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In-service teachers' experiences of using game based approaches to teach games: Implications for physical education teacher educators

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Abstract
This study investigated secondary school physical education teachers' experiences of using a game based approach (GBA) with the primary aim of exploring the qualitatively different ways teachers experience what they consider to be a GBA when teaching games. Participants in this study (n=12) taught in schools in either southeast Australia or southeast England and all had previous experience of using a GBA to teach games. With the investigation of teaching experience being the fundamental focus of this study a phenomenographic research framework was chosen to explore a primary research question that inherently focused upon GBA experience interpretation and meaning. An analysis of findings indicated three conceptions of awareness detailing the collective meaning of participants' GBA teaching experience; that being as a Learner, a Collaborator, and/or a Catalyst. Implications for physical education teacher education (PETE) programmes and recommendations from findings are offered for physical education teacher educators.

Keywords: Physical education, teacher education, sport pedagogy, game based approaches

1. Introduction
This study investigated secondary school physical education teachers' experiences of using a game based approach (GBA) with the primary aim of exploring the qualitatively different ways teachers experience what they consider to be a GBA when teaching games. With the investigation of teaching experience being the fundamental focus of this study, the nature of teaching experience, and the interpretation and meaning of that experience (with 'meaning' being defined in this study as the idea or worth of experience) is of utmost importance especially when considering that the 'hype' and support for GBA use in PE lessons is still yet to be seen in practice (Jarrett, 2015; Pill, 2011) [1, 2]. Thus, an effort/need to develop and improve GBA-related pedagogical understanding and practice, especially at PETE level, continues to exist.

2. The experience of teaching
Associated with an individual's development as a teacher is a range of commonly understood assumptions about the role experience plays in becoming a teacher. Tudela (2014) [3] for example, states that preservice teachers are understood to be 'vulnerable, innocent and in need of guidance' (p. 157) due to a lack of teaching experience whereas the practices of in-service teachers are often legitimized and made possible (even if inappropriate) based on the assumption that experience leads to full development and certainty in ones' identity as an expert. This view of teacher knowledge as Tudela (2014) [3] explains 'references experience with the assumption that one achieves expertise only through experience' (p. 160). Broadening discussion on awareness of the factors that influence experience, Keck (2015) [4] acknowledges the need for conscious attention to the 'baggage' teachers bring with them from across the spectrum of their professional life. An awareness of what and how this 'baggage' can influence experience plays a significant role in teachers' day-to-day teaching practice with opportunities to utilise and/or avoid influential elements important in helping teachers make connections between theory and practice and increasing the likelihood of more meaningful experiences to inform future practice (Sonmez, 2015) [5].

The research does, however, suggest that teachers' unquestioned beliefs, knowledge and dispositions (developed throughout their lives) typically create challenges for their interpretation and uptake of new and innovative sport pedagogies (see for example Light & Evans, 2013) [6]. Light (2008) [7] suggests that this is largely due to the tension between the unarticulated assumptions about learning and knowledge that underpin traditional approaches to games teaching and those that underpin less traditional instructional pedagogies such as game based approaches (GBAs).

2.1 Influences shaping physical education teacher practice

Just as it has long been viewed that physical education teachers hold preconceived ideas about the role they should play in the school (e.g. a curriculum idealist) and in the physical education lesson (e.g. a requirement to be authoritarian or a champion of technique development), so too have physical education teachers' personal theories of learning been viewed as having considerable influence on decisions about instruction (Applefield, Huber & Moallem, 2011; Jarrett, 2015) [8, 1]. How and why these notions are conceived and the impact personal learning theories have on teaching practice has often been related to an individual's socialisation.

2.1.1 Socialisation

Utilising the work of Lawson (1986) [9] and his exploration of the roles that various socializing agents play on physical education teacher development, research exploring the socialisation of physical education teachers suggests that the dialectical perspective of socialisation consists of three phases; acculturalisation, professional socialisation, and organisational socialisation (see Deenihan & MacPhail, 2013; Lawson, 1986; Richards, Templin & Graber, 2014) [9-11]. Curtner-Smith, Hastie and Kinchin (2008) [12] defined the first phase of acculturalisation as beginning at birth and appearing to be 'the most potent type of socialization experienced by physical education teachers' and further contended that 'interest in sport, often nurtured by parents, draws prospective physical education teachers to the profession. Interactions with physical education teachers and coaches, and experiences of school life and physical education and sport shape views on what constitutes good pedagogical practice' (p. 99). The second phase, professional socialisation, refers to "the time in which future teachers are enrolled in a teacher certification program at a college or university" (Richards et al., 2014, p. 113) [11]. It refers to the impact of a physical education teacher education (PETE) course on a preservice physical education (PE) teacher and is believed to be the least influential phase out of the three (Curtner-Smith et al., 2008) [12]. The third phase, known as organizational socialisation, refers to a school's influence on a teacher and has been defined as 'the process by which one is taught and learns the ropes of a particular organizational role' (Van Maanen & Schein, 1979, p. 211) [13]. Essentially, it is the process by which incumbent teachers of physical education pass their beliefs, practices, and protocols on to beginner physical education staff members (Lee & Curtner-Smith, 2011) [14]. Arguably then, a teacher's acculturation, professional socialization and organizational socialization play important roles in the development of their confidence to appropriately teach physical education (Morgan & Bourke, 2008) [15] as well as helping to explain why they interpret and deliver a specific pedagogical approach as they do (Curtner-Smith et al., 2008) [12].

