Incorporating TGFU into a Bachelor of Physical and Health Education degree at an Australian university

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ACHPER (QLD)
Edited Proceedings of the 27th ACHPER International Conference

Edited by

Graham D Dodd PhD

Published by ACHPER National (2011)
On behalf of the Conference Organising Committee of the 27th International Biennial Conference of the Australian Council for Health, Physical Education and Recreation, I recommend the proceedings of the Adelaide Conference to you. The theme of the 2011 Conference, *Moving, Learning and Achieving*, reminded us of what we should aim to strive for in our teaching and learning, the challenges facing our area in demonstrating educational creditability, and what is unique about Health, Physical Education, Recreation and Sport in school and in life. The papers forming the 2011 Conference Proceedings speak to both the challenges and to the triumphs occurring across ACHPER's focus areas.

I am indebted to the colleagues who have rallied to the call to organise the conference. In particular, the Conference Organising Committee: Dr Graham Dodd, Janet Harper, Toby Priest, Craig Fosdike, Amanda Henry; and ACHPER staff Matt Schmidt, Jeff Emmel, Emily Arbon, Rick Baldock, Jennifer Buchan, Megan Cowper and Lauren Comas. My thanks also go to those who assisted Graham on the Program Committee and in reviewing abstracts and papers, and those who adjudicated the Early Career/Young Scholar award. It is just one of the pleasing outcomes of the conference, that after some years in abeyance, the Early Career/Young Scholar award was reinstated at the 2011 ACHPER Conference.

We are delighted that we acquired international and national speakers to present across ACHPER's focus areas, and other international, national and local experts have been attracted to present at the conference. Thank you for your support. It made possible a broad ranging program catering for the academic interest and the practical purposes of the wider profession in one conference - academics, teacher educators and school teachers 'side-by-side' at a conference is quite special in professional development/learning.

On behalf of the Conference Organising Committee, I trust your stay in Adelaide was enjoyable and the attendance at the conference personally and professionally rewarding. We look forward to you joining us at a future ACHPER event in South Australia.

Mr Shane Pill, 27th ACHPER Conference Chair  
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Jean Blaydes Madigan (USA)

Jean Blaydes Madigan is an Elementary School Physical Educator with 30 years teaching experience, recognized for her excellence in teaching. She was awarded Elementary Physical Education Teacher of the year for Texas in 1992 and in 1993 for the National Association for Sport and Physical Education (Southern Districts). In 1997 she received the Texas Association of Health Physical Education Recreation and Dance (TAHPERD) Honor Award.

Jean presented contemporary information linking brain based learning theory with movement and how this could be applied to teaching practice to promote quality learning.

She illustrated how movement can be incorporated into learning experiences as a key ingredient to engage and facilitate learning. She is a dynamic presenter who has facilitated workshops on this topic throughout the United States and Internationally.

Jean is the author of articles linking Brain Research and Movement to Learning and she has worked with organisations including TAHPERD, American Heart Association, the Texas Association for Supervisors & Curriculum Developers, Parenting Magazine, Teaching Elementary Physical Education, and Kimbo Educational.

In 2005 Jean was awarded Advocate of the Year from PE4LIFE in recognition of her development of an Action Based Learning (ABL) Program as a model elementary PE program. She has produced videos on ‘How to Make Learning a Moving Experience’ and ‘Teaching the Teen Brain’ and resources titled ‘Thinking on Your Feet: A Year’s Worth of Lesson Plans, Action Based Learning™ Lab Manual’, and the ‘Body Brain Adventure LAB Manual’.

Jean is currently involved in curriculum writing in a number of special projects including the Eric Jensen CD Library, Cooper Institute for Aerobic Research's Voyager after school program, and the Richardson and Humble Independent Schools Districts PE Curricula.

Dr. Frances Cleland (USA)

Dr. Fran Cleland is a professor in the Department of Kinesiology at West Chester University where she has been teaching for seventeen years.

She is the Assistant Chair of the Health and Physical Education Teacher Certification Program. Fran also taught at the University of New Hampshire and East Stroudsburg University. Prior to teaching at the college level, Fran taught K-12 health and physical education in schools in Indiana, Virginia and Oregon.

Dr. Cleland’s research has focused on implementing critical thinking in K-12 physical education and in 2003 she co-authored an elementary textbook with her mentor, Dr David Gallahue., Developmental Physical Education for All Children, currently used in schools and university teacher education programs.

Dr. Cleland has received numerous state, district and national awards, the most recent being the 2005 American Alliance of Health, Physical Education, Recreation and Dance (AAHPERD) Honour Award. Fran is a Past-President of the National Association for Sport and Physical Education (NASPE), and served on NASPE's former Council of Physical Education for Children.
Dr Ken Rigby (Australia)

Ken Rigby is an Adjunct Research Professor and an educational consultant based at the University of South Australia. He was educated in England where he obtained an honours degree in Economics (London University) and a Postgraduate Certificate in Education (Leicester University). Subsequently he worked as a teacher in schools in London and in Norfolk, (both secondary and primary) before immigrating to Australia, and finally as a School Guidance Officer. Subsequently he was employed as a lecturer, then Associate Professor in Psychology and Research Methods at the University of South Australia. He completed a PhD in Psychology at the University of Adelaide in 1977.

Over the last ten years he has become a leading authority on bullying and peer victimisation with more than 100 refereed papers and other publications. His book "Bullying in schools and what to do about it" has been published in Australia, the UK and North America and is regarded as a standard text.

Dr Rigby has been invited to address numerous conferences and/or seminars in many countries, including Australia, New Zealand, Canada, United States, Singapore, Korea, Ireland, Israel, Belgium, Greece and South Africa, and to provide advice on the development of anti-bullying policies and procedures. He has recently conducted sessions at the University of Florence and the University of Cambridge.

Dr Tim Hopper (Canada)

Dr. Tim Hopper is an associate professor and faculty member in the School of Exercise Science, Physical and Health Education, Faculty of Education, University of Victoria in British Columbia. Tim has taught at all levels of the school curriculum both in Canada and the UK. He regularly presents at National and International events and has established a reputation as an engaging speaker and an enthusiastic workshop presenter able to connect and translate theory with practice. His scholarly role at the University focuses on PE teacher education, in particular, conceptual approaches to teaching and learning such as Teaching Games for Understanding, complex learning theory and Movement Education.

Working with his colleague Dr Kathy Sanford he has recently completed a three-year research project based on the development of a teacher education program-wide electronic portfolio process. Drawing on complexity theory the study examined the influence of e-Portfolios on pre-service teachers’ learning and program renewal.

Dr Hopper is currently collaborating with Dr Joy Butler to examine how inventing games, a process where students adapt the structures of games to make them fair, flowing, fun and for everyone, can be used in PE. This project will investigate how an inventing games unit can develop students’ abilities to collaboratively create worthwhile games that nurture situated ethics and engaged game play.

Tim uses his expertise in IT to collaborate with his pre-service teachers developing an expanding website of units of instruction(http://web.uvic.ca/~thopper), and video footage of his classes can be accessed on the pre-service teachers video journals website.
Professor Emeritus Alan Reid (Australia)

Alan Reid is Professor Emeritus of Education at the University of South Australia and was the 21st Fritz Duras Memorial speaker.

His research and publications focus on the broad themes of education policy, curriculum, the history and politics of public education, social justice and education, teachers’ work, and citizenship education. He has authored, co-authored or edited 15 books and monographs and well over 100 journal articles. He is currently the national President-elect of the Australian College of Educators.

Alan has been influential in education policy development at the state and national levels. In 2004/5 he was appointed by the South Australian Minister of Education to be a member of a three person panel to review the South Australian Certificate of Education (SACE); and he was engaged by the South Australian Department of Education and Children’s Services (DECS) to lead the development of a system-wide culture of research and inquiry.

In 2009, Alan was awarded the annual Gold Medal of the Australian Council of Educational Leaders (ACEL) for an educator whose 'contribution to the study and practice of educational leadership is assessed as most outstanding at the national level'. In the same year he was also awarded the Alby Jones Medal for excellence in educational leadership.

In 2005, the Australian College of Educators awarded him the inaugural MacKillop Medal in recognition of his distinguished services to education. In 2004, he was named by the Bulletin as one of Australia's 'Ten Most Influential Educators'.

Toward Health and Physical Education for New Times

The 27th ACHPER International Conference provides a timely reminder of the relevance of the Health & Physical Education (HPE) learning area in Australian education. It comes at a time of deliberations about the nature and place of HPE in a proposed new Australian Curriculum.

Emerging evidence from global researchers reveals a strong connection between human movement, enhanced learning and cognitive development. This evidence links and supports the benefits of human motion for the functioning of the brain and comes from a range of academic fields including molecular science, cognitive science, neuroscience, behavioral science, and psychology. These benefits have also been observed anecdotally for many decades by HPE teachers, and in recent times under research conditions in schools where ample movement opportunities have been provided for the students through daily HPE programs and an active curriculum.

Learning, memory, concentration, and mood significantly influence a student’s academic performance and the evidence is increasing that movement enhances all of these functions.

The irrefutable evidence relating the influence of movement on the mitigation of health risks such as obesity, diabetes, and coronary heart disease has been widely reported and disseminated. However, the added evidence of the strong link between human movement and cognitive development strengthens the case for HPE to be centralized in the education process for students. Fundamental to the effectiveness of this link is the provision of quality HPE movement experiences and a movement rich ‘active curriculum’.

It was a major objective of this Conference to focus on this compelling evidence, its implications, and successful implementation strategies through the theme Moving, Learning, & Achieving. The intention was to broaden the understanding about the importance of Physical Education, Health Education, and Recreation in the education process of people of all ages. It re-affirmed the belief held by teachers at all levels of education and the wider community that human movement plays a fundamental role in the process of healthy human cognitive, social, physical, emotional, spiritual, and physiological growth and development in individuals across the lifespan.

This fresh approach strengthens the case for HPE to be acknowledged as playing a pivotal role in the healthy holistic education of Australian students for new times.

These edited Proceedings are an amalgamation of papers relating to research and professional practices presented at the Conference around the Theme Moving, Learning, & Achieving. They have been peer reviewed and are grouped according to the Conference sub-themes. Included are a set of Posters which were on display for delegates but were not peer reviewed.

Graham D Dodd PhD
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Dr Syed Ibrahim and Dr Kaukab Azeem
SECTION 1:

Moving, Learning, & Achieving an active and Healthy life reflecting Resilience, Optimism, and Well-being
Health literacy and health related practices

Stefania Velardo & Murray Drummond – Flinders University, Australia

The contemporary concept of health literacy, which relates to the acquisition, understanding and application of health related information, has become an increasingly important public health issue, particularly where parents and children are concerned. Given that the home setting possibly comprises the strongest influence on children’s dietary and physical activity patterns, this study employed a qualitative approach to explore the factors that shape parents’ health related decision making for children, in everyday life. Fourteen parents living in a low socio-economic region of South Australia, with children aged from birth to 12 years, were interviewed by means of semi-structured focus groups and in-depth interviews. Participants provided insight into a number of barriers to making informed, healthy choices for children and emergent themes related to a two-tiered concept of physical health, the financial burden and time associated with maintaining physical health, and the effects of peer pressure. This paper will specifically focus on one aspect of the study findings, related to the ways that parents access, understand and apply health information related to children’s physical activity.

Health literacy and health related parenting practices

It is well established that the early years of life set the foundation for future health and wellbeing, through the development of lifestyle patterns and habits (Australian Institute of Health and Welfare [AIHW], 2009). Positive physical activity patterns have been identified as a key component of children’s physical health, which may reduce the risk of a number of lifestyle diseases, including obesity and Type 2 diabetes (AIHW, 2009). However many Australian children are not meeting the daily recommendations for physical activity. Results of the 2007 Australian National Children’s Nutrition and Physical Activity Survey indicated that 26% of children did not meet the National Physical Activity Guidelines and approximately 66% of children engaged in more than two hours of screen time per day, thus exceeding the recommended guidelines (AIHW, 2009). The Children's Participation in Cultural and Leisure Activities Survey (Australian Bureau of Statistics [ABS], 2009) also indicated that 1 million (37%) children aged five to 14 years did not participate in any sport organised by a school, club or association, out of school hours. A reduction in physical activity rates is attributed to an increase in sedentary activities, including “screen time” tasks such as television viewing, internet usage and video games, which may place children at an increased risk of overweight (Golan & Crow, 2004a; Lob-Corzilius, 2007). Such activities may be more pronounced in
environmentally disadvantaged areas, where there are fewer opportunities for physical activity, particularly amongst socially disadvantaged individuals (Macintyre, 2007). Another contributing factor may be parents’ perceived lack of neighbourhood safety, due to anxiety regarding harm from strangers (‘stranger danger’) and road safety (Carver, Timperio, & Crawford, 2008; Timperio, Crawford, Telford, & Salmon, 2004), which may restrict children’s outdoor activities.

The role of parents as an influence on children’s attitudes towards, and participation in, physical activity and other recreational activities is well documented (Loprinzi & Trost, 2010; Zecevic, Tremblay, Lovsin, & Michel, 2010). Parents play a crucial role in determining the types of recreational activities that are adopted by children, as well as monitoring the degree to which they are undertaken. For example, parents may recommend or discourage certain activities through the purchase and regulation of various commodities such as televisions (Dennison & Edmunds, 2008). Parental influence can also occur through parents’ encouragement and support of sporting endeavours. Results of a study conducted by Loprinzi and Trost (2010) indicated that parents who were encouraging and supportive of physical activity had a positive influence on preschool-aged children’s participation in physical activity in the home environment. Parents serve as important role models of a healthy lifestyle for children (Benton, 2004; Golan & Crow, 2004b; Ventura & Birch, 2008), and research has indicated that parents who participate in physical activity are more likely to encourage physical activity in children (Pearson, Timperio, Salmon, Crawford, & Biddle, 2009).

In order to understand the influential factors that shape parents’ decision making in the context of children’s health, it is important to consider the contemporary concept of health literacy. Health literacy is broadly concerned with the ways in which individuals acquire, understand and apply health related information (Jordan, Buchbinder, & Osborne, 2010). While early definitions of health literacy were concerned with patients’ literacy and numeracy skills in healthcare settings, a broader conceptualisation has emerged over time, acknowledging the importance of an individual’s ability to make decisions about health in everyday life (Peerson & Saunders, 2009). In this way, health literacy is regarded as an important life skill (Velardo, Elliott, Filiault, & Drummond, 2010). In the context of physical activity, a limited model of health literacy may reflect a parent’s ability to correctly cite the national physical activity guidelines for children, while a broader conceptualisation might relate to his or her ability to access information about opportunities for sport within the local community, or simply learning to incorporate physical activity into daily life, and then acting upon this information.

In contrast to the majority of studies which have utilised quantitative methodological tools to “measure” this concept (Arnold et al., 2001; DeWalt, Dilling, Rosenthal, & Pignone, 2007; Shone, Con, Sanders, & Halterman, 2009;) this study employed a qualitative approach to gain a descriptive account of health literacy from the parental perspective, in order to inquire into the factors shaping
health related parenting practices. The entire investigation focused on two dimensions of parenting behaviours; those which related to children’s physical activity patterns, and those associated with dietary intake. This paper reports on the study findings that related to physical activity only, and selected emergent themes. Further discussion regarding other aspects of the study, and a full summary of emergent themes will be reported elsewhere.

