‘Taking away the scary factor’: Female pre-service primary school teachers’ responses to game sense pedagogy in physical education

Richard Light
The University of Sydney, Australia
r.light@edfac.usyd.edu.au

Steve Georgakis
The University of Sydney, Australia
s.georgakis@edfac.usyd.edu.au

Abstract: This paper reports on a study of pre-service primary school teachers’ first experiences of a physical education unit of study using Games Sense pedagogy at an Australian university. Game Sense is a student-centered, inquiry-based approach to teaching games and sport.

Keywords: physical education, game sense, pedagogy, physical education teacher preparation

Introduction
Alternate approaches to teaching games and sport developed over the past two decades such as Teaching Games for Understanding (Bunker & Thorpe, 1982), Sport Education and Game Sense (see for example, den Duyn, 1997; Light, 2004) offer great potential for making learning in and through games and sport more meaningful, more satisfying and more educationally valuable than traditional practice. Underpinned by social constructivist learning theory, they have been attracting increasing research attention over the past decade and have made an impact upon teaching in schools and clubs across a range of cultural settings. The teaching of games and sport in the new 2005 NSW Personal Development, Health and Physical Education (PDHPE) syllabus follows a Game Sense approach and this is a promising development for physical education in NSW. However, while a growing number of teacher education programs expose pre-service teachers to Teaching Games for Understanding (TGfU) and its variation such as Game Sense both in Australia and elsewhere research suggests that most teachers continue to focus on the refinement of sport-related skills as the core of their physical education programs. Despite exposure to these new approaches beginning physical education teachers tend to revert to conventional practice during the early years of their teaching (Evans & Clarke, 1988; Macdonald & Glover, 1997). The general resistance to TGfU, Game Sense and other innovations in games teaching is largely due to the ways in which these pedagogical approaches challenge long-established ‘traditional’ practices and views of what constitutes good teaching (Butler, 1996; Kirk & Claxton, 1999, Light, 2002).
The vast majority of teachers graduating from generalist primary school teacher education programs are female and it is these teachers that will be responsible for teaching physical education and sport. Research on females’ experiences of physical education and sport indicates that the majority of them have poor experiences of the subject at school and lack confidence and the inclination to teach physical education. Females are also more marginalized from sport and games by the dominant, top down, direct instruction teaching that characterizes traditional approaches and which could be seen as a masculinist approach to teaching. With this in mind, this study focuses on the responses of female pre-service primary teachers to their first unit of study on teaching physical education that emphasized the Game Sense approach to teaching games and sport.

The game sense approach
Game Sense is an Australian variation of Bunker and Thorpe’s (1983) Teaching Games for Understanding model developed through collaboration between Thorpe, The Australian Sports Commission and Australian sports coaches in the mid-1990s (Light, 2004). It is student-centred, inquiry-based approach that contextualizes all learning within games modified to suit the abilities and inclinations of the students. Units of study begin with games modified to reduce skill demands enough to allow all students to engage in play and focus on the tactical dimensions of the game. Modified games are presented as problems to be solved and guided by teacher questioning. Modified games reduce demands on skill or technique and allow students to focus on thinking, tactical understanding and decision-making. Teacher questioning is used to stimulate thinking in preference to direct instruction. In between periods of activity students reflect on ideas and concepts through group discussion and the lesson draws on student knowledge to inform play and scaffold on this knowledge as games become more complex. For example in basketball, students may begin with a game of two verses one ‘keepings off’ or ‘piggy in the middle’ where the aim for the two in possession is to make as many passes as possible in thirty seconds. The teacher will encourage them to explore movement off the ball, types and timing of passes, communication, presenting a target for the ball carrier to pass to and other tactics such as fakes. At the same time the teacher encourages the defender to think about things such as whether or not to pressure the ball carrier or the receiver. The students are rotated regularly and through questioning encouraged to talk and think about how to solve the range of problems that typically arise in this game and the full game of basketball while developing a range of techniques within a meaningful situation. Learning to play any game involves problem solving, decision-making and responding to cues (Kirk & MacPhail, 2002) as processes that are essentially intellectual. The Game Sense approach can focus on problem solving and several researchers such as Howarth (2005) have adopted a ‘game as problem’ view of tactical approaches such as Game Sense.