2.1.2 Experiences and beliefs

Wanyama and Quay (2014) [16] argue that the teaching of physical education faces challenges all around the World. This is particularly so if a physical education teacher's accumulated experience base is limited, as having a broad base of experience to help generate and entertain new ideas and skills enables construction of further knowledge enhancing further learning (Elliot & Campbell, 2013) [17]. With physical education teachers constructing and developing knowledge from their own experiences of physical education as a pupil, any dominance within their schooling of programmes lacking pedagogical and content variety and/or frequency has a worrisome legacy. As explained by Morgan and Bourke (2008) [15] 'the quality of an individual's school physical education experiences directly predicted his or her confidence to teach physical education' (p. 2).

Just as teaching confidence in physical education can be difficult to alter, so too the beliefs of teachers. As Rossi (1999) [18] and Barker and Rossi (2011) [19] point out, the beliefs of in-service PE teachers will vary and can be difficult to change with beliefs 'acting as a filter through which a host of instructional judgements and decisions are made' (Harvey & O'Donovan, 2011, p. 767) [20]. Such beliefs, as Green (2002) [21] contends, are primarily informed by teachers' personal biographies and acculturation and inform the development of entrenched predispositions that significantly impact upon teacher development (Harvey & O'Donovan, 2011) [20]. However, preservice PE teachers' beliefs can be changed as research by Moy, Renshaw and Davids' (2014) [22] suggests. Their study into Australian preservice PE teachers' receptiveness to an alternative pedagogical approach to teach games found strong evidence to show that it is possible for PETE educators to change beliefs in order to overcome the constraint of acculturation.

Butler (2005) [23] has suggested though that changes in teachers' practices can only occur when there is a core belief in innovation, and even then the conflict that may exist between a teacher's core beliefs about teaching and learning and the assumptions that underpin use of a new pedagogical approach can create further barriers to implementation (Light, 2008) [7]. Yet, as explained by Aelterman, Vansteenkiste, Van den Berghe, De Meyer and Haerens (2014) [24], even if teachers are predisposed to altering their practice, teachers do not necessarily act upon their beliefs that might motivate and inform this change. This has both positive and negative connotations for the trialling of pedagogical innovations such as the consideration of using GBAs to teach games.

2.2 Game based approaches

Researchers have used the term game based approaches (GBAs) to describe the range of pedagogical approaches that 'focus on the game instead of decontextualized techniques or skills to locate learning within modified games or game-like activities and that emphasize questioning to stimulate thinking and interaction' (Light & Mooney, 2013, p. 2) [25]. GBAs have also been described as an alternative to the more 'traditional' teacher-centred approaches historically synonymous with games teaching in physical education and sports settings (Light, 2002) [26]. Reviews of GBA literature by Oslin and Mitchell (2006) [27], Harvey and Jarrett (2014) [28] and Stolz and Pill (2014) [29] have highlighted a number of pedagogical approaches utilised around the world that reflect similar, but contextualised (e.g. country specific) characteristics. The range of GBAs mentioned in literature include Teaching Games for Understanding (TGfU; Bunker & Thorpe, 1982)

[30], Game Sense (GS) (Light, 2004) [31], Play Practice (PP; Launder, 2001) [32], Tactical Games Model (TGM; Mitchell, Oslin & Griffin, 2006) [33], Tactical Decision Learning Model (TDLM; Gréhaigne, Wallian & Godbout, 2005) [34], Ball School (BS; Kroger & Roth, 2005) [35], Integrated Technique-Tactical Model (IT-TM; López-Ros & Castejón, 1998) [36], Invasion Game Competence Model (IGCM; Mesquita, Farias, & Hastie, 2012) [37] and the Games Concept Approach (GCA; Rossi, Fry, McNeill & Tan, 2007) [38].

2.2.1 Perceptions of game based approaches

Despite a breadth of studies available on preservice PE teachers' and preservice primary teachers' perceptions of GBAs (see Li and Cruz, 2008; Dudley & Baxter, 2009) [39, 40], fewer studies exploring in-service PE teachers' perceptions of GBAs exist. In Casey and Dyson's (2009) [41] study into an in-service PE teacher's experience of using TGfU to teach a unit of tennis, pedagogical and time constraint issues associated with planning and implementation were reported. Feelings of insecurity and apprehension when orchestrating pedagogical change were also felt by the in-service PE teachers with comment noting the need to provide pupils with a short 'crash course in how to be taught this way' (p. 190). Rossi et al., (2007) [38] also highlight the confusion felt by in-service teachers, especially with regard to the different forms of GBAs that they were exposed to, with the use of GBAs seen as just another 'teaching trick' (p. 106). Findings in a study by Diaz-Cueto Diaz-Cueto, Hernandez-Alvarez and Castejon (2010) [42] into five in-service PE teachers' perceptions of implementing either a basketball or handball unit suggested further challenges associated with GBA implementation in that teachers began 'doubting their own pedagogical expertise and knowledge' (p. 378). And in a study by Pill (2011) [2] that surveyed 64 in-service PE teachers' degree of engagement with GBA curriculum design and enactment it was reported that TGfU-GS 'had yet to be fully understood and implemented by the majority of teachers' (p. 115). Of significance here is the thread of common confusion reported by in-service PE teachers and indeed how the exploration of teaching experience can and should be considered in the effort to improve GBA-related pedagogical practice, specifically through the design and delivery of physical education teacher education (PETE) programmes.