**Method**

*Participants*

This study focused on parents with children aged from birth to 12 years, due to the significance of the role of parents on children’s health behaviours prior to adolescence (Lindsay, Sussner, Kim & Gortmaker, 2006). The research was also limited to male and female parents from two-parent families, given the differences between single and two parent families, in terms of family dynamics and child health outcomes (Gorman & Braverman, 2008). Fourteen parents were sampled via a purposeful sampling technique, to participate in the investigation. Within this sample, there were 12 mothers and two fathers. Participants resided in a common metropolitan local government area which was classified as a low socio-economic region of South Australia, using a Social Health Atlas of South Australia (Glover, Hetzel, Glover, Tennant, & Page, 2006). Prior to data collection, ethics approval for this project was granted by the Flinders University Social and Behavioural Research Ethics Committee.

*Procedure*

Focus group and individual interview methods were used to collect data. Two focus groups were used to collect data from 10 participants; each containing six and four participants, respectively. Once the two focus group sessions were undertaken, four additional parents participated in a one on one interview. These in-depth interviews were conducted to pursue salient issues that emerged from the focus groups, in a more personal setting, while also serving as a basis of methodological triangulation. An interview guide was used in this research in order to provide direction for the focus group and in-depth individual interviews. Based on the literature and contemporary definitions of health literacy, an interview guide for the focus groups was devised. The guide used in the individual interviews was then formulated in response to the data which emerged from the two focus group sessions. Questions were broadly based upon the topics of child health, accessing, synthesising and applying health information related to children’s diet and physical activity requirements, and community resources. All of the interviews were audio recorded and transcribed verbatim. Data was then analysed using an inductive approach (Thomas, 2006). Thematic analysis was undertaken to examine emerging concepts and identify common, recurrent themes (Pope, Ziebland, & Mays, 2006).
Results
The following section outlines the results of the study which specifically related to children’s recreational and physical activity behaviours. The results have been categorised under the major headings of: 1) Accessing and understanding health information, 2) Applying health information.

1) Accessing and understanding health information

Physical health: A two-tiered concept

A two-tiered concept of physical health emerged throughout the interviews, encompassing two distinct viewpoints that contrasted each other. On one hand, participants indicated that knowing how to achieve and maintain good physical health was simple and straightforward. One parent reflected:

> Everyone knows being healthy is about leading an active lifestyle. I guess it means trying to keep them active and running around, not short of breath.

(Parent #1)

Many parents attributed their understanding to several key messages frequently conveyed through mass media, and reinforced within the school setting. With regard to physical activity, the principle message communicated was to “be active”, which was linked to increasing children’s sporting participation. Several parents also indicated that they were aware of a media message pertaining to the importance of limiting children’s screen time.

While the basic components of maintaining good physical health were seemingly “simple” to comprehend, it was interesting to note that none of the participants were familiar with the current physical activity recommendations for Australian children, that recommend a minimum of one hour, and up to several hours, of moderate to vigorous physical activity per day for children aged five to 12 years (Department of Health and Ageing, 2004). When questioned about the guidelines, only one parent responded, albeit hesitantly stating, “I’m not too sure, but you hear stuff like 20 minutes a day”. All of the participants interviewed placed less emphasis on physical activity recommendations in comparison to dietary guidelines, as children were considered to be “naturally active”. According to one parent:

> The physical part is more straightforward, like you know they should be active every day, but the nutritional bit is more involved… I know that as a kid she’s going to run around and play games, so as long as she’s moving and not sitting around all the time that’s easy for me. I don’t have to worry about it.

(Parent #9)
Only two parents were familiar with current screen time guidelines, whereas most participants had never come across this term before. These guidelines recommend that children do not engage in more than two hours of screen time per day (Commonwealth Scientific and Industrial Research Organisation, 2009). One mother discussed the benefits of working in accordance to these guidelines, as it was a means by which she could set boundaries, which incidentally led to more physical activity. However, for the majority of parents, it was difficult to judge “where to draw the line”, in terms of television viewing and engaging in electronic activities, particularly when programs were deemed “educational”, as they were often perceived to beneficial towards the child’s development. Indicative of most parents, one participant reported:

I think you need to think about whether it’s educational or not because they can learn. So if they watch one or two educational shows a day then that would probably be okay. But I don’t know for sure… is that good for their development or bad for their development? (Parent #4)

In summary, although most participants were familiar with the “be active” media campaign, it is possible that the current physical activity guidelines have little direct impact upon children’s activity, due to a lack of parental awareness. The data reported here concurs with research conducted by Dwyer and colleagues (2008), whereby participants in this study were not able to describe national physical activity guidelines, and only a small number were able to discuss national screen time guidelines. Research investigating the relationship between poor knowledge of dietary guidelines and the likely resultant poor compliance with these guidelines (Main & Wise, 2002; Wardle, Parmenter & Waller, 2002) may have implications regarding meeting recommendations for screen time and physical activity. Alternative ways of engaging parents regarding national guidelines would appear to be implicated as a result of this investigation.

2) Applying health information

The cost of physical health

Another prominent theme to emerge from the interviews was related to the financial burden and time associated with applying health information and maintaining good physical health, in terms of physical activity. In the context of the interviews, time and monetary cost were both regarded as expenses. There were mixed feelings surrounding the cost of physical activity for children. On one hand, parents discussed the growing financial burden of children’s organised sport, which was particularly challenging for families with several children, on a limited budget. Consistent with prior research, being “healthy” was associated with increased costs incurred from sporting club
membership fees and uniforms (Brockman, Jago, Fox, Thompson, Cartwright, & Page, 2009; Puglisi, Okely, Pearson, & Vialle, 2010). For example, one father stated:

Well there’s the cost factor with sports. It’s hard to get your kids to actually just kick a ball or play outside when other kids are doing club sports. You know sometimes it’s a positive thing, like they say kids at school are doing this and this, can we do that too? And you need to say no because there’s money, then there’s time because you’ve got to run around all over the place. But really most people nowadays are on a limited budget. (Parent #5)

Conversely, parents identified a broad range of free resources which promoted physical activity within the community. These included parks, playgrounds, basketball courts and the beach. Some parents identified a number of barriers associated with accessing these recreational resources. First, considering that the resources were located outdoors, utilising them was often hindered by the weather, particularly during periods of rain or cold temperatures. However, parents were most reluctant to make further use of these resources because of the “safety factor”. The view that children were at risk of physical confrontations with threatening strangers, or becoming injured due to unsafe driving, was universal among parents.

**Safety**

The notion of safety emerged as a significant factor throughout interviews. Parents acknowledged that children’s incidental activity had changed over time, as a result of increased parental concerns over neighbourhood safety. The current situation, in their opinion, provided a great contrast to their childhood, when they were able to frequently engage in physical activity by “walking to school”, “riding bikes” and “roaming the streets”, without being accompanied by an adult. Parents claimed that safety was one of the greatest barriers to children’s physical activity, as they were now required to supervise their children’s physical activity experiences, which cost them time. While parents could alternatively opt for enrolling their children in supervised club sport, this would create a financial burden. One mother was of the opinion that:

Safety can definitely confine them to the home. Today it’s not like you can send your kids off by themselves, like when we were kids. I don’t know if it’s more unsafe out there, or if we’re more aware of it, because we’re a lot more safety conscious these days. (Parent #2)

Noteworthy, accessing local community resources and participating in junior sport was identified by the study participants as requiring a lot of time, further supporting findings within the existing research literature. Time-consuming practices included the extra time commitment of
transporting children to and from organised sport (Brockman et al., 2009; Puglisi et al., 2010), as well as parents having to supervise neighbourhood play in parks and playgrounds, given the wide-ranging safety concerns related to harmful predators or unsafe motorists (Carver et al., 2008; Puglisi et al., 2010; Timperio et al., 2004). This led many parents to use television and other electronic commodities as “babysitters”, which enabled them to gain more time and “get stuff done”, such as cooking and household chores. When questioned about children’s recreational activities, the majority of parents in the two focus groups, as well as all of the individual interviewees, acknowledged a shift towards a more technology-oriented lifestyle. They did not attempt to challenge this development, but simply accepted this as an unchangeable part of contemporary life.

Peer Pressure
The impact of peer pressure was also a point of discussion amongst parents. There was a mutual understanding that peers, particularly those from school or kindergarten, had the potential to promote various technological commodities. It was common for children to attempt to convince parents to purchase computer programs and game consoles, on the basis that “my friends have it, why can’t I?” Parents acknowledged that such commodities often led to sedentary behaviours amongst their children and they perceived peer pressure as a difficult social phenomena to overcome. Peer pressure was particularly challenging given children’s capacity to frequently align themselves with friends of similar age, as a basis for comparison. One mother explained:

It’s so frustrating because you can’t guard against it or protect them from it, because it’s going to happen, so you’ve got to work out a way of getting around it and explaining that, “in our family we don’t do this”, but that’s a really hard thing. (Parent #7)

Throughout the interviews, parents frequently used adjectives such as “terrible” or “guilty” to describe their feelings as a result of pestering. Many parents stated that it was challenging to set boundaries, when they did not want to upset their children or make them feel “left out”, in comparison to other children. At this stage, parents would sometimes “give in” to the child’s request, thereby confirming to the social norms around the modern lifestyle, with technology accepted as an integral part of children’s recreational activities. For instance, one parent reported:

My son’s 10 and we waited a long time before we let him have the computer games but because of peer pressure, because everyone’s got them, we allowed him to have it. And he will play it constantly if you let him. But you know, when we got the Playstation it still didn’t compete with the neighbours who had the Xbox or the Wii. (Parent #6)
Discussion
Clearly, the relationship between parental health literacy and health related parenting practices is a complex one, and a number of factors influence the ways in which parents access, understand, and apply health information related to physical activity. Through focus group discussion and follow-up one on one interviews with the 14 parent participants, this study provides insight into issues facing parents and children meeting national physical activity guidelines. In terms of accessing and understanding health information, these issues included difficulty describing national physical activity guidelines and understanding screen time recommendations. Efforts to promote physical activity may therefore be directed at emphasising formal national guidelines by engaging parents in diverse ways. Additional barriers to physical activity, in terms of utilising health information and promoting an active lifestyle, included financial burden, time constraints, safety concerns and peer pressure affecting parents’ ability to manage children’s recreational requests. Accordingly, strategies to support parents, such as public health programs to develop parental capacity to behaviourally manage children’s requests may be a point of consideration. Parental concerns over children’s safety also encourage consideration of urban development strategies that focus on crime prevention through the environmental design, in order to create “safer” communities (Cozens, 2002). This study highlights the importance of further qualitative research which explores factors that have the capacity to enhance, or act as barriers to physical activity amongst children, across diverse communities. Future research may develop a deeper understanding of current physical activity efforts, in order to promote and facilitate more positive behaviours.

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An investigation of early career teachers’ integration of the principles of student social and emotional wellbeing into their professional practice

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Social and emotional wellbeing has grown in importance in educational settings, with an increasing focus on promoting the wellbeing of all students. Promoting social and emotional wellbeing has become a priority as researchers have found that poor physical or mental health in children, including the presence of emotional or behavioural disorders, is associated with poor academic achievement. A systematic focus on social and emotional wellbeing in schools may have a variety of benefits and the literature suggests that there can be an association with more positive behaviour and academic performance. However, there has been little research into how beginning teachers take what they may have learnt about social and emotional principles and apply it in their early years of teaching.

Recent developments indicate the inclusion of social and emotional wellbeing as a key concept is becoming firmly integrated into the Australian educational context, through educational policy and guidelines, school practices and mental health programs. However, the presence of such policies, practices and programs does not assure their adoption and use by early career teachers in school and classroom practice. For this reason, both policies and the underlying principles of social and emotional wellbeing require inclusion in teacher education and professional development for early career teachers.

This study proposes a mixed qualitative and quantitative methods approach to explore the extent to which early career teachers integrate the knowledge and principles of student social and emotional wellbeing into their practice. Questionnaires and interviews provide the means to compare and analyse reflections of early career teacher professional practice. In addition to broadening the very limited research area, this study proposes to provide important information regarding early career teachers’ practices to teach and interact with students in a way that builds social and emotional wellbeing.
Introduction

The issue of social and emotional wellbeing (SEW) has grown in importance in educational settings, with an increasing focus on promoting the wellbeing of all students (Weatherby-Fell and Vincent 2005, Ministerial Council on Education, Employment, Training and Youth Affairs, 2008). Promoting SEW has become a priority, as researchers have found poor physical or mental health in children, including the presence of emotional or behavioural disorders, is associated with poorer academic achievement (Becker & Luthar 2002, Spernak et al. 2006). In Australia, the inclusion of SEW as a key concept is becoming firmly integrated into the Australian educational context, through educational policy and guidelines, school practices and mental health promotion programs (Griffith and Cooper 2005; Department of Health and Ageing 2000; Vincent et al. 2005). Teachers are the nexus between policy and practice; and between school and students. Research (Moodie 2008) also suggests that students benefit from teachers who interact with them in a way that builds SEW. This approach represents a focus on how to teach rather than what to teach. Although the connection between SEW and school success is well documented, there has been little research into how pre-service teacher’s attain knowledge of SEW, nor how early career teachers take what they may have learnt about SEW and apply it in their early years of teaching, through their teaching practices and interactions with students. This study will use a mixed methodology to investigate (a) pre-service teacher education and how it caters for SEW in preparing new teachers and (b) early career teachers’ reflections on their pre-service education and current experiences related to the knowledge, understanding and skills they have developed to support the SEW of their students in their early years of teaching.

Social and Emotional Wellbeing

Social and emotional wellbeing is a component of overall wellbeing. Wellbeing is a generic, broad and all-encompassing term and is applicable to a wide range of educational and health–related environments (Weare 2010). The term ‘social and emotional wellbeing’ incorporates the key concepts of mental health, emotional intelligence, social and emotional learning and resilience. Further to this understanding, young people’s SEW is influenced by a combination of individual and environmental factors, which may or may not be able to be modified. Miller and Daniel (2007) identify individual factors that may support or alternatively create adversity for an individual, such as one’s temperament and family background, personal strengths, social and emotional skills, genetic or biological factors and physical health. Environmental factors may include family relationships, school and community experiences. According to NICE (2009) SEW more specifically relates to the positive paradigm that encompasses:

- Social wellbeing, the ability to have good relationships with others and to avoid disruptive behaviour, delinquency, violence or bullying.
- Emotional wellbeing, the ability to recognise and manage emotions to achieve happiness,
confidence and not feel depressed or anxious.

- Psychological wellbeing, a feeling of autonomy and control over one’s life, problem solving skills, and a sense of involvement with others.

**Mental Health**

Social and emotional wellbeing is closely connected to the term ‘mental health’. There has been a recent paradigm shift in mental health from a negative to a positive approach. It is seen as a positive state, not just the absence of illness, reflecting a person’s capacity to function well in society and lead a happy and productive life. The World Health Organisation (WHO) (2001) defines mental health as ‘a state of wellbeing in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.’

