Premier’s Australian College of Physical Education PDHPE Scholarship

A Game Centred Approach for Enhancing Quality Teaching and Improving Student Learning Outcomes in PDHPE

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The NSW Department of Education and Training (DET), Quality Teaching Framework (QTF) was developed in 2003[[1]](#footnote-1)1, establishing a common understanding of quality pedagogy. It emphasises that pedagogy focusing on high levels of intellectual quality benefits students. The framework illustrates the importance of a quality learning environment and the relevance of linking students’ work to personal, social and cultural contexts outside of the classroom. However, the framework presents serious challenges for Physical Education teachers whose practice in the teaching of games has focused on mastering technique and guided by the idea of learning as the mere acquisition of skills (Light, 2002). Furthermore, it is believed that traditional approaches to teaching games and sport are incapable of meeting worthwhile educational outcomes and continue to alienate and marginalise less skilled and less confident students (Ennis, 1999).

A Shift in Pedagogy

A considerable body of literature suggests that the challenge presented by the QTF can be met by shifting the teaching of games from a technique-led approach; to a game centred approach (GCA) as an alternative (Curry & Light, 2007, Pearson, Webb & McKeen, 2006). GCA’s offer educators the opportunity to highlight the intellectual dimensions of games while providing stimulating and satisfying learning experiences for their students.

The introduction of the Personal Development, Health and Physical Education (PDHPE), Years 7–10 Syllabus (NSW, BOS, 2005)[[2]](#footnote-2)2 reflected this pedagogical shift. The syllabus incited changes to both the content and the teaching strategies traditionally utilised by PDHPE teachers, particularly within the teaching of games (Pearson, Webb & McKeen, 2006). These changes to the syllabus clearly reflected the shift towards a GCA, which encouraged physical educators to move from traditional, teacher-directed approaches of skill-drill practices, to more student-centred approaches where students are encouraged to explore different ways of moving in order to investigate quality performance.

Like with any ‘new’ innovation, GCA’s have been met with some resistance, especially from established teachers and young teachers trying to initiate change (Tan, et al. 2002). Physical educators in Australia have been slower to adopt student-centred, inquiry-based approaches than most other subject areas (Light & Georgakis, 2005). In physical education there is more entrenched resistance and a conception of physical education, as being located outside the academic curriculum due its concern with the physical aspects of learning and an apparent neglect of the intellectual (Light & Fawns, 2003). This has resulted in a slower shift towards GCA’s, with Game Sense pedagogy yet to make a significant impact upon teaching in NSW (Forrest, Webb and Pearson, 2006).

The study focus

The main focus of this study was to investigate:

* 1. How a Game Centred Approach can support the dimensions of pedagogy outlined in the QTF, with an aim to improve students’ learning outcomes within PDHPE.
  2. How, as PDHPE teachers, can we use Game Centred Approaches to provide high quality learning and maximise the students learning experience.

Through investigating the origins and pedagogies of GCAs, it was hoped that a deeper understanding of these approaches could be gained. The study aimed to gain further insight into the delivery and application of GCA’s, in order to support implementation in a school PDHPE context and providing physical educators with a means of offering high quality learning.

Methodology

Information was gathered mainly through semi-structured interviews with academics renowned in the field of GCA and with the pioneers of the TGFU approach. The timing of the study tour was situated around the 5th International TGFU and participating in the Masters in Education Course on Curriculum Innovations in PE.

The report focuses heavily on information gathered from interviews with Dr. Shane Pill[[3]](#footnote-3), Mr. Greg Forrest[[4]](#footnote-4) and Dr. Dean Dudley[[5]](#footnote-5), as their research and academic background is more pertinent to the study of GCA’s here in Australia. It is important to note that the content included has been paraphrased for the purpose of this report.

Background to GCAs.

