may well be a function of the difficulty of changing from pedagogy that is familiar and thus comfortable. The data suggests the PE teachers saw the tactical GSA and the SEM as more difficult to implement than the approaches and practices that were familiar to them and already embedded in their pedagogy. The GSA pedagogy was considered particularly more difficult to implement due to the supervision of multiple games occurring at once. Directive pedagogy persists when the body

of evidence is against it as the desirable pedagogical preference is a curriculum emphasizing a critical inquiry orientation (DECS, 2004). Further, an absence of depth to the teachers' pedagogical and content understanding about models based practice generally, and the tactical GSA and SEM models specifically, acted in the case of these teachers to constrain curriculum design and enactment through the tenets of either model. Teacher comprehension of purpose, form and function of the MBP did not lead them to conclude that GSA or the SEM would enhance student learning outcomes.

Our data and debates articulated in the literature raise questions about how the various forms of MBP are being positioned and presented to teachers and indeed, how they should be. For example, are the models the basis of the curriculum or the basis from which curriculum planning more generally occurs? Or is it, that the models are subsumed within curriculum planning that has a different orientation or emphasis, such as an orientation and emphasis related to student achievement of the outcomes described in the curriculum document? It was beyond the scope of this research to explore these questions with teachers, but we suggest there is a need for future research that pursues the manner in which MBP is presented to teachers. It was also beyond the scope of this research to consider how this can productively link with efforts to encourage and support teachers' creative engagement with the possibilities for teaching and learning in PE that are presented by contemporary curriculum policy.

Conclusion

The data arising from this research painted a picture of well entrenched, established conceptual and program norms about PE content, PE teaching as a process, and product expectations resulting from this process consistent across the sites and to the teachers regardless of their situated school context. PE teachers continually encounter well-entrenched ideas about program design and enactment that disrupts confidence in the worth and practicality of alternative ideas and constructs (like MBP) for PE teaching. This research suggested that continual hegemonic encounters with a custodial status quo consisting of directive teaching of sport-as-techniques (Kirk, 2010) and ambitions for content breadth constrains the potential for innovation of practice such as teaching using a MBP. For the participants in this study there is recognition of the models but not an understanding or acceptance of an argument that they necessarily lead to enhanced PE. Consistent with findings from research with Australian PE teachers in a different jurisdiction (Clennett & Brooker, 2006), a narrow interpretation of curricula was evident in this research which constrained the focus of teaching and constricted student performance expectations. The teachers also indicated limited engagement with the official curriculum document and this can also be considered a limitation on the potential stimulus for curriculum change. The themes developed from the data examined in this study adds weight to previous claims by Curtner-Smith (1999) and Clennett and Brooker (2006) that 1. PE teachers are frequently resistant to the changes in new curricula, 2. Show little enthusiasm for pursuing knowledge of it, and 3. Adopt a passive stance in terms of developing their personal knowledge through meaningful opportunities to engage with the conceptualisations contained in the curricula documents. It is apparent that directions towards the use of MBP in curriculum documents, the availability of detailed descriptions of MBP and suggested units of work styled through the models, and MBP research agendas are insufficient to bring about broad change in practice to models-based PE. This research suggests the local PE community of practice finds it particularly difficult to let go of their historically normative practice and that there is limited recognition of a need or desire to do so. As "policy actors" (Ball et al., 2011) the

teachers in this study positioned themselves as notably distant from official curriculum and similarly, MBP.

In this study, it appears that there is some support for suggestion that the adoption of MBP is slow. As curriculum and policy literature repeatedly acknowledges, there are many factors involved in the uptake of change, from organisational policies, teacher attitudes and feelings of efficacy related to new ways of thinking about, designing, and enacting PE teaching. The literature reviewed for this paper points to the dynamics of the initial adoption process, or diffusion of MBP, moving to sustainability and the entrenchment of a 'new normal' having been investigated with a few enthusiastic adopters and 'lone rangers'. This research has pointed to a need to further examine the connection between the early adopters and advocates, and diffusion and sustainability arising from where the diffusion of the idea (in this case, the idea of MBP) reaches what Rogers (2003) called "critical mass". Critical mass is the point after which further diffusion becomes self-sustaining" (p. 369) and becomes "the way we do things around here" (Markus, 1987, p. 491). Our work has also drawn attention to the insights that education policy literature can prospectively bring to investigations of these processes and more specifically, to research that seeks to extend understanding of the dynamics of interaction of institutional, system and personal factors in limiting, constraining or encouraging adoption of MBP in the Australian PE context.

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