Many people who work in education have an aversion to the term, mental health, assuming it is a euphemism for mental illness and tend to associate it with mental illness such as depression, anxiety, schizophrenia, and their attendant stigma (Weare 2010). The concept of SEW has been adopted to remove some of the apprehension aroused by the term mental health and because it has a positive and holistic connotation (Stafford et al. 2007).

**Social and Emotional Learning**

More recently, attention has been given to the area of social and emotional learning (CASEL 2009), social and emotional aspects of learning (DCSF 2009) and emotional literacy (Antidote 2003, Mauer & Brackett 2004). Social and emotional learning researchers advocate the understanding of what the nature of social and emotional skills are and the development of programs intended to increase and reinforce such skills (Cohen 1998, Elias et al. 1997, Saarni 1988, 1997, 1999, Zins et al. 2001). Social and emotional learning is a process to attain skills for the promotion of social and emotional wellbeing (Elias & Weissberg. 2000).

**Resilience**

Resilience is usually characterised in terms of the capacity to achieve positive outcomes despite adversity. In relation to SEW, resilience is the capacity that some people have that allows them to maintain or re-establish their SEW in the face of challenges to their wellbeing. There are different ways to look at resilience, either as an internal trait of a person and/or as something that is fostered by the right environment (Benard 2004). The term ‘resilience’ evolved from longitudinal population health studies (Luthar, Cicchetti & Becker 2000) in which some participants did not develop the negative outcomes anticipated despite their exposure to risk factors such as adverse life events or
situations. Subsequent research into resilience has been concerned with understanding how individuals overcome adversity and why one individual may be more resilient than some of his/her peers who had negative outcomes (Bernard 2004). One school of thought regarding resilience comes from Benard (2004) who emphasises that a student’s ability to be able to cope with and overcome difficult times can depend on the importance of caring and connectedness in the environment, communicating high expectations for students, helping them to achieve their goals and fostering authentic participation of children and young people in the classroom and school.

The Role of the School in Supporting the Social and Emotional Wellbeing of their Students

A comprehensive and systematic approach to SEW in educational settings may contribute to improved behaviour, higher academic achievement and better health and social outcomes. Systematic social and emotional education should begin in preschool, continue through primary and high school and should be an integral component of the school curriculum (Elias et al. 1997, Collaborative for Academic Social and Emotional Learning, 2007b). While the research does not prove a definite cause-and-effect relationship, there is enough evidence to support the premise that such approaches can be associated with improvements in children's behaviour, academic achievement and health (Response Ability 2007). Research indicates schools can influence social and emotional wellbeing via a range of approaches to promoting a healthy psycho-social environment (WHO, 2003).

The Role of Teachers in Promoting Social and Emotional Wellbeing

Recent research indicates the quality of teachers and their teaching are the most important factors for students outcomes (Organisation for Economic Co-operation and Development (OECD), 2005). Informed and caring teachers may make a significant contribution to student SEW. All teachers have a pastoral role to play and the positive impact of a caring teacher-student relationship on student SEW cannot be underestimated (Keeffe & Carrington 2007). Teachers who demonstrate democratic interaction styles, take account of individual differences in their expectations of student behaviour, model a ‘caring’ attitude toward their own work and provide constructive feedback have positive effects on student SEW (Keeffe & Carrington 2007). Teachers are instrumental in making their students feel that they belong, are cared for, valued and respected. Teachers’ personalities and temperaments may also influence the environment through their relationship with their students, what they teach as well as how they teach. Teachers are well placed to recognise and identify a young person with mental health concerns and to assist the young person to get appropriate help. To assist in the process of early intervention and referral, teachers need to be informed about the more common mental health disorders that may affect children and young people under their care. Furthermore,
teachers need to be aware of the process and protocols that their school has in place to ensure that students get the help they need (Keeffe & Carrington 2007).

Social and Emotional Wellbeing in Pre-service Teacher Education

The impact of SEW on academic outcomes and behaviour (Zins et al 2004, Shriver & Durlak 2005), raises the question of how teacher pre-service education courses prepare early career teachers to contribute to and support SEW in their students. Social and emotional wellbeing is a cross-curricular issue, as are literacy, numeracy and information communication technologies. Developing skills that improve SEW do not exclusively belong to a particular learning or curriculum area such as English, maths, science or history, but they do underpin students’ capacity to learn and succeed academically (Zin et al, 2004). Teachers are likely to promote student SEW in different ways depending upon the developmental stage of the children or young people they teach (that is, preschool, primary, or secondary) and learning area they are teaching in. Until recently, any explicit coverage of SEW in teacher education programs was frequently devolved to the health and personal development curriculum area.

Bernard et al. (2007) found teachers to be important contributors to students’ SEW and advocated that SEW should become an integral part of initial teacher education and ongoing teacher professional learning and development programs. Addressing SEW in pre-service education may help early career teachers to feel more confident about creating supportive environments, participating in whole-school programs and responding to young people.

In more recent times there has been a move internationally for the inclusion of SEW in teacher education (Zin et al 2004, Centre for Social and Emotional Education 2007, Collaborative for Academic Social and Emotional Learning 2007a, Palomera et al. 2008, NICE 2009). Palomera et al. (2008) reviewed numerous studies and proposed that in order to design pre-service teacher education, it would be necessary to understand the basic content and competency objectives which future teachers are to develop in their students. Incorporating the principles of SEW into teacher education programs will serve as a basis for ongoing teacher development.

A study conducted by Weare and Gray (2003) recommended addressing SEW issues not only at school, but also at institutions involved in educating pre-service teachers. They found that education in SEW for new teachers proved effective in increasing their own emotional competency as a beginning professional. (Byron 2001). A more systematic inclusion of social and emotional issues in teacher education is supported in Australia through a national program called Response Ability (Vincent et al. 2005). Introducing social and emotional concepts in pre-service education may assist graduates to be better prepared for the complexity of their roles in today's schools (Hazel & Vincent
2005). Ideally, SEW should be integrated broadly across teacher education programs, being explored from different perspectives in a number of units, so that its fundamental contribution to learning can be reinforced (Vincent et al. 2005). In preparing teachers to enter the profession, an awareness of SEW should be promoted as an integral component of quality teaching practice. Consultation with teacher educators and pre-service teachers suggests that relevant issues should be introduced in foundation subjects, reinforced throughout the program and integrated into the student practicum (Kemp et al. 2007). Incorporation of sound SEW education at the pre-service level may enable teachers to be better prepared to create learning situations in the classroom that promote SEW.

**Methodology and Methods**

The integration of the principles of student SEW into early career teachers’ professional practice will be investigated via a variety of methods. Four types of triangulation have been proposed as a way of ensuring deeper understanding and legitimacy of the data. These include triangulation of methods; sources; analysts and theory/perspective. A combination of document analysis, surveys and interviews (methods) will be employed across existing documentation, and samples of early career teachers (sources). Through examination of the data by the researcher and supervisors (analysts) and through different theoretical/perspective lenses, the key themes, which emerge, will reflect the trustworthiness of the central, core experiences of the phenomenon under investigations. This study aims to utilise a model of social research, which is informed by a mixed- method approach that includes quantitative and qualitative research data and methods in order to investigate the research questions. The flexibility of emergent design allows to make sense of what occurs through conducting semi –structured interviews. Participants will have the opportunity to respond more elaborately and in greater detail than is typically the case with quantitative methods. In sum, as teaching is a dynamic and highly complex profession, integrating different methods is likely to produce better results in terms of quality and scope as it encourages the probing of underlying issues assumed by mixed-method.

**Stage 1: Representation of social and emotional wellbeing in state and/or national teaching standards for graduates**

**Research question:** Are the principles of social and emotional wellbeing represented/ reflected in the teaching standards of graduates?

**Method:** Document analysis

**Data source:** National Teaching Standards – graduate level.

Stage 1 of the study will involve a thorough examination of the professional teaching standards
for their congruence with principles of social and emotional wellbeing. The National Professional Standards for Teachers describe what teachers should know and be able to do at four levels of professional expertise: Graduate, Proficient, Highly Accomplished and Lead Teacher. The Graduate level of professional expertise will be examined in this study. The Standards make explicit, the knowledge, skills and dispositions required of teachers at each level. The Standards align with the *Melbourne Declaration on Educational Goals for Young Australians* (Ministerial Council on Education, Employment, Training and Youth Affairs 2008) and provide a platform for strategic action on teaching and learning policy at the national and state level.

The systematic exploration of the teaching standards, comparing the standards with the principles of social and emotional wellbeing will be undertaken as: (1) they serve as a core standard identifying what all teachers should know and be able to do; (2) they are used to focus teacher education programs on the knowledge and skills needed by teachers and; (3) they form the basis for assessing students in teacher education programs. It is intended that those standards that include explicit and implicit reference to the principles of social and emotional wellbeing, or that employ language used in definitions of key social and emotional wellbeing principles would be included.

**Stage 2: Identification of the teaching and learning of social and emotional wellbeing in the pre-service teacher education curriculum**

**Research question:** What opportunities are provided in pre-service teacher education to become informed about social and emotional wellbeing?

**Data source:** Documents: Professional Teaching Standards documentation for accreditation, course information booklets, program rationales and unit outlines.

Key Informants: Deans, Head of Programs and/or lecturers.

**Method:**

A document analysis will be conducted to identify and contextualise social and emotional wellbeing theory and principles in pre-service teacher education courses. The data gathered will demonstrate teaching and learning of social and emotional wellbeing theory from tertiary institutions that offer teacher education courses. Such data will include: rationales and reports provided in accreditation documentation; official unit curriculum outlines that explicitly and implicitly address social and emotional wellbeing issues and professional placement outlines and policies. Other documents that provide data with reference to the rationale for teaching and learning in the education course, and desired outcomes of professional placements, will also be collected and analysed.

Key informant interviews are qualitative in-depth interviews with people who have been
assigned responsibility for the accreditation of their institution’s teacher education program. The purpose of the key informant interviews will be to collect additional information that may be required from the people who have firsthand knowledge about the requirements of the teacher standards and the knowledge, skills and understanding of teacher education programs in their respective institution (UCLA Center for Health Policy Research 2010).

**Stage 3: On line Survey: Teaching and Learning of Social and Emotional Wellbeing**

**Research Question:** What are early career teacher’s reflections on what they have been taught about social and emotional wellbeing?

**Data Source:** Early career teachers

**Method:** On line Survey Design

Surveys provide a way of gathering structured and unstructured data from respondents in a standardised way either as part of a structured interview or through self-completion. This study will request participants complete a statistically oriented online survey method questionnaire. The questionnaire will consist of a set of questions to establish and confirm similar patterns across a large group. At the completion of the survey, participants will be invited to indicate their expression of interest to further participate in the study to explore ideas, concepts and information that emerge from the survey.

**Question Structure**

Highly structured closed questions have been chosen to be included in the survey as they are more suitable for large scale surveys such as this. The survey will include demographic questions to identify characteristics such as age, gender, and geographic place of education, length of course, key learning area and teacher degree awarded. These questions will help to classify differences between early career teachers. Demographic data will assist in establishing a more accurate picture of the group, by better understanding the nature of early career teachers. In this survey the response format for closed questions range from a simple yes/no response, to an agree/disagree alternative, to asking the respondent to choose one alternative from 3 or more response options.

**Survey administration**

The questionnaire will be administered via email to as many respondents as possible. It is expected that approximately 1000 surveys will be emailed out, with at least 300 teachers returning the completed survey. Interested participants will complete the informed consent form prior to their involvement. All participants who express an interest in participating in Stage 4 will be considered and the minimum sample size will be 30 cases.
Stage 4: Focus groups with early career teachers about the implementation of social and emotional wellbeing in their professional practice

Research Question: What do early career teachers do in their professional practice that supports social and emotional wellbeing?

Data source: Subset of early career teachers.

Method:
Focus groups are a form of group interviewing and rely on interaction within the group based on topics that are supplied by the researcher. The main purpose of focus group research is to draw upon respondents’ attitudes, feelings, beliefs, experiences and reactions about

i. the skills, knowledge and understanding of social and emotional wellbeing acquired during teacher education program and

ii. the current practices that promote social and emotional wellbeing in students.

The benefits of focus group research include gaining insights into people’s shared understandings of social and emotional wellbeing and the ways in which others influence early career teachers in a group situation. It is intended that the focus groups will meet face to face and will last approximately one and half hours each. Where possible, approximately six to ten respondents will make up each focus group and a possible 3-5 focus group interviews conducted.

Stage 5: Semi-structured Interviews with early career teachers about the implementation of social and emotional wellbeing in their professional practice.

Research Question: What personal, situational and systemic factors impact on the capacity of early career teachers to support social and emotional wellbeing in their students?

Data source: Subset of focus group

Sample size: 9-12 participants

Method: Semi – structured interviews
The purpose of using semi-structured interviews will be to capture early career teachers’ reflections, views and stories. Semi-structured interview are the best means of ensuring that certain questions are consistently asked throughout the sample, but within the context of as normal a conversation as possible. In other words, the questions will not always be asked in quite the order as in the schedule.
Conclusion
Social and emotional wellbeing is a critical component of any child’s growth and development. Furthermore, there is significant research to suggest that promoting SEW in schools, using a comprehensive whole-school approach, can support more positive behaviour, learning and healthy outcomes for students. There is limited evidence however, to indicate what pre-service teachers learn about SEW, how they implement this knowledge and its impact on their roles in promoting the SEW of their students. This study will explore how pre-service teachers take what they are supposed to have learnt about SEW in pre-service education and how they apply it in their early years of teaching.

References


Addressing body image issues in the health education classroom: Can a constructivist approach improve current interventions?

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The importance of the media as a central resource for young people as they develop their identities has been widely accepted. The Australian government reiterated this premise in its Body image: Information paper (2009) by acknowledging that the media and advertising industries contribute to the cultural view of the ideal body. That document also identified critical thinking as an intervention that can teach adolescents to challenge media realities of the ‘ideal’ body type. Critical thinking can be taught through a social constructivist approach to health education that requires students to exchange ideas, negotiate shared meanings and reflect on personal views. This paper is an exploration of a critical theoretical approach to teaching about body image issues. It will support research into the constructivist teaching and learning practice that could improve current body image programs in Australian schools.

Background
Over the last 20 years there have been significant changes that have reformed the context of education in Australia. The National Declaration on Educational Goals for Young Australians (Ministerial Council on Education, Employment, Training and Youth Affairs, 2008) highlighted five major changes that affect conditions for Australian schooling. Three of the five reforms imply the importance of encouraging students to play an active role in their learning by thinking deeply, critically and logically when evaluating evidence. Globalisation and technological innovations have created environmental, social and economic pressures that place great demands on education and skill development. Specifically, advances in technology have changed the way individuals’ share and process information. Students must therefore become problem-solvers who can adopt novel and creative ways of perceiving information (MCEETYA, 2008).