Bunker and Thorpe (1982) were responsible for the significant movement in Physical Education towards Game Centred pedagogy. They first proposed Teaching Games for Understanding (TGfU) whilst working at Loughborough University, UK in the 1980s. As a result of their research, a series of papers emerged[[6]](#footnote-6), since then numerous publications, conferences, presentations, and workshops have been developed to discuss the thinking and concepts behind TGfU.

Almost three decades after the Bunker and Thorpe article (1982), outlining this approach for teaching games in secondary schools; teachers and coaches are still embracing the notion provided by this approach and suggested pedagogy. The philosophical underpinnings of TGfU, align more closely with humanistic, child-centred, and constructivist ideals (Butler & Griffin 2010). Its pedagogical principles have had an impact upon teaching in schools and clubs across a range of cultural settings such as in the United Kingdom, New Zealand, France and Singapore. In Singapore a GCA was mandated by the Ministry of Education in 1999.

A range of derivatives have pioneered innovative pedagogies as a result of TGfU. The ‘Play Practice’ method (Launder, 2001) was introduced, driven by the need to find worthwhile alternative to traditional approaches. Slade (2010) captures aspects of the game model methodologies in his book ‘Transforming Play’. Kirk & MacPhail’s (2002) and Holt, Strean and Bangoechea (2002) provide templates for instruction in games. Australian’s are more familiar with the ‘Game Sense’ approach which became prominent in the coaching arena, as a result of Thorpes Fellowship tour to Australia in 1992. Pill explains that ‘Game Sense’ is a sport-specific iteration of the TGfU model.

Game Centered Approaches (GCA) is now the commonly accepted term used to describe the numerous derivatives that share similar pedagogical principles and curriculum direction with TGfU.

Major insights

The major insights from this study are presented under the following themes:

* Pedagogy and Practice
* Syllabus Links
* Students Learning
* Quality Teaching
* Implications for the Teacher
* Curriculum design
* Assessment and Reporting
* Future Directions

Pedagogy and Practice

GCA pedagogy is concept based and student-centered, focusing on the tactical considerations of the game. GCAs provide a learning environment where every student is able to participate in decision-making based on tactical awareness thereby retaining an interest and involvement in the game (Thorpe, Bunker, Almond 1986). The traditional ‘how?’ to perform the skill is taught after providing the context of ‘why?’ the skill is needed. Skill execution and performance are only emphasized after the student identifies the need for the skill (Werner, Thorpe and Bunker, 1996).

Dudley suggests that GCAs present a more realistic view of what games are about i.e. teamwork, communication, decision-making; rather than technical skills in isolation. Pill advocates that a small-sided games approach intensifies engagement and provides more opportunity for skilled learning in the games context.

Bunker Thorpe and Almond (1986) presented four pedagogical principles fundamental to GCAs. The principle of ‘sampling’ different game forms; providing modifications through ‘representation’ of the game version, ‘exaggeration’ of tactical concepts and ensuring the games’ ‘tactical complexity’ is developmentally appropriate. Sampling uses different game forms, demonstrating the similarities between games within each game category e.g. demonstrating the importance of creating space in invasion games. Representation involves modifying the game to represents the more advanced version of the game, so that students are more able to succeed e.g. playing Newcomb as a representation of Volleyball. Exaggeration is the process of exaggerating tactical concepts to highlight a particular game concept e.g. having more attackers than defenders in invasion games. Finally tactical complexity takes the students development level into consideration, ensuring the games created match their ability and progress with the learner e.g. increasing tactical complexity by moving from a 4v1 to a 4v2.

Syllabus Links

The move towards GCA pedagogy is evident in the in the syllabus content and terminology. The syllabus outcomes require students not only to participate, but also to be cognitively involved in games (Pearson et al 2006). The TGfU game classification system is evident through the syllabus outcomes where students are required to demonstrate movement skills through the games categories of target, striking/fielding, invasion and net/court. The syllabus places more emphasis on decision-making and problem solving skills and building tactical and strategic understanding. Pearson et al (2006) suggest that the progression from stage 4 to stage 5 also reflects GCA principles by requiring students to demonstrate a greater capacity for critical thinking and problem solving.