3. Method

3.1 Participants

Participants were recruited from two different sites: in-service PE teachers from secondary schools in southeast England (n = 6) and in-service PE teachers from secondary schools in southeast Australia (n = 6). Site locations were chosen to reflect the breadth of research into and use of GBAs emanating from both sites as well as the primary researcher's experiences of teaching in both locations. Five schools at each site were identified (based on existing contacts had at each school). An initial questionnaire was sent out via email to teachers within each school's PE department with all selected participants (from 6 different schools in total) indicating experiences of teaching using GBAs in teaching careers ranging between one to thirty three years.

3.2 Procedure

Two 40-60 minute interviews were conducted with each participant at least a week apart. The primary focus of interview one was to develop a shared level of communication trust between interviewee and interviewer facilitated by interviewee reflection upon their journey into teaching. Interview two focused upon getting participants to relive a past GBA teaching experience. This was completed through use of elicitation interview technique which focuses on the reliving and verbalisation of a past and specific situation whereby interviewees were pressed to explore their own experiences of a given GBA teaching experience and guided into a state of evocation through the use of Ericsonian language and sensorial questioning (Vermersch, 1994) [43]. See Jarrett, Mouchet, Harvey, Scott and Light (2014) [44] for a more detailed explanation of the use of elicitation interview technique.

3.3 Phenomenography

At its core the focus of this study was to investigate and analyse the collective meaning participants give to experiences of using a GBA to teach games, in recognition of the personal and subjective nature of teaching. According to Watkins and Bond (2007) [45] 'meanings exist through the way individuals' experience situations' (p. 291) thus a phenomenographic approach was chosen to explore research questions that inherently focused upon variations in meaning offered through the reliving of teachers' experiences of using a GBA (Marton & Booth, 1997) [46].

As a research framework synonymous with educational and pedagogical development applications, phenomenography has often been used to help answer questions about thinking and learning (see Åkerlind 2008; Entwistle, 1997; Marton, 1986) [47-49]. A phenomenographic approach implies that the 'object of the research is the variation in ways of experiencing phenomena' and its use implies an interest in 'revealing and describing variation, especially in an educational context' (Marton & Booth, 1997, p. 111) [46]. In phenomenography individual voices are not heard as the description and analysis of experience at a collective level is the focus. Furthermore, phenomenography is based on the understanding 'that individuals' capabilities for acting in relation to phenomena are related to how they have learned to experience the meaning of phenomena they are acting toward' (Watkins & Bond, 2007, p. 291) [45]. For this reason an interview programme devoted to providing participants with opportunities to relive their teaching experiences whilst simultaneously investigating the meanings they associate with their experiences was used.

3.4 Data Analysis

In accordance with phenomenographic research analysis procedures, key utterances relating to participants' GBA-related teaching experiences were categorised reflecting the utilisation of analytic induction. A conceptualisation of the framework that guided analysis, known as the outcome space, is outlined in Figure 1:

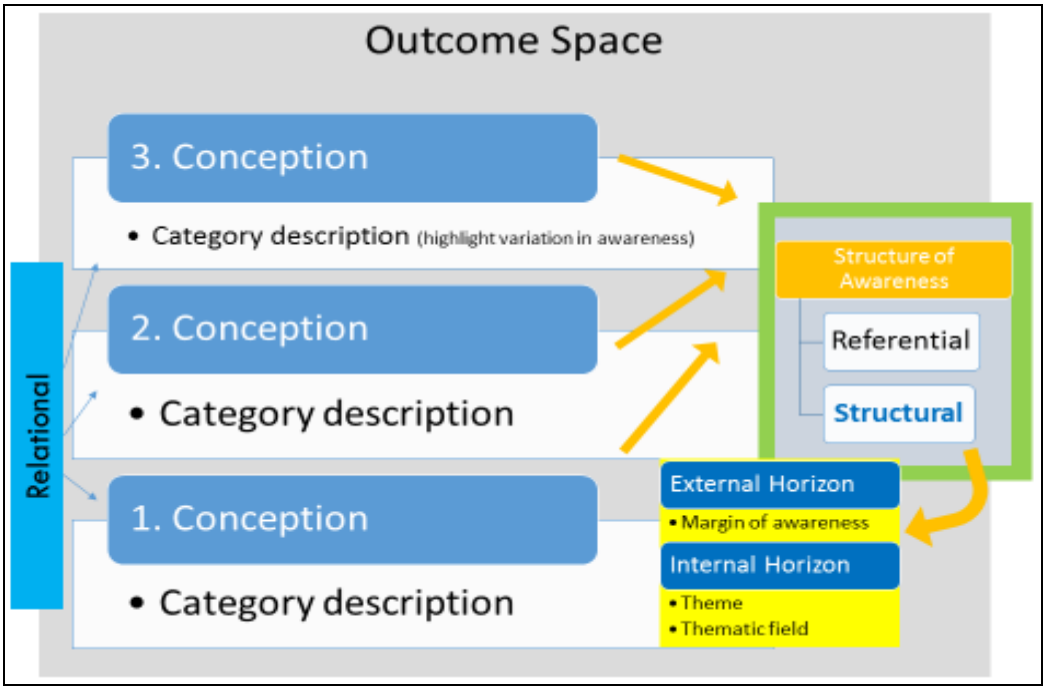

Fig 1: Conceptualisation of the framework that guided analysis

Step one of transcript analysis involved the reading and rereading of all transcripts enabling key utterances to be linked. The second step involved the grouping of similarities and differences in utterances made about GBA-related teaching experience. Referential and structural aspects of the data were then focused upon, specifically the overall meaning being attributed to their GBA-related teaching (referential) as well as what participants' focus of attention was on (structural) (e.g. what element of teaching practice they were focused on). Threads of attention (also known as dimensions of variation) running through and linking each category were then focused upon (Marton & Booth, 1997) [46]. A dimension of variation was determined if present throughout multiple individuals' utterances within each category. The third step of the analysis process was the formulation of a draft set of descriptive categories. The fourth step was the initial development of the outcome space, with particular attention paid to the finalisation of categories and category descriptions. Category descriptions were formulated from selected utterances. The fifth and final step was to assign a name, or metaphor (Larsson & Holmstrom, 2007) [50], to each category.