The Body image: Information paper (Australian Government, 2009, p.7) noted that the technologically enhanced, unhealthy and unattainable images presented in the media contributes to what a culture considers ‘beautiful’. Young people are more likely to seek out external sources, such as the mass media, as a reference point to help deal with concerns about the physiological, social and psychological changes they are going through (Ata, Ludden & Lally, 2007; Clay, Vignoles & Dittmar,
Therefore, the media influences the body characteristics an adolescent determines ‘desirable’ or ‘undesirable’ while forming their own identity (Australian Government, 2009, p.9). Kirk (1993) supported that the ‘media culture is not merely consumed and discarded, but it is utilised to construct personal identities… [as the] material the media supplies is not passively absorbed but is actively appropriated as the stuff of people’s sense of self, their place in the social world’. Studies also suggested that exposure to ‘ideal’ images presented in the media may lead to body dissatisfaction, particularly when an individual’s social environment (such as family members, peers and teachers) reiterates such ‘ideals’ (Australian Government, 2009, p.12).

Alarmingly, the National Survey of Young Australians (NSYA) (Mission Australia, 2010) reported that body image was one of the top three issues of personal concern for young Australians across all states of Australia. The survey found that the proportion of young people concerned about body image increased with age, from 28.1% of 11-14 year olds to 33.3% of 15-19 year olds to 40.3% of 20-24 year olds (NSYA, 2010, p.11). The worrying assumption is that adolescents internalise media images from a complexity of sources in an uncritical manner, which may lead to increased body image concerns during young adulthood. Consequently, it is important that adolescents are taught critical literacy skills (Freebody & Luke, 1990; Luke, O’Brien & Comber, 1994; Kanasa, 2006) to address this trend. The Australian Government (2009) also advocated that critical literacy is a plausible intervention that may improve body satisfaction amongst adolescents. At this point, it is important to acknowledge that not all young consumers of the mass media develop body dissatisfaction; suggesting other factors shaping body image need to be considered. However, body dissatisfaction is linked to the incidence of poor well-being and serious mental health conditions (Australian Government, 2009), so the media’s impact on body image cannot be ignored. Therefore, this paper will explore the logistics of teaching critical media literacy skills in a social constructivist classroom.

**Competing discourses**

Ryan (2007) explained that attempts to enact a critical agenda with young people must be situated within the intersecting and often competing discourses of adolescence, school settings, Australian society and obesity prevention.

**Adolescence**

Adolescents are particularly vulnerable to body dissatisfaction as they are continually making choices about what is salient for them during this less predictable time of their lives (Clay et al., 2005). Subsequently, body image programs may come across difficulties when encouraging adolescents to be critical of media practices because of the personal investment they may have in such images – consuming and replicating media images to keep up to date with the latest trends and gain peer
acceptance. On the contrary, researchers such as Ryan (2007) dispute claims that suggest adolescence is a time of major disruption by acknowledging that adolescence is a time when resistance to structural or dominant norms (i.e. the ‘ideal’ body) in society is most readily achieved. Therefore, the stimulation of critical thinking could encourage adolescents to question the widely accepted social expectations of the ideal body.

School settings
Amidst a postmodern corporate culture, critical theorists argue that schools should initiate change and challenge hegemonic ways of seeing the world, rather than simply preparing students to cope with social change (Ryan, 2007). The unquestioning acceptance of “healthism” in the curriculum deems individuals responsible for making healthy choices that construct anxieties about their bodies’ that may lead to unhealthy behaviours (Rich, Holroyd & Evans, 2004). However, it is widely accepted that schools can teach critical thinking skills in constructivist classrooms (Mimbs, 2005) to help students actively interpret and evaluate societal norms rather than passively accept their environment (Australian Government, 2009; O’Dea, 2007).

Australian society
Australian society values freedom of speech, business enterprise, creativity and diverse opinions. Consequently, there is a conflict between the financial drive of enterprises to attract consumers (through the use of particular images) and the ability to produce empowered young people. As the body has become an outward marker of ‘value’ in a consumer culture, a social hierarchy based on body size, shape and weight has evolved in schools. For instance, a slim body is associated with particular psychological characteristics, self-control, status and ‘worth’ (Rich et al., 2004, p.182-183). Consequently, the NSYA urged media, fashion and advertising industries to promote positive body message through initiatives that build critical literacy skills and self-esteem (Mission Australia, 2010).

Obesity prevention
Wilksch and Wade (2009) reported that studies on eating disorders often paid insufficient attention to obesity as a potential risk factor or consequence. Overweight children are more likely to have lower self-esteem than their normal weight peers and since low self-esteem is a risk factor for disordered eating, the effects of obesity in body image interventions need to be considered (O’Dea, 2004). Obesity prevention programs commonly adopt a ‘blame the victim’ perspective and interpret being overweight as an outward sign of neglect for oneself (Rich et al., 2004). The consideration of adolescents who are overweight as ‘shameful’, ‘dirty’ and ‘irresponsible’ may reproduce and institutionalise moral beliefs about their body (Rich et al., 2004, p.179) that obesity prevention programs fail to address.
**Media literacy and body image programs**

There are widespread opinions for the prevention of body dissatisfaction through school-based nutrition and health promotion strategies. Research indicated media literacy interventions within an interactive, student-centred, self-esteem building framework might be a safe and effective way of reducing risk factors for eating disorders (O’Dea & Abraham, 2000; Wade, Davidson & O’Dea, 2003) and improving body image. By promoting the awareness and rejection of body image ideals among adolescents, media literacy programs may empower students to identify, analyse and challenge the thin ‘ideal’ body presented in the media (Wade et al., 2003).

Health education interventions can effectively promote self-acceptance and a positive body image when they incorporate young people’s perceptions, comments and suggestions (O’Dea, 2002). Paxton (2000) indicated that media literacy interventions could teach critical appraisal strategies by supporting students in becoming active advocates on body image. Tiggemann (2004) highlighted the need for programs to ensure adolescents are resistant to media images and suggested adolescents are taught cognitive-behavioural skills. These skills would enable students to identify distorted patterns of thinking and maladaptive behaviours (such as body checking, mirror gazing and social comparison) that initiate and maintain body image concerns (Reas & Grilo, 2004).

Body dissatisfaction is believed to be higher in girls than boys; thus, body image programs to date have focused on the needs of females. Yet research indicated that boys also show rates of body dissatisfaction, steroid used and body dysmorphic disorder (Paxton, 2000). This suggests that educational programs should be designed to suit the needs of both boys and girls. Additionally, the majority of body image programs use didactic teaching approaches rather than cooperative, interactive and participatory learning strategies (Austin, 2000). In preference to programs that attack the media directly, it will be shown that constructivist classrooms could address these shortcomings through enriched media literacy interventions.

**Critical theory**

There is extensive literature pertaining to the definition of critical theory and thinking. Grundy (1987, p.19) defined critical theory as ‘a fundamental interest in emancipation and empowerment to engage in autonomous action arising out of authentic, critical insights into the social constructions of human society’. Beyer (1989) added that critical thinking involves assessing the authenticity, accuracy and worth of knowledge claims and arguments. Thus, critical pedagogies in schools can interrogate and contend the ‘media realities’ of our social world (McLaren, 2003). The benefits of critical theory in constructivist classrooms have been collectively agreed upon, yet there are many perspectives on how students should learn critical thinking (McLaren, 2003). A selection of these strategies will be defined.
according to their perceived ability to address body image concerns in a constructivist classroom.

Teaching critical thinking

Constructivism is a philosophical perspective that suggests knowledge is constructed as a result of cognitive processes within the mind and through interaction with the environment (von Glasersfeld, 1995). Therefore, constructivist approaches in the classroom require the teacher to ‘set up conditions that encourage self awareness and reflection, hoping to facilitate further growth’ (Kincheloe, 1993, p.125). Critical constructivism is a form of problem solving that can support the development of critical thinking by placing the responsibility for learning on the students. In doing so, critical theory challenges the technical (objective facts and concepts) and practical (subjective and interpretative attitudes) views of knowledge through an emancipatory perspective – a view that knowledge is historically, culturally, politically and economically located and constructed through social interactions (Habermas, 1972). Thus, an emancipatory constructivist approach to teaching about body image issues could: develop students’ ability to reconceptualise and integrate knowledge and question students’ construction of values, attitudes and beliefs (Kemmis, Cole and Suggett, 1983; Ward, 1996) of their body.

Usher (1996, p.10) stated ‘that it is not sufficient for a teacher to teach students about thinking. Students must be taught how to think critically and to do this it is essential to use classroom techniques which actively engage students in thinking’. Brooks and Brooks’ (1999) practices for a constructivist classroom promote deep understanding, by looking ‘not for what students can repeat, but for what they can generate, demonstrate, and exhibit’ (p.16). The following are guidelines for the effective teaching of body image according to Brooks and Brooke’s five guiding principles:

- use problems relevant to students such as the impact of the media on body image
- structure learning around primary concepts such as the application of critical thinking skills in the consumption of media images
- value students’ points of view through group discussions on the media’s intent of images
- adapt the curriculum to address students’ suppositions (i.e. examine technological methods used to manipulate images
- assess student learning in the context of teaching by gauging their ability to transfer critical thinking skills to a variety of media sources

Perkins (1992) argued that the skill of critical thinking is often ‘disconnected knowledge’ because it is taught through learning experiences that are separate from the content. For instance, adolescents may be unable to connect the importance of critical thinking skills to the improvement of
self-esteem and body image. Bybee’s (1997) model for constructivism involves a natural learning process that could link critical thinking with body image. Teachers could adhere to Bybee’s (1997) approach by engaging students in the learning of critical thinking through posing questions, defining a problem or using group discussion to stimulate ideas. The students would then be encouraged to explore critical thinking through guided student inquiry. Following on from this, students would explain their own concept of critical thinking and clarify their understanding through class discussions. Students then elaborate on their ideas and apply their newfound knowledge of critical thinking to different situations. Finally, the teacher evaluates students’ critical knowledge by assessing whether there has been changes in the way students think about body image.

Fogarty and McTighe (1993) claim their three-storey intellect approach to teaching critical thinking skills is highly effective as it is a more inclusive. This approach is focused on the acquisition, understanding, application and transferring of thinking and could underlie body image interventions. The first-storey would facilitate body image activities that instruct on the nature of critical thinking skills. The second-storey would immerse students in the thought process of being a critical thinker. Finally, the third-storey would encourage students to transfer critical thinking skills to their body image perceptions through reflective practices.

Case Studies

Home Economics Curriculum
The Department of Education, Employment and Training in Western Australia reviewed its home economics curriculum and found that the content did not support changes to women’s life patterns thus limiting their post-school opportunities (Maughan, 1996). Consequently, a socially critical orientation to the home economics curriculum was trialled at Kemslott High School to address gender issues and vocational outcomes by requiring students to understand how power is used to arrange everyday economic processes and social life (Kemmis, Cole and Jugget, 1983). It was thought that critical theory could explore the relationship between gender and oppression in the family, workplace and schools (Maughan, 1996). This trial successfully trained students to critically analyse rather than simply participate in the given structures of society. Body image programs could adopt a similar critical orientation to empower students to become active consumers of the ideal body images presented in the media.

Critical thinking shifts the role of the teacher from the ‘provider’ of information to a ‘facilitator’ of student interactions and discussions on concerning issues (Eyre, 1999). The Kemslott study found that the questions posed by teachers would stimulate critical thinking and thoughtful responses if they demand the collaborative challenging of facts and the status quo. Questions should
also promote listening skills, the respect of individual views and the design of an action plan to enable students to learn their own feelings and see themselves and society in different ways (Maughan, 1996; Usher, 1996).

The Kelmslott intervention lead to a ‘Stepping Out’ literacy program focused on developing critical analytical skills. The use of three-level questioning effectively enabled students to analyse media messages by: identifying the main issues, reading into the inferences made and evaluating the material based on individual opinions, values and feelings (Maughan, 1996). This approach could be applied to a body image program to enhance the critical consumption of media images of the body. Although this study did not specifically address body image, the socially critical approach at Kemslott developed an awareness of gender imbalances in society and the workplace. The critical analysis strategies on media influences prompted personal responsibility and independence. Thus, students gained the skills to be reflective and critical (Maughan, 1996) in ways that would enable them to achieve the objectives of a critically orientated body image intervention.

*The Health and Physical Education (HPE) of Aboriginal and Torres Strait Islander (ATSI) students*

The literacy and numeracy outcomes of ATSI students in Australia have been well researched. However, the same attention has not been given to HPE outcomes even though the health status of ASTI Australians remains poorer than that of non-ATSI Australians (Northern Territory Department of Education, 1999). Schools are significant sites for cultural reproduction as they introduce, prepare and legitimate forms of life chances for ATSI students. Therefore, Olsen, Rynne and McDonald (2002, p.11) used critical theory to: address the range of cultural and educational needs of ATSI students in the educative process (or ‘Gumala Mirnumarni’ – the coming together to learn) and incorporate Indigenous perspectives in HPE.

Wink (2000) upheld that the provision of a critical pedagogy would encourage ATSI students to commit to change based on reflections of personal and other’s action. Olsen et al. (2002) concluded that critical theory did prompt ATSI students to take responsibility for their own learning through recognising the impact of their behavior on fellow students, acknowledging learning is a lifelong process and establishing respectful partnerships. Although the critical pedagogy did not specifically address body image, the teaching practices did shift the traditional balance of power in classrooms by providing learners with a ‘voice’ (Kincheloe & Steinberg, 1998; Wink, 2000; Olsen et al., 2002). This empowerment of students may favourably enhance the objectives of media literacy interventions by ensuing students are active participants in discussions on the impact of the media and personal values on their body image.

Olsen et al. (2002) alluded to shortcomings of critical theory in this HPE case that have also
been found in previous research into critical theory. These included the illusive feeling of empowerment and the assumption that teachers can actually provide students with power (Ellsworth, 1989). There is also the tendency of critical pedagogies to overlook individual differences. Additionally, Watts, Jofili and Bezerra (1997) highlighted the need for the in-servicing and professional development of teachers in constructivist approaches. It is imperative that body image interventions acknowledge these weaknesses to ensure constructivist approaches to teaching about body image issues are highly effective.

Conclusion

The National Curriculum is committed to supporting all young Australians to become successful learners, confident and creative individuals, and active and informed citizens (MCEETYA, 2008). This paper suggests that the subtleties of the National Education Goals can be achieved by developing students’ critical thinking skills to enable them to make rational and informed decisions and accept responsibility for their actions. Although, critical theory may not immediately translate into behavioural changes, it may provide protection against external media pressures, and provide a foundation on which to critique media images (Paxton, 2000). Consequently, the implementation of a critical orientation to teaching about body image issues would complement the National Curriculum Goals and potentially improve the current body image interventions used in Australian schools. Further research into ability for such interventions to improve an adolescent’s body image would need to be conducted.