Methodology
The site, the participants and the researchers
This research was conducted at the University of Sydney. The participants were in their second year of study as generalist primary school teachers in a program within which physical education made up only six credit points in their degree. The unit of study was their first experience of physical education within their course and comprised two hours a week over a twelve week semester. The students had been exposed to constructivist approaches to teaching in their other subject areas and were familiar with much of the learning theory presented at the beginning on the unit. The class of over 90 students was divided into groups of thirty for workshops and we used one of these groups for our research. The students in the unit of study were predominantly female with approximately 90% of students female. The first author lectured in the unit of study and the second author conducted all interviews and distributed the questionnaires.
The unit was structured to link the learning theories underpinning Game Sense with the social constructivism that the students had been exposed to in their other studies. The first three weeks of the unit were devoted to lectures that discussed learning theory, examined the Game Sense model and encouraged the students to see physical education as an integral part of the curriculum. These lectures also included critical examination of dominant practice in physical education and encouraged the students to reflect upon their own experiences of PE at school. This was followed by a series of workshops in which the students were taught to play cricket, soccer, volleyball and basketball using a Game Sense approach. During this time they were encouraged to reflect upon each session and discuss how they felt as well as about the pedagogy used. Over this period of time students were organised into team teaching groups that would teach a lesson at a local primary school toward the end of the unit. They were also reading the literature on Game Sense required to complete a major essay based on an informed reflection upon their experiences of the workshops. The essay encouraged them to explore emotional and affective responses and to suggest what Game Sense might have to offer as a pedagogy. In the last weeks of the unit the teams taught a single one-hour sport class at a local primary school. The design of the learning process linked PE with the rest of the curriculum and encouraged the students to approach it as they would any other subject area. They were encouraged to concentrate on pedagogy and not on specific content knowledge of games which most of them lacked. They were also encouraged to draw heavily on student knowledge and provide guidance and encourage their pupils to lead their own learning. The team teaching allowed them to work collaboratively and provided support for those who were lacking confidence in teaching games and sport.

Data generation and analysis

We initially used a survey consisting of a whole class questionnaire (N=28) to provide us with a broad overview of the cohort in the study. This data was used to support more detailed one-on-one semi-structured interviews (n=6) and observation data which provided the primary source of data for the study. Thus the triangulation between different data sources is used to strengthen the study validity. The study was conducted according to the ethical principles of informed participation, anonymity and confidentiality.

The participants of the study were 28 female second-year pre-service primary education teachers who were exposed to a unit of Game Sense. There was a 100 per cent response rate. A random selection of eight students was invited to interview and six of these agreed to participate. The other two students did not due to time restrictions. All the girls were from Sydney and had no prior experience to Game Sense. The unit of study was their first in physical education in their program. The 28 participants were from the one tutorial group. We read over the interview transcripts to identify common, recurring themes under which we then organized the data. These are the themes discussed in the results section of this paper. After the completion of the unit of study students completed a mixed response questionnaire. The first section had a series of Likert scales exploring students’ a) previous experiences of physical education b) Pre and post attitudes to the unit of study c) experience and attitude toward “Game Sense” pedagogy. The second part of the questionnaire gave the students opportunity to respond more openly to short open ended questions.