4. Results

A summary of elements that formulated the outcome space is present in Figure 2 and showcases the presence of three main categories of experience, that being the experience of GBA teaching as a *Learner*, a *Collaborator*, or as a *Catalyst*, along with the five discerned themes of *Questioning [Q]*, *Design of game [DG]*, *Decision making [DM]*, *Engagement [En]*, and *Development opportunity [DO]* that comprise the thematic field.

4.1 Experience of variation

Drawing on the ideas of Dewey (1938) [51], Piaget (1970) [52] and Vygotsky (1978) [53] a teacher's capacity for experiencing GBA teaching is informed by the breadth of previous experiences as a teacher and of the environmental conditions that shaped those experiences. Thus, the nature of teachers' GBA teaching experiences are complex, as is the consideration of how teachers' increasing awareness of the phenomenon (i.e. the experience of teaching using a GBA) influences their capacity to experience the phenomenon. The presence of three categories within the outcome space is suggestive of this growth of awareness as the constitution of categories (and their description) is based on variation in how elements of the experience are discerned. Thus, the categories of *Learner*, *Collaborator*, and *Catalyst* reveal not just participants' increasing awareness of the phenomenon (e.g. as pedagogical choice defined by experience) but also their capacity to experience the phenomenon (e.g. the meaning associated with a GBA-related teaching experience).

An analysis of the differences between experiences at an individual level is not a feature of phenomenographical research, instead a part of the analysis framework directs analysis to be focused upon the differences between category meanings. Three distinct but inclusive meanings (each meaning associated with one specific category of experience) are presented in Table 1.

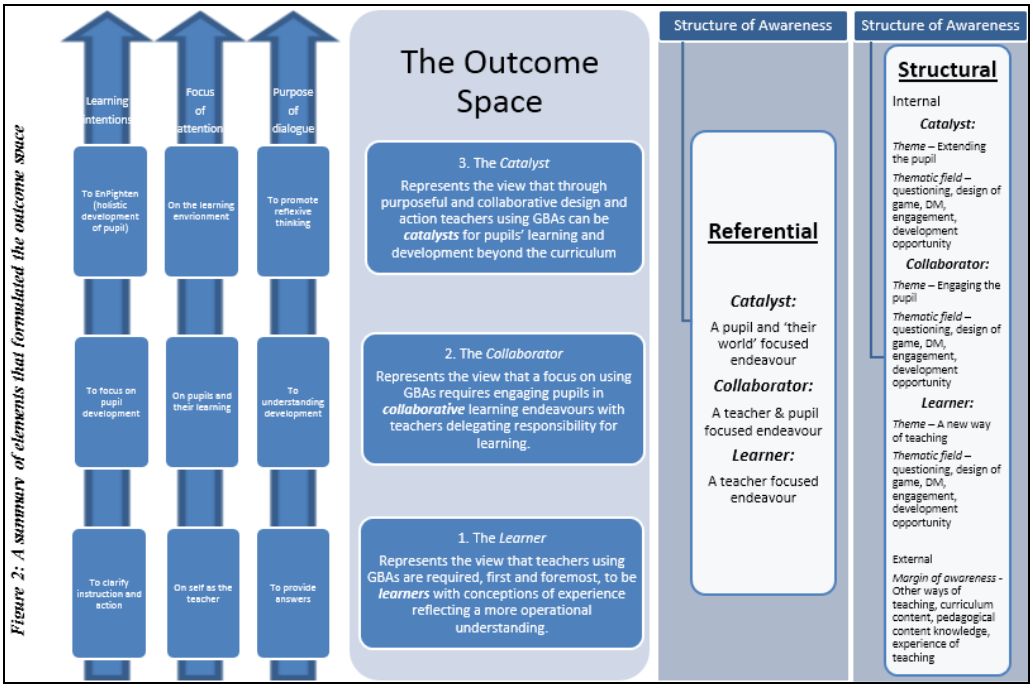

Fig 2: A summary of elements that formulated the outcome space

Table 1: Categories and their associated meaning

Categories of experience	Referential (Meaning) aspect
Catalyst	A pupil and "their world" focused endeavour (PWF)
Collaborator	A teacher and pupil focused endeavour (TPF)
Learner	A teacher focused endeavour (TF)
Note: The three referential aspects depicted above refer to the meaning recognised within and amongst all shared utterances.	