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I wish to thank my PhD supervisor, Associate Professor Jenny O’Dea from the Faculty of Education & Social Work at the University of Sydney for her valuable input and assistance in the development of this paper.
Subjective, ‘intrinsic’ meaning of movement experiences has not received due recognition in the current discourses of physical education. Movement is basic to bodily experiences and is at the core of the practice of physical education. For quality and comprehensive physical education to occur, educators need to understand and plan for meaningful educational endeavours where subjective intrinsic experiences of the child are planned for and taught in an effort for children to understand their feelings, sensory experiences and ‘place in the world’. The aims of this research is to uncover via a qualitative interpretive examination teacher understandings and conceptions of children’s subjective and ‘intrinsic’ movement experiences and associated meaning-making of such experiences within the context of school physical education. Eight specialist physical education teachers working in government secondary colleges were interviewed using semi-structured questions about their knowledge of and about children’s subjective movement experiences, the contribution of their teacher education program to this understanding and how their curricula and pedagogical skills could be developed in this domain in the future. Analysis of the results has indicated that most physical education teachers interviewed have a global and superficial understanding and knowledge of the concepts related to children’s subjective movement experiences, although their ability to articulate these is ‘clouded’ by dominant scientific expressions. Additionally, teacher’s intimated that their personal experiences in movement related physical activities provided insight into how some groups ‘felt’ when participating in physical education. Implications for physical education teacher education unit and program development are drawn, as well as suggestions for ongoing physical education professional learning opportunities.

Introduction
Within the discourses of physical education there is renewed interest about the concepts of movement, movement experiences, meaning and meaning-making as they relate to the pedagogies of the body (Arnold, 1979; Brown, 2008). This research has not been abundant, however that which has been available for four decades is conceptually rich and has provided untapped intellectual resources for theoretical development. However, locating and positioning the subjective intrinsic qualities of movement within the physical education discourse, and importantly how physical education teachers
understand and practice it, inevitably confronts historical problems and challenges about how the discourse of physical education has been conceptualised, contextualized, represented and legitimated, over time and place.

For quality and comprehensive physical education to occur, educators need to understand and plan for meaningful educational endeavours where subjective intrinsic experiences of the child are planned for and taught in an effort for children to understand their feelings, haptic/sensory experiences and ‘place in the world’. As Kleinman (1979, p.179) has argued one of the key objectives of physical education should be to “discover the heretofore hidden perspectives of acts and uncover the deeper meaning of one’s being as it explores movement experiences” (p. 179). Yet, the dominant discourses of the biophysical sciences (e.g anatomy, exercise physiology, motor development) still pervade much of physical education pedagogy (Johns, 2005) while areas such subjective intrinsic experiences of movement others remain on the margins. From a more contemporary perspective Tinning (2008a) writes that “…human movement is as much a social experience as a biological experience, it is as much emotion as it is sweat.” (p.26). Both scholars poignantly highlight that research must come to recognise the humanistic, philosophical and experiential outcomes in physical education.

In physical education, such meaning and meaning making occurs as a result of engagement and reflection on individual’s subjective and intrinsic responses to the moving experience. One approach that can plausibly uncover such experiences is known as phenomenology. Phenomenology is the study of phenomena, it is a philosophical approach to describing the meaning and meaning-making of agents/actors/performers - the way things appear to us in experience or consciousness. Bain (1995) argues that "because of its philosophic assumptions, phenomenology has particular relevance to the study or movement" (p. 241). Unfortunately, very little is known about the pedagogical actions of teachers, especially as it pertains to the intrinsic notions of the participant. Tinning (2008b) goes one step further and has stated that “…we have not seen much of the phenomenological focus on pedagogy in kinesiology” (p. 410). Given this, the purpose of this study is to further elucidate on the problem of the ‘pedagogical encounter’ between physical education teacher and student as it relates to movement and meaning-making of the child. More specifically, how physical education teachers pedagogically incorporate ‘intrinsic’ phenomenological concepts of ‘lived experience’ into their classes. The timeliness of the research problem is that while movement is basic to bodily experience, its qualities and characteristics in education and health promotion discourses are not well understood. If such qualities and characteristics are not understood, the pedagogical potential of children’s physical education experiences and learning within it are diminished.
Brown’s (Brown, 2008; Brown & Payne, 2008a, 2008b) ongoing research examining movement, meaning, meaning-making as experienced through subjective, intrinsic qualities of movement and physical activity participation highlighted that “The challenge for us and physical education is for physical educators to recognize how the nascent but revitalizing phenomenology and social ecology of physical education can enhance its endeavours conceptually and practically in ways that have not been previously envisaged, or only partially so” (p. 14). Such a call requires that the literature of a phenomenology of movement in physical education, or educating physically (Smith, 1997) highlights the importance of ‘pedagogical encounters’ between teacher and child/student. Smith writes:

We need to suspend belief in how children’s physical education can be explained and be prepared to describe how it is possible for an adult to stand in an educative relation to a children within particular, somewhat unique, situations that carry significant connotations of physical maturation (Smith, 1992, p. 62)

For physical educators, therefore, there is a need to comprehend, understand, conceive of and plan for meaningful educational endeavours whereby the body-subject, the subjective, the lived experiencer, likely to be the child in physical education classes, experiences, feels, sees, knows and understands themselves through movement as compared with learning about and practicing certain skills that exist ‘out there’ often in the teachers’ minds or the curricula to which they work instrumentally. Smith (1992, 1997, 2007) also raises the importance for the teacher with concepts such reminiscence, gestural reciprocity, mimesis, observation and use of developmentally appropriate language that provides for a landscape of action where such a phenomenology of educating physically can occur. However this is anecdotal and empirical research is required if this agenda is to move beyond mere philosophical, theoretical and conceptual discussion.

**Approach and Methodology**

The specific challenge for physical education teacher education research is to move beyond the philosophical and theoretical literature that has been available for four decades towards empirical research and understandings about the centrality of movement experiences so that future educators and professionals concerned about the health and wellbeing and educational experiences can critically examine their current practices and policies. As a result a revitalized notion of movement, and understanding of the various contexts and environments in which movement occurs, will enable deeper consideration of how the discourses of physical education and human movement can be reconceptualized in school-based pedagogies.
This study employed an interpretive design incorporating semi-structured interviews with eight specialist secondary government physical education teachers underpinned by socio-ecological theory. Informed consent will be obtained prior to the semi-structured interviews which will be 60-75 minutes in duration. Interview questions will be developed from the literature review and which best represent the intent of the purposes of the study.

Questions pertinent to this study were open ended and designed to promote conversations around participant experiences, and their knowledge and understanding of subjective movement experiences, especially as it pertains to the teaching of secondary school physical education. The interview length ranged from 50 to 75 minutes and all focus group interviews were digitally recorded.

All interviews were recorded using a digital audio device and were then later transcribed into Microsoft Office Word 2007 word processing program (Microsoft Corporation, 2006). Following transcription, data was imported and analysed using the qualitative data analysis package NVIVO (QSR International, 2002) in order to establish emergent themes. Unabridged transcripts provided the basis for analysis of interviews. Transcripts underwent an exhaustive thematic analysis and an analysis of oppositional relations (Patton, 2002). Each theme was coded in NVIVO, using a system whereby the themes (or nodes) can be assigned to the transcribed text as they occur and then later recalled for analysis.

**Findings and Analysis**

As part of the semi-structured interviews, participants were asked a range of open ended questions about their teaching of physical education (current pedagogy, examples of typical lessons). Questions focussed on their knowledge and understanding of children’s subjective movement experiences was the dominant theme, however participants were also asked questions relating to their university training/education, their professional learning opportunities, and how they saw the profession developing in the future, all ‘framed’ by notions of the subjective, intrinsic and personal. From this conversation in an interview with a teacher, he identified a consistent, yet important aspect of most teacher’s understandings:

Yeah, it’s a hard one isn’t it? The enjoyment for the body is very much a perception thing.
(Male, experienced teacher)

It was this statement which summarises succinctly what most physical education teachers interviewed intimated about their understanding and knowledge of the subjective and personal meanings of children in their classes. It was clear from the interviews that most participants possess a
global understanding and knowledge of the concepts related to children’s subjective movement experiences, and that this global understanding resonates as a component of educating the whole person as ‘through, about and in’ movement (Arnold, 1979). Yet, their ability to articulate through meaningful language was often compromised by a default bio-scientific language associated primarily with exercise physiology, likely to be as result of the large scientific content in their undergraduate degree programs – a fact noted as consistent with the dominant discourse of physical education since the 1980s (Johns, 2005; Kirk, 1990; Tinning, 2002). Take for example the following exchange:

Q: Think back to your undergraduate program and tell me if there are any concepts related to the notion of movement experiences.
A: …in terms of bio phys and movement experiences, some of the maximal testing (referring to exercise physiology testing) that we did and experiencing that feeling probably I would put under that movement experience.
Q: What’s that feeling?
A: That feeling of what it means to be at your max I guess. That feeling of exhaustion, that you’ve got so much lactic acid in your legs that you can’t walk. To have the heart pounding out of your chest, to be out of breath, those sorts of maximal feelings of exhaustion and so forth…

Teacher Preparation
In examining the role of teacher preparation, it is apparent that little or no time is spent in physical education teacher education (PETE) programs examining the importance of the personal, subjective and intrinsic experiences and meanings that occurs through movement from either a participatory perspective or within or using a pedagogical ‘lens’ or ‘frame’. A couple of those interviewed did state that discipline study in sociology was apparent in their undergraduate courses but that this was more analysis of sport on a greater scale and that subjective movement experiences were rarely if at all discussed, outside ‘aesthetic’ activities such as dance/gymnastics:

Never. I’m just thinking, because I did an Applied Science and then Dip Ed, we would have touched on it in Dip Ed, but no (Female, experienced teacher)

It’s funny for a degree that is so focused on physical education, you have to actually spend so much time not looking at that as something of importance at all. (Male, experienced teacher)

Never, never. Maybe the only places you ever, ever heard it mentioned and I don’t think it was mentioned for any other reason than I think it’s a bit of an inherent thing within it, is in
dance. That’s probably the only place or time I ever heard mentioned was the joy of the movement and self-expression of movement. All the rest of it was technical skill development. (Male, very experienced teacher)

Such findings are not that unexpected given the work of Swan (1995), MacDonald (1992) and MacDonald and Tinning (1995) who individually examined student-teacher preparation in PETE and professional socialisation, where socio-cultural understandings were perceived as less important that knowledge associated with biophysical foundations. It is also consistent with the dualisms that are inherent in physical education between mind-body/body-mind, applied science degree/education degree, biophysical/sociocultural ways of knowing and sport and games/gymnastics and dance (Rintala, 1991). As a result degree programs must move beyond such simplistic binaries, as mentioned above, and embrace the importance of the intrinsic and subjective. Several PETE degree programs in Victoria have taken up this challenge, so it will be interesting to see if in the future such ‘education’ has had an impact.

**Understanding the nature of the experiencer**

According to Brown and Payne (2009) it is imperative that the nature of the experiencer - where the embodied, ecological and meaning-making is kept pure and is not ‘poisoned’ from another’s experience. Archer (2000) writes that concepts such as self-consciousness, thought, emotionality and personal identity are prior to and more basic than the acquisition of our social identity. Such work directly contradicts much of the previous work on the social construction(s) of the body(ies) and acknowledges that critical realism has neglected the causal powers of subjectivism. Importantly, respondents acknowledged their subjectivities:

I was naturally inclined to experience joy when I was active, but most people weren’t.

(Female, experienced teacher)

Further to this, teachers either individually or as a team sought to understand via mimesis (Smith, 1991, 2007) what children who were fearful of content in physical education, felt like and sensed in their lessons. They engaged in a range of activities, performing and participating in dance or singing, reflecting and thinking about their ‘experiences’ from a personally subjective stance. In other words they wanted to know more about themselves and their student’s experiences and meaning-making in learning:

In our PLT (professional learning teams) …we wanted to put ourselves, we were trying to look at ourselves from a student in our class who is fearful of any activity that we were asking them to do, understanding that we often do that to kids in our subject. And so we tried to find
something that would make all of us feel that way, and we’re like skydiving, ‘nah I love that’, all these crazy things for a Phys Ed/Outdoor Ed faculty, and then someone said singing, and everyone said ‘I’m not doing that’. And we went ‘that’s it’, and everyone’s like ‘no I’m not doing that’. And it was perfect. So then we had to work really hard on encouraging each other to do it, even just to accept that we were going to do it. And then we did, we got the singing teacher to teach us, and we noted all of our feelings when we having to do it, and we performed, we videoed it and we showed it to the staff. So we put ourselves totally through that experience to try and understand what a kid feels like in our class. (Female, very experienced teacher)

Another teacher with seven years experience personally took a challenge to further understand what it would feel like to be a participant in an activity that she was not comfortable with - dance:

So I went into it really nervous, because I can’t, I’m not coordinated at all when it comes to that whole rhythm movement stuff. Which is strange because when I was little I did calisthenics for many years and I guess that was more a structured thing than a movement. But yeah it was just that whole uncomfortable, you’re out of your own confident circle, you, and you’re with people you don’t know at all so that makes it even harder to make a fool of yourself I guess in many ways. (Female, experienced teacher)

**Experience, success and challenge**

Positively, findings from this study have highlighted how some teachers engage in mimesis to more fully understand the experiences of children that they teach. Partially overshadowing these responses however, is the responses from those interviewed to express experience in terms of instrumentality and functionality, be that challenge, self-concept, skill development or success:

They are enjoying themselves out there, so whether that’s shown in a smile or whether it’s not, but they are enjoying themselves and that comes through being challenged and having a teacher that motivates and has rapport with you. (Male, experienced)

…it’s the student succeeding and it’s the teacher giving them praise or acknowledgement that they have succeeded (Female, beginning teacher)

The meaning I would hope that they experience success every time that they come to phys ed. class so not necessarily scoring a goal or anything like that, but just practicing the skill and
getting the feel of the skill correctly, make them feel like yep that was successful, okay I can put that in my memory bank for later on next time when we come back to it sort of thing (Female, beginning teacher)

It needs success, so you need success to enjoy what you’re doing and success doesn’t have to be 10 free throws in a row. (Male, experienced teacher)

This demonstrates what Arnold (1979) stated as examples of education ‘through’ movement. Such extrinsic reasons for pursuing movement in physical education may be appropriate because they in fact lead to a desirable educational outcome. The teachers in this study have articulated that while they understand experience, primarily in terms of instrumentality, what they have not expressed eloquently enough is the importance of performing movement for its intrinsic purposes/reasons, Arnold’s calls this education ‘in’ movement and espouses the philosophy that movement (in physical education) is indeed worthwhile in and of itself.

**Implication for ‘movement education’ teachers and researchers**

This research has provided some initial evidence on what teachers know and conceive about children’s subjective knowledge in physical education. In this sense, there are some that are developing deeper pedagogical relationships, as highlighted by van Manen (1997), where the child does not get marginalised in the process of developing curriculum and pedagogical approaches consistent with subjective intrinsic ways of knowing (Smith, 1991).

The importance of acknowledging such discourses, we believe has the potential to re-energise and renew the respective fields whilst also challenging long held beliefs of practitioners to look beyond the concrete, post-modern, objective, ‘everything must have an answer’ mentality pervasive in society and within the movement education sub-disciplines.

Clearly as educators of the moving body we need to be sensitive to the educational experiences that are held in class or on the sporting field. This paper has highlighted the often forgotten aspect of physical education, outdoor education, dance education or sport, that being the subjective experiences held by the participant or the student.