Discussion with Forrest highlighted the fact that, despite this apparent shift towards GCA pedagogy, the syllabus still places a heavy emphasis on participation and the acquisition of movement skills, where the desired learning returns to mastering technique. This may explain why teachers fall back on more traditional methods of practice.

Concern was expressed by the academics for the capacity of school Physical Education programs, to provide adequate learning opportunities for students to develop movement competence and expertise. Research suggests that it takes on average 10,000 hours of training for a talented player to reach elite levels, which translates to slightly more than three hours of practice daily for ten years (Ericsson and Charness, 1994). Furthermore, it takes between 240 and 600 minutes of instruction time for the average student to become proficient in one fundamental movement skill (Department of Education, Victoria, 1996).

The PDHPE Syllabus has been designed so that students would typically achieve the standards described in the outcomes and content in 300 hours. There is simply not enough time in school for Physical Education Teachers to provide worthwhile learning opportunities that can meet these skill and technique based outcomes.

Students Learning

Bunker and Thorpe (1982) suggest that teaching students’ skills that many may never be able to achieve and in some cases, some students have already mastered is not valuable. GCAs provide opportunities for students to participate in modified games which allows 'the game' to develop and the teacher to assist specific individuals or small groups with their own technical needs. Pill explains that GCAs place the learner and their development central to the learning process where activities are appropriately modified to suit their developmental level. Students develop cognitive structures as well as physical capacity. They learn to make sense of the environment they have been put in and are encouraged to anticipate the most appropriate response based on the context.

Forrest challenges physical educators to rethink what they believe learning to be. He encourages physical educators to adopt a broader concept of skill, shifting learning to a more strategic understanding over purely acquisition of movement skill, which is inherent with GCAs. He challenges physical educators to revisit what the students have actually learnt at the end of the lesson. He suggests it is less likely students will have been able to master a movement based skill over concept or tactical based content. Dudley states that skill will only get us so far; a higher learning is required to make better players and for students to become more proficient.

Quality Teaching

The NSW QTF encourages educators to provide high quality learning across the curriculum. GCA pedagogy is said to provide an ideal means for physical educators to address the three dimensions of quality pedagogy outlined by the framework when teaching games (Curry and Light’s, (2007); Pearson, Webb and McKeen (2005).

GCAs highlight the intellectual dimension of the game by challenging thinking and offers teachers the capacity to differentiate games so that they are more significant to the learner. Pill suggests that physical educators may not have enough time in a lesson to see improvement in physical performance but there is the opportunity to improve the cognitive structures to improve performance.

Pill explains that GCAs encourage learners to participate in games that are pitched to the zone of proximal development and are at the level of optimal challenge. The student centred nature of GCA allows physical educators to differentiate learning activities to meet the individual needs of the students, unlike a traditional didactic, skill-based approach.

Implications for the Teacher

Pill states that the teachers’ role is central to the efficacy of the learning with GCAs. Dudley explains that GCAs require a facilitator’s role of the teacher, so that players take on more responsibility for their own development and learning. He suggests that the key to successful implementation is questioning. The emphasis of teaching needs to be on the play, where tactical and strategic problems are posed in a modified game environment, ultimately drawing upon students to make decisions.

A prominent implication expressed by all interviewees, was the demand for higher level of pedagogical content knowledge (PCK) from the teachers when using GCAs. Pill suggests, if teachers do not have the understanding of pedagogy to vary practice or the content knowledge to pick up on the mechanics that might need correction to improve performance, then they will not improve students’ learning. Forrest emphasises, that in order to facilitate quality learning with GCA pedagogy, teachers need to know what they are looking for in the game; if they do not they will revert to providing feedback based on movement performance, as it is easier to provide technique-based feedback

Pill reinforces that teachers have to be very good learners in order to be good implementers of GCA pedagogy. They need the capacity to know when to intervene and when to ask the right questions. The ability to direct attention in the right areas is critical to the understanding. The strength of the learning is directly related to the capacity of the teacher to construct the learning environment

Dudley stresses the importance of feedback. He suggests that teachers are under the misconception that the feedback they give students, is the most important feedback they will receive. It is the feedback that teachers get from their students that makes them change their teaching to cater for the needs of the learner that is the most important.