5. Discussion

5.1 Experience of variation as a Learner

As a *Learner* experiencing GBA teaching there was a range of elements discerned across all three threads of expanding awareness. Further analysis of this range, however, reveals limited focus of attention on arguably (from a literature perspective) the two most important elements of GBA teaching – the *Design of game (DG)* and effective *Questioning (Q)*. With regards to the *Design of game (DG)* Harvey (2009, p. 7) [50] stressed the importance of "getting the game right" as a fundamental feature of GBA-related teaching practice so that pupils 'think more about, and within, the game'. This importance should not be under-valued as numerous scholars have attested (Light, 2014; Pearson & Webb, 2008) [55, 56]. There is an art to designing meaningful and purposeful games that provide pupils with opportunities to achieve specific learning outcomes (Webb, Pearson & Forrest, 2006) [57], yet without it being a prominent focus of attention for teachers their GBA-related teaching will be experienced predominantly as a novice with a limited understanding of the nuances associated with GBA teaching. The same can be said with regards to an absence of attention on the element of *Questioning (Q)*. Effective questioning strategies are a central component of the teacher's role in GBA teaching (Hubball, Lambert & Hayes, 2007) [58], yet lower-order questioning that focuses on knowledge recall, such as the questioning strategies evident in the study by McNeill, Fry, Wright, Tan and Rossi (2008) [59] into preservice PE teachers implementation of a GBA on practicum, helps to define GBA teaching experience within the *Learner* category.

Reflecting comments by Harvey and Light (2015) [60] who identified the two areas of game design and effective questioning as being of particular concern for current GBA teaching practice, the findings of this study, particularly within the *Learner* category, expose a similar understanding of experience. Thus, the relationship between these two elements, that being the effect of game design on effective questioning and vice versa, appears synergistic. Pearson and Webb (2008, p. 1) [56] highlight this point through their discussion of a process for effective question construction:

For *questioning* to be effective, it needs to be planned and specific to the outcomes that the teacher requires from the participants… The process involves the teacher analysing the categories of games (invasion, striking/fielding, net/court and target games) and then choosing a sport from one of these categories. Following this the teacher determines the elements to be an effective player using the subcategories: technical, tactical/strategic, cognitive, and rules. *Games* are then *designed* around one of the subcategories or a combination. *Questions* are then designed in each of the subcategories listed above. [Emphasis added]

5.2 Experience of variation as a Collaborator

As a *Collaborator* experiencing GBA teaching there was an even focus of attention on all five themes across all attributes. Of prominence was the greater number of meaning statements (utterances) that were recognised as being attentive to pupil *Decision making (DM)* as opposed to the *Learner* category. Thus, with a more even attention being given to key components of GBA teaching, it could be suggested that teachers experiencing the phenomenon as a *Collaborator* maintained a developing appreciation of the importance that different GBAs place on learning tactics alongside skills. In

reference to Rovegno, Nevett, Brock and Babiarz (2001) [61] such evenness of attention supports the notion that a *Collaborator* has the capacity to experience GBA teaching with an understanding of the interdependence of motor skill execution and decision making as relational characteristics of game play. This is an important development in relation to how teachers experience GBA teaching as it reveals a developing confidence in pedagogical content knowledge. Furthermore, with *Pedagogical content knowledge (PCK)* being one of four aspects of awareness associated with the margin of awareness (e.g. an aspect of awareness that remains on the periphery but still affecting experience) its growing presence as an element of awareness within this category (as opposed to the *Learner* category) suggests an increasing influence on how a teacher's thematic field and theme of attention is structured. This developing confidence in pedagogical content knowledge is affirmed by Utterance 18 below:

It was quite nice in a way and it made me feel a lot more confident with what I was doing with them and it was good to know they were getting something from me and I was giving something to them. (Utterance 18)

5.3 Experience of variation as a Catalyst

As a *Catalyst* experiencing GBA teaching there was a distinct focus of attention on the experience of providing pupils with *Development opportunities (DO)*. Evidence of what and how those development opportunities were experienced by teachers can be found in the form of pupil question asking as relived by the teacher:

Miss, can we take this line of cones out here? It is too hard. (Utterance 68)

Utterance 68 provides an insight into GBA teaching as experienced by a *Catalyst* insofar as the focus of attention remains on the act (and product) of reflexive thinking. The experience here of listening to a pupil suggests an appreciation of pupil voice as a meaningful act of learning. But this experience is more than just a focus of attention on the pupil as the act of providing pupils with a voice gives recognition of their perspective and *their world* as a valid source and focus of learning. Utterance 68 also demonstrates evidence of a pupil 'making or creating their own games' (Quay & Stolz, 2014, p. 23) [62]. The significance of this, as discussed by Quay and Stolz (2014) [62], is that there is a shift in the pupil's learning experience beyond that of the confines of the GBA. By providing an opportunity for the pupil to change the game broadens their environment 'beyond that of a focus on tactical awareness, decision making and skill execution, to involve the game itself' to enable 'game appreciation to be achieved at a deeper level' (p. 23). Thus, associated with GBA teaching being experienced as a *Catalyst* is the recognition of experience as being a *pupil and 'their world' focused endeavour (PWF)*. Utterance 24 highlights this focus again through attention being placed upon a collective endeavour:

We'll try to get you guys to find out the answers through the practise so that during the game you can answer those questions physically on the court. (Utterance 24)

Light (2013) [63] has stated that one of the main features of effective Game Sense teaching is the provision of opportunities for collaborative formulation of ideas/solutions that are tested and evaluated. Utterance 24 speaks directly of this provision as a collaborative approach has been adopted (e.g. "We'll try…") to formulate ideas (e.g. "…find the answers through the practise…") that are then tested in context (e.g. "…you can answer those questions physically on the court"). As a *Catalyst*, the experience of having a priority focus on providing *Development opportunities (DO)* for pupils varies considerably from the *Learner* who experiences GBA teaching with limited recognition of the importance of *game design (DG)* and *Questioning (Q)*. Yet as an inclusive hierarchy suggests, there is potential to develop a more complex understanding of GBA teaching as evidenced by a change in what becomes the predominant focus of attention as well as an expansion of awareness of elements associated with the theme, thematic field, and margin of awareness of specific phenomena. Thus, having a greater awareness of a teachers' focus of attention has implications for the enhancement of pupil learning by way of a more complex understanding and use of a GBA. Such an understanding has implications for PE teacher educators and the structure of PETE programmes.