The moving body is complex and it can be examined through various research ‘approaches’. It is important that researchers and practitioners continue to advocate and develop various pedagogies, curricula and approaches to their work, so that the multi-layered qualities of bodily movement and
how individuals come to make meaning of their movement becomes an ingrained component of their moving educational experiences.

References


SECTION 2: Moving, Learning, & Achieving new Sport and Education Strategies and Links
Incorporating TGfU into a bachelor of physical and health education degree at an Australian university

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Pearson and Webb (2010) investigated whether Physical Educators in NSW schools had adopted the TGfU approach to the teaching of games in their classes. Forty PDHPE teachers were surveyed with questionnaires and focus group interviews to determine their knowledge and understanding of TGfU and the extent to which they had incorporated TGfU into their teaching of games in Years 7 to 10. Fifty third-year Physical and Health Education pre-service teachers were also surveyed after completing their Professional Experience in the schools of the teachers surveyed. The pre-service teachers’ observations of Physical Education classes in the schools were also used to determine the extent that TGfU was being used in the teaching of games within those schools. It was concluded that the integration of TGfU into the NSW secondary school physical education curriculum has so far been unsuccessful.

For TGfU to become more commonplace in the teaching of games in schools, it needs to have a solid base in pre-service teacher education programs. While the Faculty of Education offered a four year Bachelor of Education (Physical and Health Education) for many years, the new Bachelor of Physical and Health Education responded to a number of influences that emerged during the life of the previous program. One of the decisions was to firmly embed TGfU throughout the movement and pedagogy strands of the new degree. This paper discusses how TGfU has been incorporated across subjects within the new course structure. Core subjects that explore the pedagogical basis of TGfU with specific links to programming of games teaching and Professional Experience for pre-service teachers are examined. It is anticipated that with a strong focus on TGfU throughout the new Bachelor of Physical and Health Education program, TGfU will become much more commonplace in the teaching of games in NSW schools.
Introduction

Whist the concept Teaching Games for Understanding (TGfU) has been around in the literature since the early 1980s, it was not introduced to the Australian sporting community at large until 1996, when Rod Thorpe from Loughborough University, England was brought out by the Australian Sports Commission (ASC) and conducted TGfU workshops around the country. Since Thorpe’s visit, many sporting authorities (for example, Australian Sports Commission, Australian Touch Association, Australian Football Federation, Australian Rugby Union), universities and state education bodies have promoted the TGfU approach via professional development and accreditation courses over the last decade. Teaching and coaching resources have been developed and continually updated. A number of tertiary institutions across the country involved in physical education and sports coaching incorporated TGfU concepts into their curricula. However, it has only been recently that the concept of TGfU has been written into secondary school syllabus documents. In 2005, a new Personal Development, Health and Physical Education (PDHPE) Years 7–10 Syllabus (Board of Studies NSW, 2003) was implemented in NSW (Australia) secondary schools. One area that underwent major changes within the syllabus was that of the teaching of games, with the move towards a TGfU framework (Werner, Thorpe & Bunker, 1996). This change has implications for practicing teachers in relation to both the content and teaching strategies traditionally utilised in the teaching of games.

Research (Curry & Light, 2006; Light, 2002, 2003; Pearson, Webb & McKeen, 2008; Thomas, 1997a; Turner & Martinek, 1999) indicates the strengths of the TGfU approach and the desirability of it as one of the major approaches to the teaching of games in the new PDHPE syllabus. The aim of the Years 7-10 PDHPE syllabus is to ‘develop students’ capacity to enhance personal health and wellbeing, enjoy and active lifestyle, maximise movement potential and promote lifelong health and physical activity’ (Board of Studies NSW, 2003, p.11). Given the decreased involvement of children in physical activity, TGfU is aimed at encouraging children to become more tactically aware and to make better decisions during the game. As well, it encourages children to begin thinking strategically about game concepts whilst developing skills within a realistic context whilst increasing participation and enjoyment. Essentially by focusing on the game (not necessarily the ‘full’ game), players are encouraged to develop a greater understanding of the game being played. Thomas (1997b) states that the desired effect of this is ‘players/students who are more tactically aware and are able to make better decisions during the game, thereby adding to their enjoyment of playing the game’ (p.3). Research by McKeen, Webb and Pearson (2007) support the increased enjoyment of students exposed to the TGfU approach compared to traditional teaching of games. TGfU has been shown to result in improved learning outcomes for students. Games are a significant component of the physical education curriculum, with research suggesting that ‘65 per cent or more of the time spent in physical education is allotted to games’ (Werner et al, 1996, p.28).
Following are some specific references to TGfU principles from the Years 7-10 PDHPE syllabus (Board of Studies NSW, 2003):

1. ‘demonstrate movement skills through a range of experiences including: games from categories such as target, striking/fielding, invasion and net/court’ (p.24)
2. ‘participate in a range of movement activities that demonstrate and enhance their ability to improvise movements to solve problems eg defending or attacking strategies’ (p.25)
3. ‘adapt, transfer and improvise movement in increasingly demanding contexts eg varying space, rules, equipment and apparatus, time restrictions’ (p.35)
4. ‘design and participate in modified activities to improve performance and promote safe participation in increasingly complex and challenging situations’ (p.35)

Such prescriptive content of what students should be learning would indicate that for effective teaching these learning outcomes would be seen in Years 7-10 Physical Education lessons in NSW schools.

A discussion paper entitled Quality teaching in NSW public schools (NSW DET, 2003) was developed to improve teaching practice and hence student learning outcomes. This led to further initiatives to ensure quality teaching was occurring in all NSW schools, one of which was the establishment of the NSW Institute of Teachers in 2004. The NSW Institute of Teachers is a statutory authority for the regulation and promotion of the teaching profession in NSW established under the Institute of Teachers Act 2004. The Institute supports quality teaching in all NSW schools. Its charter is to advance the status and standing of the teaching profession. The Institute oversees a system of accreditation and recognition of teachers’ professional capacity against professional teaching standards. It also provides a process for the profession to contribute to the development and implementation of initial teacher education and continuing professional development. The Institute is also the accrediting body for all NSW initial teacher education programs. This process involves accrediting those programs that meet the requirements of specific teaching areas and satisfy the Professional Teaching Standards of a graduate teacher at the completion of a four-year degree (NSW Institute of Teachers, 2009).

The standards are intended to describe the nature of teachers’ work in three domains: Professional Knowledge, Professional Practice and Professional Commitment. There are seven elements that describe the areas encompassed within these domains. They are:

- Teachers know their subject/content and how to teach that content to students
- Teachers know their students and how students learn
- Teachers plan, assess and report for effective learning
- Teachers communicate effectively with their students
• Teachers create and maintain safe and challenging learning environments through the use of classroom management skills
• Teachers continually improve their professional knowledge and practice
  Teachers are actively engaged members of the profession and the wider community (NSWIT, 2009, p.3)

The Quality Teaching model (NSW DET, 2003) and new syllabus outcomes (Board of Studies NSW, 2003) highlight the need for students to not only participate, but also to be cognitively involved in games lessons. Quality teaching is about what students learn, not just about what they do. TGfU allows students to understand how to use the skills they are acquiring and why they need these skills to play the game. The TGfU approach challenges teachers and coaches to understand the deep intellectual structures of playing and learning to teach a game effectively (Hopper, 2002).

A study conducted by Pearson and Webb (2010) investigated whether Physical Educators in NSW secondary schools have adopted the TGfU approach to the teaching of games in their classes. This study involved a two-phase process to determine the extent to which PDHPE teachers have incorporated TGfU into their teaching of games in Years 7 to 10 since the mandatory implementation (in 2005) of the new PDHPE syllabus. Phase 1: PDHPE teachers (n=40) were surveyed with questionnaires and focus group interviews to determine their knowledge and understanding of TGfU and the extent to which they have incorporated TGfU into their teaching of games. Phase 2: Third-year Physical and Health Education pre-service teachers (n=50) were also surveyed via questionnaire and focus group interviews after completing their Professional Experience in the schools of the teachers surveyed. The pre-service teachers’ observations of Physical Education classes in the schools were used to determine the extent that TGfU was being used in the teaching of games within those schools. The study was conducted in October-November 2009. The participating PDHPE teachers were from local regional NSW schools that the regional university utilised for Professional Experience for its pre-service teachers. The participating pre-service teachers were in the third year of a four-year Bachelor of Physical and Health Education degree. Results from the first stage demonstrated that there are still many PDHPE teachers that have little knowledge of TGfU and who adopt the traditional skill development approach to the teaching of games. This has not appeared to have changed from the results of an earlier study conducted in 2005 involving PDHPE teachers across NSW (Pearson & Webb, 2009).

Results from the second stage indicated that only 22% of teachers included any observable TGfU principles (eg. inquiry oriented, problem-solving and developing tactical skills) in their games teaching. ‘Most games lessons that I observed involved a brief teacher led warm-up, a few skill drills and then students playing the game … or just students playing the game’ (female pre-service teacher).
Another pre-service teacher (male) commented ‘when I taught a TGfU based games lesson, my supervising teacher thought that it was quite disjointed and didn’t allow for maximum participation’.

It appears from other comments from pre-service teachers that there wasn’t much support for TGfU in the teaching of games in the schools that they were located. Comments such as ‘...it [TGfU] doesn’t work’ and ‘students don’t learn skills through game sense [TGfU]’ may demonstrate the lack of understanding and support for TGfU from participating PDHPE teachers. This needs to be further investigated by follow-up interviews with the participating teachers.

The Development of a New Degree Structure

There is still a gap between research on teaching and learning games and sport and TGfU practices and development. It is difficult for knowledge to penetrate into the existing practices of teachers (Grétiaigne, Richard & Griffin, 2005). Given that TGfU is still new for many current Physical and Health Education teachers and students, there needs to be continuing awareness and development of TGfU in teacher training institutions. This is paramount for the opportunity of the TGfU approach to be adopted by teachers throughout Australia.

Change in educational institutions is traditionally slow. It is anticipated that with the current changes in pre-service teacher education and the NSW Institute of Teachers’ new accreditation scheme, teachers will be more accountable for what happens in their teaching. For TGfU to become more commonplace in the teaching of games in schools, it needs to have a solid base in pre-service teacher education programs. As part of the new Year 7-10 PDHPE syllabus (Board of Studies NSW, 2003) and the NSW Institute of Teachers’ accreditation process, an Australian university developed a new Physical and Health Education degree structure. While the Faculty of Education offered a four year Bachelor of Education (Physical and Health Education) for many years, this new course responded to a number of influences that emerged during the life of the previous program:

- external reviews of teacher education and related fields;
- research developments in education and teacher education in particular;
- the advent of the NSW Institute of Teachers (NSWIT), which has produced a set of Professional Teaching Standards to which our graduates must conform;
- developments in teaching practice, such as the Quality Teaching (QT) initiative of the NSW Department of Education and Training (DET), the largest employer of the graduates;
- changes in health knowledge and the role of physical education in the well-being of adolescents; and
- further increase in public, political and media scrutiny of teacher education and school and university education more generally.
Professional bodies, industry employer groups, academics and external experts from other teacher education institutions, curriculum specialists, and practicing teachers were consulted in the development of the program. It was agreed that the new degree structure would provide students with a stronger theoretical foundation, further opportunities for professional development and extended opportunities for professional mentoring. This was achieved through the incorporation into the design of the new Physical and Health Education degree structure, three phases (foundation, consolidation and transition) that are a focus for content, delivery, learning outcomes and assessment for each subject within the phase. Additionally this structure provides a means of considering the relationship between subjects within the phase. This horizontal structure formalises previously loose and incidental connections between subjects in a horizontal direction.

One of the decisions was to firmly embed TGfU throughout the movement and pedagogy strands of the new degree. Table 1 shows how TGfU has been incorporated across subjects within the new Bachelor of Physical and Health Education program (see Figure 1 for a complete sequence of the degree structure). One of the changes was to move from an individual game approach (for example, teaching hockey, soccer, cricket, softball, tennis, badminton, volleyball, etc) to teaching subjects that incorporated game categories (invasion, net court, striking/fielding, target). Within these new subjects a series of generic games were introduced with the aim of increasing knowledge and understanding of skills, strategies and tactics for all games in the TGfU game categories. The focus is on pre-service teachers being able to teach games in a way that utilises problem-solving skills to develop students’ knowledge and understanding of strategies and tactics across a variety of games.
Table 1: Bachelor of Physical and Health Education subjects incorporating TGfU (commenced 2008)

<table>
<thead>
<tr>
<th>Year</th>
<th>Subject with specific TGfU components</th>
<th>Supported by Pedagogy subjects</th>
<th>Enhanced by Professional Experience in schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Foundations of Movement Skill Acquisition</td>
<td>Foundations of Teaching and Learning in Physical and Health Education</td>
<td>10 rolling days over 10 weeks in Primary school</td>
</tr>
<tr>
<td>2nd</td>
<td>Teaching and learning net court, striking and target games</td>
<td>Quality Teaching and Learning in Physical and Health Education</td>
<td>3 week block in secondary school</td>
</tr>
<tr>
<td>3rd</td>
<td>Teaching and learning invasion games</td>
<td>Curriculum Perspectives in Physical and Health Education</td>
<td>4 week block in secondary school</td>
</tr>
<tr>
<td>4th</td>
<td>Promoting lifelong physical activity</td>
<td>Leadership, Management and Professional learning in Physical and Health Education</td>
<td>7 week Internship in secondary school</td>
</tr>
</tbody>
</table>

Descriptions of the some of the movement subjects are provided below:

1st Year - Foundations of Movement Skill Acquisition
This subject will engage students in theoretical and practical experiences that will examine the fundamental principles underlying all movement and identify how these principles impact on the development of specialised skills and the promotion of lifelong physical activity. The categories of games, the principles of play and the basic principles underpinning the individualisation of instruction for exceptional learners in physical activity settings will be introduced in this foundation subject.

2nd year - Teaching and learning net court, striking and target games
This subject will actively engage participants in a variety of games (net court, striking/fielding and target) that demonstrate the different approaches to the teaching and learning of games. Key game concepts will be explored in a variety of increasingly complex contexts and integrated with learning theories relating to enhancing student learning. Demonstrated game skills and teaching competencies in selected games will be required.

3rd Year - Teaching and learning invasion games
This subject will actively engage participants in a variety of invasion games that demonstrate the different approaches to the teaching and learning of games. Core game concepts related to invasion games will be explored in a variety of increasingly complex contexts and integrated with learning
theories to allow analysis and evaluation of a variety of pedagogical approaches used for teaching games which can then be incorporated into unit and program design. Demonstrated game skill and teaching competencies in selected games will be required.

4th year - Promoting lifelong physical activity
This is a core subject and the final in a sequence of five subjects that focus on movement skill acquisition and the promotion of lifelong physical activity. With research clearly confirming the short and long term health benefits of physical activity the need for all individuals to adopt lifelong physical activity is vital. This subject will examine opportunities for physical activity over the lifespan and analyse the barriers to physical activity. Students will participate in and research a broad range of movement experiences – competitive and non-competitive, individual, group and team, recreational, health and fitness and outdoor education challenges. Planning programs for groups and individuals in fitness and physical activity in both school and community settings will be examined.