The first section of the questionnaire was entered into SPSS (Statistical Package for Social Sciences) for statistical analysis. The second section of the questionnaire, the open ended response questions and the interview transcripts were quantitatively analysed using a grounded theory approach (Glaser & Strauss, 1997). Themes and ideas were identified; the following section identifies and discusses themes that emerged from the research.
Results and discussion

1: The inclusive nature of Game Sense

The majority of the participants in the study enjoyed playing and watching sport yet reported on negative experiences of physical education at school. This was particularly so in the secondary school setting where there was a noticeable lack of enjoyment and interest in physical education classes. The participants reported on being excluded from classes by teaching approaches that focused on the performance of technique. This ultimately meant that they did not see the educational value of physical education. In fact they saw physical education as an “other” subject that serviced the needs of elite athletes. Most noticeable was the absence of any real link between physical education and educational outcomes. In fact many of them had some very negative experiences:

*It was terrible. The teacher was a cricket coach and that is basically all we did – play cricket. The less athletic students and basically all the girls, just stood out of the way….. There was no real attempt to get students involved. The P.E. teacher himself played for New South Wales and wanted to lift the profile of cricket in the school. The girls didn't really care.* (Interview, Vanessa)

One of the reasons why the participants found Game Sense was so enjoyable was that it was inclusive and encouraged far more participation and genuine engagement in the games. The participants signaled this as one of the major reasons why they disliked P.E. at school because of this competitive aspect that is that P.E. really only catered to the elite athletes:

*I really found that the way each activity was structured to each topic was really useful to the learning of that sport. It really showed me how to integrate all (original emphasis) students in the learning experience and reflect and ask questions. Physical education classes at high school were so competitive, that by the end of Year 10 most of the girls would not even bring our uniforms, let alone participate.* (Interview, Sue)

When asked about how the various schools combated low participation rates at schools teaching pedagogy was deemed not important enough. One participant interviewed noted that single sex health and P.E. classes were trialed one year, but were abandoned because girls did not participate in these either. Lisa-Jane suggested that the traditional approach excluded the less skilful:

*The teachers and students made lots of excuses about why participation and non-compliance in P.E was so prevalent, although after doing this unit of study with Richard, the answer became clear to me, it was the teachers' bad teaching and learning practices which was the biggest issue. I'm not saying that facilities and equipment etc etc were not a problem, the teachers themselves needed to evaluate and reflect more. Looking back now there was no relevance of PE to our lives and not participating was our collective response. The well-skilled boys who were achieving loved it whereas the rest did not* (Interview, Lisa)

2: Confidence in teaching PE: Taking out the scary factor

The participants overwhelmingly indicated that by the end of the unit they felt ready, and motivated to teach physical education. This contrasted with the trepidation that some reported approaching their first unit of study in physical education and a total lack of confidence and desire to teach physical education. After their first unit of study in Game Sense the students indicated that they were more confident in teaching physical education:

*I am very committed to teaching it (sport and physical education) because you know the value of it, but didn't know the pedagogy. I now have a greater confidence and the same goes for my friends that...*
Three of the students interviewed critically analysed the significance of the P.E. pedagogy that they had been exposed to as students at school. They suggested that pedagogy is far more important for PE teaching than actually being able to perform the various skills involved in the sports. That is to say that pedagogy is more important than content knowledge:

*I am not a sporty person you know and a little overweight, my weight problem was one of the reasons why I did not participate in school sport and have been a little anxious about participating in university P.E. courses. This is why I turned up to the first class late with no sporting gear. After the first 10 minutes the social interaction was so positive that I just bonded with the girls. This will be the approach I use when I go out to teach I want all my students to have a positive experience..... Teaching 20 percent of a class would be worthless. I will endeavour to have 100% of students participating. I am hoping Game Sense will do this for me. Not being a sporty person should not stop people from participating or even teaching physical education (Interview, Wendy)*

3: The educational value of PE

Through the questionnaires and interviews the participants said that the unit of study had helped them see the educational value of physical education. Much of this was attributed to the linking of the theory underpinning Game Sense to theories of learning they had been exposed to in other areas of their program. There was a marked increase in understanding the importance of physical education not only in the school curriculum but also in the total development of the children:

*The Game Sense approach was effective as it was based on constructivist concepts that encourage students to develop their own understanding within meaningful contexts. By experiencing modified games, I was able to develop tactical knowledge (Interview, Vanessa)*

Participants noted that Game Sense was much more student-focused than their own experiences of physical education were. They suggested that there were two reasons for this. The first was that the workshops were inked to theory. The second was that actually experiencing student-centred learning theories in action actually helped them better understand the content of lectures in other areas of their program. Commenting on netball / basketball session Sarah suggested that:

*The link between the lectures and workshops was great and it is clear to me why the teacher should act as a facilitator in guiding the lessons. Richard's approach to team talks, questioning time, is more inclusive and gets the students to think about what it was that they were doing. (Interview, Sarah)*

4: The affective dimensions of learning

The affective dimensions of learning have, until recently, been largely overlooked in the physical education literature. As Heywood (2001) suggests, joy in learning is a deep emotion that is important for learning that can be transformative. Recent research on Game Sense (and TGfU) has also highlighted the affective dimensions of learning (Light, 2003; Pope, 2004). The participants in this study reported similar deep affective experiences of the workshops to those of females in Light's (2002) study of pre-service teachers. The participants felt included and valued and enjoyed the social interaction stimulated by Game Sense in particular. They felt challenged yet supported and part of the decision-making process. The discussions on the tactical aspects of the game, apart from getting them involved in the lesson
also meant that they understood the game and the various tactics involved. Even a particularly male dominated sport such as cricket produced much enthusiasm as Nicole noted:

>When I go and on ‘prac’ cricket will be the first sport I would teach. I disliked cricket before we had our session on kanga cricket. After the kanga cricket session, I went home and spoke to my husband about cricket; It was the first time I ever spoke to him about any of my uni studies. It was lots of fun.....I learnt a lot from this unit and also had lots of fun. Certainly didn’t expect it to be like this. (Interview, Nicole).

### Conclusion

This study offers an example of how Game Sense (and other similar approaches) can offer a very useful means of helping teachers deliver meaningful, satisfying and educationally valuable physical education in the primary school. It does, however challenge suggestions that, in order to teach Game Sense the teacher must have a sound content knowledge of games and sport. While this is certainly a great advantage this research supports Light’s (2002) contention that, if the pedagogy is mastered, teachers with limited knowledge of games can use Game Sense effectively in primary schools. Of course, the nature of this study and Light’s (2002) study do not take into account the task of teachers such as those in this study implementing Game Sense as full time teachers. The radical change in attitude toward teaching games and sport and their increased inclination and confidence to teach physical education is, however, promising. Other longer-term studies do indicate that, given the right support, beginning teachers can successfully develop their Game Sense/TGfU teaching (Light, 2004; Light & Butler, in press).

In this study Game Sense did address many of the females’ concerns with teaching P.E. originating from their own personal experiences such as the competitive and exclusive aspect of P.E. Game Sense encourages social interaction and collaborative problem solving and these were dimensions of the approach that most appealed to the participants in this study. Participants noted the enjoyment attained by having ownership of lessons and being a part of inclusive educational practices. This draws attention to the affective dimensions of teacher education. By engaging in the workshops the young women in this study experienced the content of their lectures in a process that engaged the body in learning. At the same time this involved an essentially emotional experience that formed a pivotal aspect of the learning process involved in the unit of study. While physical education lends itself to this approach we close by suggesting that other subject areas might usefully look at how they might engage the boy in learning to provide an integrated learning experience that involves mind, body and emotions in an inseparable relationship.

### References


Copyright © 2005 Richard Light and Steve Georgakis: The author assigns to HERDSA and educational non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The author also grant a non-exclusive licence to HERDSA to publish this document in full on the World Wide Web (prime sites and mirrors) on CD-ROM and in printed form within the HERDSA 2005 conference proceedings. Any other usage is prohibited without the express permission of the authors.