5.4 Implications for teacher educators

Other than remaining with the status quo, two options for teacher educators are apparent with both at either ends of the 'what can be done' spectrum. The first reflects a movement away from emphasizing a 'new approach' or 'paradigm shift' focus within PETE programmes when offering GBA induction and teaching experiences. As suggested by Pill (2011, p. 120) [2] 'many teachers already teach in a manner not too far removed from a TGfU-GS approach' so that by highlighting starting points for a TGfU-GS approach that are already evident in teaching practice the refinement of existing practice may give the practice of GBA teaching more traction. The second takes heed of Kirk's (2011) [64] suggestion that continual modification and slippage away from truer versions of approaches may undermine pupil achievement. Such a perspective gives rise to the need within PETE programmes to focus on developing a practical and philosophical understanding of a variety of approaches to help preservice PE teachers develop an appreciation for the requirements of more informed pedagogical content knowledge. If we consider the implementation of a longer more intense GBA-related induction within PETE programmes, then there is scope within such programmes to focus on nuanced understanding of a range of approaches (e.g. TGfU *as well as* Game Sense).

It is also incumbent on teacher educators to help preservice PE teachers to experience variation in the way they conceptualise GBA teaching. Thus, when reflecting on the GBA teaching experiences relived as part of this study, Kirk's (2011) [64] comments on the need within PETE programmes to focus on developing a practical and philosophical understanding of a variety of approaches presents as a more suitable inclusion within PETE programmes. A considered and progressive PETE programme that develops knowledge of a variety of approaches and conceptualisations will also help teacher educators avoid a 'dip in and out' approach to GBA induction practices that may restrict continuity of development.

Another implication of study findings relates to teacher educators' utilisation of awareness of teachers' differing experiences of GBA teaching. The implication here is that there is a lack of awareness from teacher educators (and deliverers of in-service PE teacher professional development opportunities) based on the limited evolution of GBA-related learning and development opportunities within PETE (and in-service professional development) programmes. This lack of awareness provides further justification for the nature and

focus of this study, but it also leads to a set of specific PETE recommendations derived from study findings.

5.5 Recommendations for teacher educators

Three main recommendations for PE teacher educators and PETE programmes have been drawn from the analysis of findings. Firstly, the showcasing of effective GBA teaching should be a feature of learning within PETE programmes facilitated through the pairing of preservice PE teachers from different year group cohorts (e.g. a 1st year student being mentored by a 4th year or Masters level student) so that observation, trialling and discussion of practice becomes a key feature of GBA induction practice. Secondly, including stand-alone units/modules within PETE programmes that focus on development of knowledge and teaching experience specific to individual GBAs (e.g. TGfU or Game Sense) should be considered. Such units or modules would require the design of teaching opportunities that bring to the fore a focus on *questioning* and *game design* which would in-turn help the expansion of pre-service teachers' capacities to experience GBA-related teaching. And thirdly, the length of time and volume of opportunities to develop and trial *questioning* and *game design* practice will vary amongst institutions but the GBA teaching experiences relived within this study suggests a longer and more focused period of induction is required. As a side note such development and trialling opportunities should also be afforded to in-service PE teachers with the inclusion of micro-teaching opportunities within in-service teacher professional development days. Such opportunities act as a starting point for the trialling of new pedagogical approaches whilst simultaneously promoting the idea of reflexive thinking.

6. Conclusion

The findings of this study offer an opportunity whereby insight into the collective experiences of GBA teaching obtained through empirical research can be used to inform the teaching practices of the next wave of physical education teachers in schools. With the experience of GBA teaching being categorised as that of a *Learner*, a *Collaborator*, or as a *Catalyst,* implications and recommendations for in-service teachers and teacher educators were made and included the provision of meaningful opportunities to enhance the development of *questioning* and *game design* protocols. This focus on the provision of meaningful learning opportunities is doubly important as it not only helps to promote authentic development of GBA-related teaching practice but also because the place of PE in the curriculum is at a cross roads (O'Sullivan, 2015) [65]. Experiences of PE in the school curriculum - by teachers, pupils and other stakeholders in the school community - will play a significant role in the subjects continued inclusion in the school curriculum with the findings of this study bringing further attention to the need for reflexive consideration of pedagogical content knowledge development opportunities within current PETE programmes.