These are core subjects that explore the pedagogical basis of TGfU with specific links to programming of games teaching and Professional Experience for pre-service teachers. It is anticipated that with a strong focus on TGfU throughout the new Bachelor of Physical and Health Education program, TGfU will become much more commonplace in the teaching of games in NSW schools than research results have indicated.

The first cohort of students commenced the new degree in 2008 and they are due to graduate at the end of 2011. Feedback from the majority of these students indicates that they are confident in their knowledge, skills and understanding of TGfU and are willing to use TGfU in their teaching of games. It is important to follow-up these students to determine the extent to which they incorporate TGfU into their teaching of games and to evaluate the role of TGfU in the degree structure.
<table>
<thead>
<tr>
<th>SESSION</th>
<th>SUBJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 AUTUMN</td>
<td>EDIC101 Teaching and Learning with Technology, EDPH101 About Young People, EDFE101 Educational Foundations 1: Learning &amp; Development, EDPS101 Introduction to Anatomy and Physiology</td>
</tr>
<tr>
<td>2 SPRING</td>
<td>EDPM101 Foundations of Movement Skill Acquisition, EDPH102 Meanings of Health, EDPP102 Foundations of Teaching and Learning in PDHPE (PEX - Micro teaching in Primary school), EDUP234 Exercise Physiology</td>
</tr>
<tr>
<td>3 AUTUMN</td>
<td>EDPM201 Performing &amp; Teaching Rhythmic Movement Activities, EDPH201 Promoting Wellbeing 1, EDPP201 Quality Teaching &amp; Learning in Physical and Health Education, EDUP235 Biomechanics for Educators</td>
</tr>
<tr>
<td>4 SPRING</td>
<td>EDPM202 Teaching and Learning Net Court, Striking and Target Games, EDPP202 Teachers as Communicators, Elective A EDER302 Research Project in Education, EDPE202 Health Promotion, EDPE203 Principles and Practices of Coaching, EDPE204 Outdoor Education 1, EDPP302 Risk and Behaviour Management in Physical and Health Education (3 week block PEX)</td>
</tr>
<tr>
<td>5 AUTUMN</td>
<td>EDLE301 Learners with Exceptional Needs, EDPH301 Socio-cultural perspectives on physical activity and physical education, EDPP301 Curriculum Perspectives in Physical and Health Education (4 week block PEX), EDER301 Educational Research &amp; Action Learning</td>
</tr>
<tr>
<td>SESSION</td>
<td>SUBJECTS</td>
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<tr>
<td>YEAR 3</td>
<td></td>
</tr>
<tr>
<td>6 SPRING</td>
<td>EDPM301</td>
</tr>
<tr>
<td></td>
<td>Teaching and Learning Invasion Games</td>
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<tr>
<td></td>
<td>EDPH302</td>
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<tr>
<td></td>
<td>Promoting Well-being 2</td>
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<td></td>
<td>EDAE302</td>
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<td></td>
<td>Aboriginal Education</td>
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<tr>
<td></td>
<td>Elective B EDER302 Research Project in Education</td>
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<td></td>
<td>EDPH401</td>
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<tr>
<td></td>
<td>Promoting Lifelong Physical Activity</td>
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<tr>
<td></td>
<td>EDPH402</td>
</tr>
<tr>
<td></td>
<td>Application of Health Education in School and Community Settings</td>
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<tr>
<td></td>
<td>Elective C EDPE401 Sports Studies 1</td>
</tr>
<tr>
<td></td>
<td>EDPE402</td>
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<tr>
<td></td>
<td>Community placement</td>
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<td></td>
<td>EDPE403</td>
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<tr>
<td></td>
<td>Intervention Skills for Teachers</td>
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<td></td>
<td>EDPE404</td>
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<tr>
<td></td>
<td>Outdoor Education 1</td>
</tr>
<tr>
<td></td>
<td>Elective D EDPE405 Sports Studies 2</td>
</tr>
<tr>
<td></td>
<td>EDPE402</td>
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<td></td>
<td>Community placement</td>
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<td></td>
<td>EDPE403</td>
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<td></td>
<td>Intervention Skills for Teachers</td>
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<td></td>
<td>EDPE404</td>
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<tr>
<td></td>
<td>Outdoor Education 2</td>
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<tr>
<td>YEAR 4</td>
<td></td>
</tr>
<tr>
<td>7 AUTUMN</td>
<td>EDPM401</td>
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<tr>
<td></td>
<td>Promoting Lifelong Physical Activity</td>
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<tr>
<td></td>
<td>EDPH402</td>
</tr>
<tr>
<td></td>
<td>Leadership, Management and Professional Learning in Physical and Health Education 12 credit points</td>
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<tr>
<td></td>
<td>EDPP402</td>
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<tr>
<td></td>
<td>Internship 7wks 12 credit points</td>
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<tr>
<td></td>
<td>EDPP403</td>
</tr>
<tr>
<td></td>
<td>Leadership, Management and Professional Learning in Physical Education 12 credit points</td>
</tr>
</tbody>
</table>

Figure 1. Progression grid for Bachelor of Physical and Health Education

Conclusion

The monitoring of standards and the quality of teaching performance has become very apparent in NSW public schools and requires teachers to adopt effective teaching strategies. The central component of TGfU – an inquiry oriented and problem solving approach to develop tactical understanding – fits well into this prescribed pedagogy for the teaching of games. Physical education teachers must provide opportunities for students to gain knowledge and learn during games lessons. The Quality Teaching framework suggested for public schools in NSW reinforces mandatory syllabus
outcomes by requiring teachers to have deep knowledge and understanding of concepts and ideas and for students to be challenged and be engaged in critical thinking and decision making.

It is essential that quality physical education has student learning as a central consideration and focuses on developing knowledge for life-long physical activity (Hickson, 2003). Whilst TGfU is not the only pedagogical model for teaching games, it is most certainly one that encapsulates the dimensions of quality games teaching. Continuing teacher training and development is required to support teachers in developing an understanding and skills necessary to utilise a TGfU approach that underpins the teaching of games within the NSW 7-10 PDHPE syllabus (Board of Studies NSW, 2003). The structure of the Bachelor of Physical and Health Education degree will provide students in this program with opportunities to develop their knowledge, skills and understanding of TGfU. This will potentially enable these preservice teachers to incorporate TGfU principles effectively into their teaching of games.

References


Many of us remember cutting our teeth with sport on backyard versions of the sports we loved. We did this by retaining the essential rules that made the sport identifiable while modifying and introducing other rules to suit the number of players and the environment of the game at the time. We explored, created and imagined the game and its possibilities. 'Backyard League' (Cohen, 2009) employs the Teaching Games for Understanding (TGfU) (Bunker & Thorpe, 1982) concepts of discovering, experimenting and appreciating a game to teach about the sport of rugby league.

Backyard League is consistent with the premise of non-linear constraints-led approach to motor skill and game learning (Chow et al., 2007; Davids et al., 2008; Renshaw et al., 2010). This paper describes the non-linear application of TGfU pedagogy to teach appreciation of Rugby League. The paper will explain the curriculum and instructional process of Backyard League and provide a pedagogically flexible model that could be used in Primary or Middle years’ physical education. This paper will be followed by a workshop where participants can experience Backyard League.

Non-Linear Constraints-Led Approach for Game Learning

A non-linear approach to game based learning suggests that movement variability may not be disadvantageous to game learning and may be important in the cognitive and motor flexibility required to meet the dynamics of game environments. Non-linear development is predicated on a learning environment where the player is placed at the centre of the game learning process (Renshaw et al., 2010).

Understanding game constraints is central to the implementation of this approach. Constraints are the boundaries which shape the emergence of game behaviour. The constraints are categorised into three groups. 1. Individual – these are the structural and functional characteristics of an individual (E.g. height, weight, emotions, intentions etc.); 2. Task – these are specific to particular game contexts and include areas such as the rules of games, the equipment used, playing areas and markings.
et al., 2007; Davids et al., 2008; Renshaw et al., 2010)

In a constraints–led approach the role of the teacher is the identification and manipulation of the key constraints. This enables the design of task conditions to facilitate the emergence of functional movement patterns and decision-making behaviours (Renshaw et al., 2010). The implication is that physical educators need to adopt a variety of appropriate constraints to help learners search for successful solutions in a movement context (such as a modified game). The search process should ideally allow for movement flexibility and adaptability so that learners can generate solutions that are unique to the game constraints. A guided discovery instructional strategy (Mosston & Ashworth, 2002), such as is foregrounded in a TGfU approach to games teaching, assists learners identify and appreciate successful movement solutions. Renshaw et al. (2010) identified that the non-linear constraints-led approach provides a concrete tangible connection with the pedagogical practice of the TGfU method.

**Teaching Games for Understanding (TGfU)/Game Sense**

Backyard is informed by the pedagogical tenants of TGfU. TGfU is the name given to Bunker & Thorpe’s rethinking of games teaching (1982; 1983; 1986). They observed that physical education often focuses on the reproduction of textbook techniques (Pigott, 1982) and multiple game experiences. Alexander described this structure of frequent short duration units of work as an example of the multi-activity curriculum model (Alexander, 2008). Bunker and Thorpe (1982) indicated that many students left this type of games teaching without the skills, knowledge and understanding to be able to pursue the activities they experienced in any meaningful way. In response, they proposed a cycle of learning that emphasised game appreciation and tactical understanding as precursors to skill development. This was not to suggest that skill learning and skill practice was ignored, rather, skill learning was to be presented as appropriately emerging from recognition of the need for this type of learning task in order to progress individual or group game play.

This foregrounding of game play provided students with contextual understanding of the need for skill and the use of the skill. Skill drills are still an essential instructional strategy, but they are not the default starting positioning for experiences in a TGfU setting. Skill drills become appropriate when there is a need to enhance the play via improved motor skill patterns or when a specific movement pattern is required in order to be compliant with game rules.

TGfU emphasised the instructional strategy of questioning by the teacher/coach. Questions are purposefully designed to engage players in the construction of game knowledge and understanding.
(den Duyen, 1997). Questions guide player development of Game Sense (den Duyn, 1996; 1997). Game Sense is an Australian sport term used to describe ‘thinking players’ (den Duyn, 1997). These are players who can respond to the emerging situations in games with effective decision making as well as effective movement skill execution. It describes intelligent interaction in the play. For example, Wein (2004) has described sport (using the example of soccer) as essentially a cognitive interaction as successful players are generally the ones who can best read the situation in a game and anticipate how the play is going to develop. Wein (2007) consequently emphasised that junior sport should encourage the development of game intelligence by exposing players to varied simplified games as this process develops tactical game understanding and technical movement competency.

A Game Sense approach applied to a novel or new sport uses the modification of game rules and playing conditions as an instructional strategy through which to teach about the game (the rules that condition play) and through the game to be able to understand the tactical nature of play. Game rules and conditions are therefore tools to be manipulated by exaggeration, reduction or elimination (Pill, 2007) by sport teachers to enhance game learning.

**Primary and secondary rules**

The nature of sport is that there are primary rules that distinguish the sport and the nature of play from other sports, even from sports that are tactically similar in character. These primary rules also lead to core playing principles (Hopper, 1988) that assist players meet the tactical challenges inherent in the play of the game. Primary rules allow players to understand the inherent purpose, or “internal logic”, of play (Grehaigne et al, 2005). There are also secondary rules. These rules are often not constant over time and frequently have been subject to change and modification as sports have matured in complexity or morphed into multiple versions of what is essentially the same sport (for example, Beach Volleyball and Indoor Volleyball). The nature of sport is such that games continue to evolve through modifications to rules and the constraints on what is permissible during play; and new versions of familiar sports can emerge. The rule changes, that occur to give rise to a new version of the sport, retain the essential nature and character which defines the play as a particular sport. The ‘internal logic’ is not lost.

**Backyard Rules**

The intuitive manipulation of the primary and secondary rules of sport defined the development of games in many Australian backyards. Young people gathered to play out the game exhibited by their sporting heroes, but with player numbers decreed by circumstance and rules governed by the number of players and the environment of the game. For example: playing cricket with the stumps against a wall. There was no need for a wicket keeper, but the game included an ‘automatic keeper’ in play.
through the game ‘rule’ that if you hit the ball and it strikes the back wall on the full, the batter was out as the ‘wicketkeeper’ had caught the ball. In these games movement skills were refined through play and play was adapted to meet the constraints of the localised ‘backyard’ version of the sport.

Cote (1999), recognising that athletes first experience sport in playful games, coined the term ‘deliberate play’ to explain the value of games regulated by rules modified from standardised sport rules in the development of sport skill (motor competency and tactical decision making). Deliberate play situations, such as street hockey and backyard cricket, allow children the opportunity to experiment with movement possibilities and tactical scenarios to innovate, improvise and respond strategically in ways frequently restricted in traditional drill orientated practice sessions. Movement flexibility and creativity have been indicated as important factors in the development of sport competency in team sports (Berry, Abernathy & Cote, 2008; Cote, Baker & Abernathy, 2007). For example, Berry et al. (2008) reported that expert decision makers invested a greater amount of time in deliberate play activities compared to structured practice. Cote (2010) has also indicated that participation in sport is best predicted by the amount of deliberate play activities in the sampling years (age 6-12). It is important to distinguish that deliberate play is not free play. Deliberate play is participation in games with rules. Deliberate play is also distinguished from another important skill learning concept, deliberate practice (Ericsson, 2003), which is externally motivated and focussed on specific outcomes. Ericsson (2008) explained that expert performance requires the acquisition of complex integrated systems of representations for the execution, monitoring, planning, and analysis of performance. Teachers and coaches should therefore create training opportunities for deliberate practice where performers may then make the necessary adjustments to improve specific aspects of performance to assure that attained changes will be successfully integrated into performance. Deliberate play and deliberate practice are then both necessary in the development of expert performance.

Backyard League takes the instinctive nature of deliberate play constructed by young people as they mimic adult professional constructions of sport in the manipulated versions designed by them to suit the environment, individual ability and number of players available. Backyard League creates a context for teaching the essential sport skills and understanding of Rugby League by challenging players to develop a Rugby League game. The game maintains the primary rules of the sport while allowing manipulation of secondary rules which adapt or constrain the way the game is played without the game losing its distinctiveness as Rugby League. Backyard League takes the informality of the way many of us played sport with our friends and family in the backyard and on the school grounds at recess and lunch and overlays it with the curriculum principles of TGfU/Game Sense. It foregrounds the development of game awareness and teaching sport for understanding. It asks the teacher to provide less structure and more negotiation in the construction of the game environment.
Rugby League: Primary Rules

We would argue that there are primary rules that make Rugby League unique and they are what would be considered “non negotiable” in order to recognise a game as a version of League. These rules must somehow be incorporated into the ‘Backyard’ game. Further negotiation about rules and game conditions that suit the environment, age and ability of players, and number of players, are a possibility.