Dudley explains that teachers need to plan and change decisively. They need to be able to adapt and adjust the flow for the lesson to ensure the learning outcomes are met. He states that it is not what the teacher does but what they get the students to do, that counts. Teachers need to change the way they teach to ensure students are moving towards the intended learning outcome.

Curriculum design

GCA introduces learning activities around the concepts of space, attack and defence instead of the systematic sequencing of the skills lesson. Learning progression is offered by delivering games education through themes where games are classified into four basic categories based on their physical properties (Ellis, 1981) or their primary rules (Almond, 1986, Werner, et al, 1996). This provides students with a continuous experience through school years in which experiences are selected to provide progression and balance (Werner, Thorpe and Bunker, 1996).

GCAs present implications for programming and curriculum design; particularly when they are based on seasonal delivery of sports. The games classification system challenges PDHPE scope and sequences to move away from a curriculum dominated by certain types of sports (Bunker, Thorpe and Almond, 1982). This requires physical educators to rethink the structure of their curriculum. PDHPE scope and sequences need to reflect the order of tactical complexity presented by the games categories. Programs should start with target games, strike field games, build through to net/wall games and finally finish with the most tactically complex of invasion games.

Dudley encourages ‘Backward Mapping’ that not only starts with assessment but also specifically looks at the reporting process. Traditionally assessment and reporting in games has focused on skills, knowledge and fitness. Dudley challenges educators to create informative assessments for games that guide program design.

Dudley suggests that reporting procedures are one of the largest impetuses for facilitating change in teaching practice. Physical educators need to shift their reporting procedures to focus on the cognitive process. Performance needs to be judged on how much thinking the student has done and suggests that this should be the premise of reporting procedures.

Future Directions

The desired outcome of this study was to devise Game Centred resources and professional development opportunities that provide high quality learning in line with the NSW PDHPE syllabi. However, in conducting the many interviews throughout the study, concern was expressed about creating ‘yet another resource’ that simply branded GCAs and provide a very rigid way of presenting such dynamic learning where teachers are encouraged to adapt the lesson on the spot to meet the demands of their students, as a result of their observations within the context of the lesson. Providing professional development opportunities and establishing communities of practice were the preferred medium for providing support for teachers.

Pill suggests that professional development needs to be offered around questioning, so that it is developed as central to the lesson plan. This is a big shift from teacher objective and content. It is important for teachers to consider what answers they might get and not give up on the question if they do not get the right answer or the answer they were looking for.

Communities of practice need to be developed that link teachers, coaches and academics in order to grow practice. The research of academics must reach teachers in schools if a difference is to be made. Almond (2012)[[7]](#footnote-7)6 suggests that there needs to be more participatory action research. Moreover, teachers need to embrace the opportunity to take on pre-service teacher and see it as an opportunity to facilitate learning and professional development in their schools.

Forrest suggests that Physical Education programs move away from the constraints of games classification and the emphasis on participation and movement skill. He suggests the focus should be on developing programs of work are based on teaching the underlying principles of play. Instead of teaching in games categories, programs are developed in categories such as decision-making.

The new Australian Curriculum, developed by Australian Curriculum, Assessment and Reporting Authority (ACARA) offers educators the opportunity to reconfigure what and how we teach. It is important the syllabus writers provide content with substance. This study tour has certainly highlighted the need for the content, pedagogy and practice to reflect a more dramatic shift towards Game Centred Approaches.

References

Bunker, D., & Thorpe, R. (1982). A model for the teaching of games in secondary schools. Bulletin of Physical Education, 18(1), 5-8.