7. References

1. Jarrett K. What else can I do? Radical suggestions to help physical education teachers successfully implement a game based approach to teach games. Achper Act & Hea Mag 2015; 22(2/3):27-30.
2. Pill S. Teacher engagement with teaching games for understanding-game sense in physical education. J. Phys. Edu. &. Sp. 2011; 11(2):115-123.
3. Tudela A. Discourses of experience: The disciplining of identities and practices in student teaching. Aust. J. Teach. Ed. 2014; 39(3):153-164.
4. Keck C. Getting to the heart of teacher experience: The journeying of reflexivity, self-study and conscious attention. Inno.Edu. 2015; 15(67):21-48.
5. Sönmez D. Creating meaningful experiences for pre-service teachers: Thoughts and experiences on an elective course. Int. J Prog. Ed. 2015; 11(2):29-38.
6. Light R, Evans J. Dispositions of elite-level Australian rugby coaches towards game sense: characteristics of their coaching habitus. Sp. Ed. Soc. 2013; 18(3):407-423.
7. Light R. Complex learning theory–its epistemology and its assumptions about learning: Implications for physical education. J. Teach. Phys. Ed. 2008; 27(1):21-37.
8. Applefield J, Huber R, Moallem M. Constructivism in Theory and Practice: Toward a Better Understanding. High Sch. J. 2001; 84(2):35-53.
9. Lawson HA. Occupational socialization and the design of teacher education programs. J. Teach. Phys. Ed. 1986; 5:107-113.
10. Deenihan J, MacPhail A, A preservice teacher's delivery of sport education: Influences, difficulties and continued use. J. Teach. Phys. Ed. 2013; 32:166-185.
11. Richards K, Templin T, Graber K. The socialization of teachers in physical education: Review and recommendations for future works. Kines. Rev. 2014; 3:113-134.
12. Curtner-Smith MD, Hastie PA, Kinchin GD. Influence of occupational socialization on beginning teachers' interpretation and delivery of sport education. Sp. Ed. Soc. 2008; 13(1):97-117.
13. Van Maanen J, Schein E. Toward a theory of organisational socialization. In B Shaw Ed, Research into Organisational Behaviour. JAI Press, Greenwich, 1979, 209-261.
14. Lee H, Curtner-Smith M. Impact of occupational socialization on the perspectives and practices of sport pedagogy doctoral students. J. Teach. Phys. Ed. 2011; 30:296-313.
15. Morgan P, Bourke S. Non-specialist teachers' confidence to teach PE: The nature and influence of personal school experiences in PE. Phys. Ed. Sp. Ped. 2008; 13:1-29.
16. Wanyama M, Quay J. The challenges of teaching physical education: Juxtaposing the experiences of physical education teachers in Kenya and Victoria (Australia). Afri. J. Phys. Hea. Ed. Rec. Dan. 2014; 20(2:2):745-754.
17. Elliot D, Campbell T. Really on the ball: Exploring the implications of teachers' PE-CPD experience. Sp. Ed. Soc. 2015; 20(3):381-397.
18. Rossi A. Knowledge, identities, and dilemmas of the self in physical education teacher education (Doctoral thesis) 1999. Retrieved from: http://dro.deakin.edu.au/view/DU:30023480
19. Barker D, Rossi T. Understanding teachers: The potential and possibility of discourse analysis. Sp. Ed. Soc. 2011; 16(2):139-158.
20. Harvey S, O'Donovan T. Pre-service physical education teachers' beliefs about competition in physical education. Sp. Ed. Soc. 2013; 18(6):767-787.
21. Green K. Physical education teachers in their figurations: a sociological analysis of everyday 'philosophies'. Sp. Ed. Soc. 2002; 7(1):65-83.
22. Moy B, Renshaw I, Davids K. Variations in acculturation and Australian PETE students' receptiveness to an