Bunker, D., & Thorpe, R. and Almond (1986). Rethinking Games Teaching [Loughborough: University of Technology, Loughborough.](http://www.tgfu.org/articles/PHED%20RETHINKING%20GAMES.pdf)

Curry, C. & Light, R. (2007) Addressing the NSW Quality Teaching Framework in physical education: Is Game Sense the answer? Proceedings of the Asia Pacific Conference on Teaching Sport and Physical Education for Understanding.

Forrest, G. Webb, P. & Pearson, P. (2006). Teaching Games for Understanding

(TGfU): A model for pre-service teachers. Conference proceedings for ICHPER 1st Oceania Congress, Wellington, New Zealand, 1-4

Georgakis, (2006). From drills to skills to Game Sense: The meta-cognitive revolution in physical education. 2006 Proceedings for the Asia Pacific Conference of Teaching Sport and Physical Education for Understanding (pp. 45 - 58). Sydney: University of Sydney.

Griffin, L., & Butler, J. (Eds.). (2010). More Teaching Games or Understanding Champaign, IL: Human Kinetics

Light, R. (2002). The social nature of games: Pre-service primary teachers’ first experiences of TGfU, European Physical Education Review. 8(3), 291-310.

Pearson, P., Webb, P. & McKeen, K. (2006). Linking Teaching Games for Understanding and Quality Teaching in NSW Secondary Schools. Teaching Games for Understanding in the Asia-Pacific region, Hong Kong: Hong Kong Institute of Education, 37-46.

Tan, S., Wright, S., McNeill, M., Fry, J., & Tan, C. (2002). Implementation of the games concept approach in Singapore schools: A preliminary report. Review of Educational Research and Advances for Classroom Teachers, 21(1), 77-84.

[Webb, P. I.](https://misprd.uow.edu.au/ris_public/WebObjects/RISPublic.woa/wa/Staff/selectPerson?id=3430&group=9), [Pearson, P. J.](https://misprd.uow.edu.au/ris_public/WebObjects/RISPublic.woa/wa/Staff/selectPerson?id=3304&group=9) & [Forrest, G. J.](https://misprd.uow.edu.au/ris_public/WebObjects/RISPublic.woa/wa/Staff/selectPerson?id=26271&group=9) (2006). [Teaching games for understanding (TGfU) in primary and secondary physical and sport education](http://ro.uow.edu.au/edupapers/74/). In R. Brooker (Eds.), *Health Physical Education Recreation Sport Dance Oceania Congress 2006* (pp. 1-11). Upper Hutt, NZ: PENZ.

Werner, P., Thorpe, R., & Bunker, D. (1996). Teaching games for understanding: evolution of a model. The Journal of Physical Education, Recreation & Dance, 67(1), 28-33.

1. 1 For more information on the NSW QTF see New South Wales Department of Education and Training. (2003b). *Quality teaching in NSW public schools: A discussion paper*. Ryde, NSW: Author. [↑](#footnote-ref-1)
2. 2 All future reference to ‘the syllabus’ will be directed towards the Personal Development, Health and Physical Education (PDHPE), Years 7–10 Syllabus (NSW, BOS, 2005). [↑](#footnote-ref-2)
3. Dr. Shane Pill, *Flinders University, Adelaide.* Senior Lecture in Physical Education Studies. Interview on 16th June 2012. [↑](#footnote-ref-3)
4. Mr Greg Forrest, University of Wollongong, *,* Lecturer of Health & Physical Education with special interest in the pedagogy of games and sport education. Interview on 18th June 2012. [↑](#footnote-ref-4)
5. Dr. Dean Dudley, *Charles Strut University, Bathurst,* Lecturer of Health & Physical Education. Interview on 19th July 2012 [↑](#footnote-ref-5)
6. The Bulletin of Physical Education, (1982) and a book titled Rethinking Games Teaching (1986) were the two papers that pioneered the TGfU approach. [↑](#footnote-ref-6)
7. 6 The information presented is from the personal interview conducted with Len Almond, as part of this study tour. The content has been paraphrased for the purpose of this report. [↑](#footnote-ref-7)