alternative pedagogical approach to games teaching. Phys. Ed. Sp. Ped. 2014; 19(4):349-369.
23. Butler J. TGfU pet-agogy: old dogs, new tricks and puppy school. Phys. Ed. Sp. Ped. 2005; 10(3):225-240.
24. Aelterman N, Vansteenkiste M, Van den Berghe L, De Meyer J, Haerens L. Fostering a need-supportive teaching style: Intervention effects on physical education teachers' beliefs and teaching behaviors. J. Sp. Ex. Psych. 2014; 36:595-609.
25. Light R, Mooney A. Introduction. In R. Light, J Quay, S Harvey, A Mooney Eds, Contemporary developments in games teaching. Routledge, London, 2013, 1-12.
26. Light R. The social nature of games: Australian preservice primary teachers' first experiences of teaching games for understanding. Eur. Phys. Ed. Rev. 2002; 8(3):286-304.
27. Oslin J, Mitchell S. Game-Centred Approaches to Teaching Physical Education. In D Kirk, D MacDonald, M O'Sullivan Eds, the Handbook of Physical Education. Sage, London, 2006, 627-651.
28. Harvey S, Jarrett K. A review of game centred approaches to teaching and coaching literature since 2006. Phya. Ed. Sp. Ped. 2014; 19(3):278-300.
29. Stolz S, Pill S. Teaching games and sport for understanding Exploring and reconsidering its relevance in physical education. Eur. Phys. Ed. Rev. 2014; 20(1):36-71.
30. Bunker D, Thorpe R. A model for the teaching of games in secondary schools. Bull. Phys. Ed. 1982; 18(1):5-8.
31. Light R. Coaches' experiences of games sense: Opportunities and challenges. Phys. Ed. Sp. Ped. 2004; 9(2):115-131.
32. Launder A. Play Practice: The games approach to teaching and coaching sports. Human Kinetics, Champaign, 2001.
33. Mitchell S, Oslin J, Griffin L. Teaching sport concepts and skills: A tactical games approach (2nd ed), Human Kinetics, Champaign, 2006.
34. Gréhaigne JF, Wallian N, Godbout P. Tactical-decision learning model and students' practices. Phys. Ed. Sp. Ped. 2005; 10(3):255-269.
35. Kroger C, Roth K. Ball School-An introduction to game play. Hofmann, Schorndorf, 2005.
36. López-Ros V, Castejón FJ. Técnica, táctica individual y táctica colectiva. Teoría de la implicación en el aprendizaje y la enseñanza deportiva (I). Revista de Educación Física. Renovar la teoría y la práctica, 1998; 68:5-9.
37. Mesquita I, Farias C, Hastie P. The impact of a hybrid sport education–invasion games competence model soccer unit on students' decision making, skill execution and overall game performance. Eur. Phys. Ed. Rev. 2012; 18(2):205-219.
38. Rossi T, Fry J, McNeill M. Tan C. The games concept approach (GBA) as a mandated practice: Views of Singaporean teachers. Sp. Ed. Soc. 2007; 12(1):93-111.
39. Li C, Cruz A. Pre-service PE teachers' occupational socialization experiences on teaching games for understanding. New Hor. in Ed. 2008; 56(3):20-30.
40. Dudley D, Baxter D, Assessing levels of student understanding in pre-service teachers using a two-cycle SOLO model. Asia-Pac. J. Teach. Ed. 2009; 37(3):283-293.
41. Casey A, Dyson B. The implementation of models-based practice in physical education through action research, Eur. Phys. Ed. Rev. 2009; 15(2):175-199.
42. Diaz-Cueto M, Hernandez-Alvarez J, Castejon F. Teaching games for understanding to in-service physical education teachers: Rewards and Barriers Regarding the changing model of teaching sport. J. Teach. Phys. Ed. 2010; 29(4):378-398.
43. Vermersch P. L'entretien d'explicitation. Nathan, Paris, 1994.
44. Jarrett K, Mouchet A, Harvey S, Scott C, Light R. Using elicitation interview within a phenomenographic framework: Developing the breadth of research designs associated with game-based approaches. Agora for Phys. Ed. Hea. 2014; 16(3):291-306.
45. Watkins M, Bond C. Ways of experiencing leisure. Leis.Sci: An Interdisc. J. 2007; 29(3), 287-307.
46. Marton F, Booth S. Learning and awareness. Lawrence Erlbaum, Mahwah, 1997.
47. Åkerlind G. A phenomenographic approach to developing academics' understanding of the nature of teaching and learning. Teach.High.Ed. 2008; 13(6):633-644.
48. Entwistle N. Introduction: phenomenography in higher education. High. Ed. Res. Dev. 1997; 16:127-134.
49. Marton F. Phenomenography: A research approach to investigating different understandings of reality. J.Thought 1986; 21:28-49.
50. Larsson J, Holmstrom I. Phenomenographic or phenomenological analysis: Does it matter? Examples from a study on anaesthesiologists' work. Int. J. Qual. Stud. Hea. Wel. 2007; 2:55-64.
51. Dewey J. Experience and Education. Collier Books, New York, 1938.
52. Piaget J. Science of Education and the Psychology of the Child. Orion Press, New York, 1970.
53. Vygotsky LS. Mind in society: The development of higher psychological processes. Harvard University Press, Cambridge, 1978.
54. Harvey S. A Study of Interscholastic Soccer Players Perceptions of Learning with Game Sense. Asian J. Ex. Sp. Sci. 2009; 6(1):1–10.
55. Light R. Positive pedagogy for physical education and sport. In R Light, J Quay, S Harvey, A Mooney Eds, Contemporary development in games teaching. Routledge, London, 2014, 29-42.
56. Pearson P, Webb P. Developing effective questioning in Teaching Games for Understanding (TGfU). Paper presented at 1st Asia Pacific Sport in Education Conference: Ngunyawaiendi Yerthoappendi Play to Educate, Adelaide, 2008. Retrieved from: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1054&context=edupapers
57. Webb P, Pearson P, Forrest G. Teaching Games for Understanding (TGfU) in primary and secondary physical education. Paper presented at ICHPERSD International Conference for Health, Physical Education, Recreation, Sport, and Dance 1st Oceanic Congress, Wellington, New Zealand, 2006. Retrieved from: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1075&context=edupapers
58. Hubball H, Lambert J, Hayes S. Theory to Practice: Using the Games for Understanding Approach in the Teaching of Invasion Games. Phys. Hea. Ed. J. 2007; 73(3):14-20.
59. McNeill M, Fry J, Wright S, Tan C, Rossi, T. Structuring time and questioning to achieve tactical awareness in

games lessons. Phys. Ed. Sp. Ped. 2008; 13(3):231-249.
60. Harvey S, Light R. Questioning for learning in game based approaches to teaching and coaching. Asia-Pac. J. Hea. Sp. Phys. Ed. 2015; 6(2):175-190.
61. Rovegno I, Nevett M, Brock S, Babiarz M. Teaching and learning basic invasion-game tactics in 4th grade: A descriptive study from situated and constraints theoretical perspectives. J. Teach. Phys. Ed. 2001; 20(4):370-88.
62. Quay J, Stolz S. Game as context in physical education: A Deweyan philosophical perspective. In R Light, J Quay, S Harvey, A Mooney Eds, Contemporary development in games teaching. Routledge, London, 2014, 15-28.
63. Light R. Game sense: Pedagogy for performance, participation and enjoyment. Routledge, London, 2013.
64. Kirk D. The normalization of innovation, models-based practice, and sustained curriculum renewal in PE. Paper presented at AIESEP Conference, Limerick, Ireland, 2011.
65. O'Sullivan M. A crisis of confidence and leadership: Key challenges for Physical Education Teacher Education. The University of Melbourne/ACHPER Victoria, Dean's Lecture Series-Fritz Duras Lecture, Melbourne, Australia. 2015.