In order to play a game recognised and understood by players as Rugby League the primary rules emerge from core game concepts that provide the internal logic of the sport. The following game concepts are presented as those that define Rugby League and must therefore be included otherwise the game would fall outside of the parameters of what could be recognised as Rugby League. It could still well be an Invasion (den Duyn, 1997) sport – but without these concepts the game isn’t Rugby League. The core concepts are:

1. It is a game of scoring ‘tries’. ie: Getting the ball over an end line and placing it on the ground with controlled downward pressure;
2. The Attacking team is given a certain number of “chances” in which to score a try;
3. The Attacking team has to have some way of restarting the attack after each chance ends;
4. The ball can never come forwards by hand – (thrown, dropped or tapped);
5. The Defending team must have some way of stopping a ball carrier and ending one of the Attacking team’s chances; and
6. The Defending team must provide some space to the Attacking Team after they have successfully ended one of the Attacking team’s ‘chances’.

The primary rules that differentiate Rugby League from other sports are derived from these game concepts. This can be seen by comparison with other ‘line’ (Werner & Almond, 1990) Invasion sports. For example, in Rugby Union, possession (see Point 2 above) is not limited to a certain number of chances. In American Football, the quarterback can throw a forward pass see Point 4 above).

A group of players are playing a Backyard version of Rugby League when they are playing a game that adheres to rules related to the above 6 concepts. Secondary rules revolve around conditions such as: kicking and how that could be incorporated into the game, restarts of play, in goal areas, penalties and offside rules (for example).

A template to guide teachers in the use of Backyard and teacher use with students in the negotiation of game rules has been developed (Cohen, 2009) (Figure 1).
**Initial approach**

To begin to develop an understanding of the core concepts of Rugby League a basic ‘backyard’ game with constraints resulting in minimal rules: mainly around safety, boundaries and having a line to get over to score, engages students in a game as the first and major learning experience. Backyard League is therefore a game centred (Cushion, 2002; Pill, 2007: Webb & Pearson, 2008) rather than textbook technique approach for sport teaching.

The object of the initial game is to get the ball over the line at the end of the ‘field’ with control to score a try. Initial rules can include:

- The defending team can stop an attacking player who is running by tagging them;
- When tagged the ball carrier can offload it to a team mate and the defending players have to move a prescribed distance away from the play of the ball so the team in possession have an opportunity to dispose of the ball;
- If the ball goes out of bounds the team that caused it to go out loses control of the ball; and
- No tackling, pushing, ‘manhandling’ of players is allowed.

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**Figure 1. Backyard League Template (Cohen, 2009)**
From very basic rules the teacher continues a process of conditioning the game by negotiating with students the task, environment and individual constraints that result in rules that enhance the structure of the game or resolve game ‘disputes’. The need for game modifications can be identified either by the players or by the teacher. Which constraints or rules are introduced can vary and there are multiple pathways that a teacher can follow in constructing the game progression as long as all are clear on the core concepts of Rugby League, and these concepts are not contravened by the rules that are adopted. A flexible rather than rigid approach to rule changes is, therefore, preferred for this game centred sport development model as it will facilitate an understanding of why the rule is necessary and how the rule changes the structure of play and the tactical possibilities. Flexibility also enables students to appreciate that ‘sports’ are organic in that they continue to evolve through rule modifications, and the version of the sport they see played professionally is the latest or dominant iteration, and not the only iteration, of that sport.

Backyard League identifies with the way play naturally evolves when a group of children get together and decide to play a game of their favourite sport. By identifying the core concepts of Rugby League, options appear within the task, environment and individual constraints meaning that the rules can be eliminated, exaggerated, or implemented that enable the teacher and students to work together to choose a game form that works for the skill level, tactical knowledge, number of players and the playing environment available. From a TGfU perspective, an appreciation of the game is foregrounded by the establishment of core game concepts as it is these that guide the adherence to the primary rules. Game based learning and interactivity with the game is encouraged before sophisticated stylised ‘textbook’ skills and movement patterns are needed. The game becomes the focus of the teaching with sophisticated movement patterns and sport specific skills resulting from the evolution of the play. Teaching therefore becomes game-centred rather than textbook technique focussed. Movement flexibility, adaptability and creative are encouraged.

**Summary**

- Backyard League foregrounds the core concepts of Rugby League as a pre requisite to understanding the game and beginning play.
- As long as a group of students have the fundamental movement skills of throwing, catching and running they can begin to play immediately.
- Rules are negotiated by the playing group and the game commences.
- Game Sense is allowed to emerge and develop by playing rather than an initial set of drills.
- The sophistication of the game and the skill set to play is allowed to evolve at a pace determined by the participants but guided by the teacher.
Teachers are not constrained to textbook techniques and drills as students learn by playing and adapting to the play as new rules are adopted in response to the need of the players.

The aim of the ‘backyard’ approach is the development of thinking players with game understanding who respond to the emerging situations in games with effective decision making as well as effective movement skill execution (den Duyn, 1997). This emerges as players innovate, create and adapt the play to develop understanding of how rules structure, constrain and make possible the play.

Watching children play “4 square” handball in the school yard and the gradual emergence over time of complex games with sophisticated movement patterns, agreement of rules to solve issues, resolve disputes and ensure a degree of ‘fairness’ in how the game is played all can evolve without a teacher as the children engage in deliberate play. Skilled performance comes about through trial and error, negotiation and practice through plenty of creativity and adaptive play. Backyard league is an attempt to take this ‘natural’ instinctive approach to game play and adopt it to the teaching of Rugby League so that success, understanding and appreciation of the sport is promoted.

References
Secondary School Students’ Participation in Sports and their Parents’ Level of Support: A Qualitative Study from Six Adelaide Schools

Vegneskumar Maniam - The University of Adelaide, Australia

The study investigated student involvement in sports as part of co-curricular activities in the school and outside, and the effect of parental support upon their child’s sport participation. The purpose of the study was to investigate in-depth the views of year 11 students from six Adelaide schools about their parents’ influence on their participation in sport. The schools agreed to allow their students to participate on a voluntary basis. The primary data was gathered from 111 students in the form of written personal statements in response to the researcher’s open-ended guideline questions, based on the humanistic sociological approach of studying respondents’ personal perspectives on a particular phenomenon. The 80% of respondents who claimed to play sport were involved in a total of 23 different sports, with soccer being the most frequently mentioned (29%). Parental support for sports participation was evident in 89% of their comments, but only 11% of parents played an active role. The 20% of respondents who did not play sport all attended schools where participation in sport was not compulsory. The negative family constraints identified by 15% of respondents referred to issues such as lack of parental interest in sport, concerns about safety, maintaining a balance between sport and other areas of life, and the cost involved.

Introduction

Australia is a nation well known for its participation and involvement in international sporting events (Currie, 2009). Community participation in sports and recreational activities has also been recognised as an important feature of the Australian way of life (Independent Sport Panel, 2009). Yet concern has been increasingly expressed at the decline in young people’s participation in sport (Independent Sport Panel, 2009) and the fact that non participation is more likely to be often marked by gender, socio-economic and geographic location subgroups in society (Office for Recreation and Sport, 2007), as well as by minority ethnic background (Taylor, 2000).

Recent Australian Bureau of Statistics (2006) studies on participation of Australian youth in sports and cultural activities (drama/dance) indicated that overall, 25% of young adolescents aged 12 to 14 years did not participate in sporting or cultural activities. This lack of participation rose to 36%
for those in one-parent families; to 44% for those from non-English speaking countries; and to 49% for those with unemployed parents. A later study by the Australian Bureau of Statistics (2007) found that two-thirds of Australian children aged 5-14 years participated in organised sport outside of school hours. The most popular sports played by children aged 5-14, regardless of gender was swimming, with participation increasing from 14% in 2000 to 17% in 2006. The study found that in 2006 for boys the organised sport with the greatest participation was soccer (outdoor) at 19.6%, followed by swimming at 16.5% and Australian Rules football at 13.8%, while for girls it was dancing at 23.8%, followed by swimming at 18.2% and netball at 17.3%. Girls’ participation in soccer (outdoor) more than doubled from 2.9% in 2000 to 6.4% in 2006. The most recent South Australian figures show 61% of urban secondary boys and 70% of urban secondary girls played school-based sports. Among primary and secondary students combined, 13% played soccer, 12% netball, 11% Australian Rules Football and basketball, and 8% cricket (Office for Recreation and Sport, 2007).

Besides school teachers, peers, coaches and club sport administrators, it is generally regarded that parents have considerable impact on students’ involvement in sport (Griffin, 1998). Elite level athletes frequently cite the role of parents in fostering their sport participation (Lee, 2009). A qualitative study carried out by Leff and Hoyle (1995), focusing on junior tennis players in the United States, found that the players’ statements acknowledged the benefit of parental encouragement. Parents are also known to have a modelling effect on their child’s participation through their own sporting activity. Parents’ levels of activity are among the strongest determinants of their child’s activity patterns. In such families the children were 5.8 times as likely to be active than those with non-active parents (Moore, L. L., Lombardi, D. A., White, M. J., Campbell, J. L., Oliveria, S. A., & Ellison, R. C., 1991).

Family socio-economic status also appears to be a critical influence on secondary students’ participation in sports. Findings by (Wright, MacDonal, & Groom, 2003), show that sport and physical activity tend not to be important to low socio-economic families where concern for adequate food and clothing take priority. At the other end of the scale, children from high socio-economic families are often constrained to sports that contribute to the ethos of their school and produce the right kind of attributes (Wright, et al., 2003).

A Victorian qualitative study of students’ parents (Hesketh, Waters, Green, Salmon, & Willieams, 2005) yielded parental comments on the value of role-modelling healthy behaviours, including physical activity. Brusted (1993) also reported a positive relationship between higher parental encouragement and greater perceived physical competence for children. If the parents were actively involved in sporting activities then it was also likely that the children would develop positive attitudes towards sports and be actively involved in more physical activities (Cote, 1999).
This study set out to examine the students’ views regarding their parents’ influence on their sports participation. This is important for better understanding of the participation and non-participation of secondary school students in sport.

Method
Participants
The participants were 111 Year 11 students drawn from six Adelaide, metropolitan co-educational schools (South Australia). Because the schools selected the students or class group to take part, the numbers differed from school to school, depending on class sizes and the availability of students on the day of data collection. Of the 111 students involved, 70% were aged 16 and 40% were female.

Research Design
The research was designed to investigate whether or not respondents participated in sports and how far family and school factors influenced this participation. The qualitative self-evaluated data were written in response to open-ended questions designed by the researcher.

Measures
Qualitative studies such as this depend mainly on interpreting the spoken or written words of the respondents in terms of their psychological or cultural meanings rather than statistical analysis of numerical measures. The humanistic sociological approach stresses the interpretation of data from the perspective of the participants as social and cultural beings (J.J. Smolicz & Secombe, 1981; J.J Smolicz & Secombe, 1986, 1989). The different types of parental influence identified were categorized thematically using NVIVO software and plotted against one of the key social and cultural groups to which the respondents belonged, the school. Frequency tables – one for those respondents who played sport and a separate one for those who did not - were constructed to show the distribution of the categorized responses across the six school groupings. Percentages were given in the totals columns, where the numbers were high enough to justify this calculation.

Procedure
Once this research project had been granted ethics approval from the University of Adelaide and the Department of Education & Children’s Services, a formal invitation letter with documentation about the research proposal was sent to principals of Adelaide secondary schools across all three sectors. Entry to each school was negotiated through the six principals who agreed to participate. The year 11 class of respondents was selected by the school. One period of class time was devoted to completing the questions. Students present on the day participated in the study voluntarily.
Results

The extent of sports participation among the respondents and the most frequently played sports are presented in Table 1, which shows the frequency of responses for each school, as well as the totals. Overall 89 (80%) of the 111 respondents indicated that they played one or more sports; the other 22 (20%) were not involved in any sport. The total of 179 mentions of sports played was twice the number of students playing sport, but the mentions ranged from 5 in School S (which had the highest number of students not participating in sports) to 44 in School P.

Table 1: Respondents' Sports Participation

<table>
<thead>
<tr>
<th>Sport</th>
<th>Schools</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>C</td>
<td>H</td>
<td>P</td>
<td>S</td>
<td>Z</td>
<td>Total</td>
<td>% of N 111</td>
<td></td>
</tr>
<tr>
<td>Soccer</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>5</td>
<td>32</td>
<td>29%</td>
<td></td>
</tr>
<tr>
<td>Australian Rules Football</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>21</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Tennis</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>18</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Netball</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>16</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Basketball</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>15</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Volleyball</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>10</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Athletics</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Cricket</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>14 Other Sports</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>5</td>
<td>35</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Mentions of Sports Played</td>
<td>33</td>
<td>31</td>
<td>40</td>
<td>44</td>
<td>5</td>
<td>25</td>
<td>179</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>Participants</td>
<td>17</td>
<td>16</td>
<td>19</td>
<td>18</td>
<td>4</td>
<td>15</td>
<td>98</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Non Participants</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>9</td>
<td>7</td>
<td>22</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

Note. The total mentions of sports played is greater than the number of respondents (N=111), and the percentage therefore over 100, because some respondents named two or more sports.

Among the 23 sports named, soccer was the most popular, but played by only 32 respondents (29%). Australian Rules Football was mentioned by 21 students (19%), but cricket by only 7 (6%). The 16 female respondents who said they played netball represented 14% of the total, but 36% of the girls. The 14 least frequently mentioned sports have been grouped together since each attracted only one or two participants. Yet overall these 14 sports accounted for over a third (N=35) of the 89 students who played sport.
The comments on what their family thought about sport were read closely to identify different types of family influence. It was evident that these fell under two main headings: positive support and what could be called negative constraints. Five types of positive parental support were identified, along with seven types of negative parental constraint.

Table 2 presents the five types of parental support identified, together with illustrative examples of each form of support, taken directly from the respondents’ statements. The citations are quoted verbatim and sometimes contain errors of grammar, punctuation and spelling. Words or punctuation in square brackets are used where these are considered necessary for clear understanding.
Table 2: Types of Positive Parental Support Derived from Respondents’ Comments

<table>
<thead>
<tr>
<th>Positive Support</th>
<th>Example of respondent’s comments</th>
</tr>
</thead>
</table>
| Support and Encouragement               | • They like me playing sport and encourage it.  
• My mum and dad are very supportive of me playing sport.  
• My mum, dad are both right behind my involvement in sport.  
• They encourage me a lot and are very happy for me…  
• My family encourage [me] to play a lot of sports because … it’s good for me and I enjoy it.  
• very supportive, proud.  
• they are very proud of my achievement.  
• They are very proud of me.  
• father trainer for teams, mother is on club committee.  
• My father was very supportive and encouraged me to do my best… he would take me to… most of my matches or game days (Saturdays).  
• My family plays cricket [and] football so I do it as well.  
• My family all play different sports so it’s just a normal thing to play sports.  
• My dad and his side of the family are all very fit and active most of his family have won the [Bay Sheffield]. They are very much runners. My mum keeps fit and when she was young she was very involved in different sports. My older sister is a personal trainer and likes it very much. My younger brother play for about 4 football clubs and plays state football.  
• My mum has coached me in both school and club for a lot of my netball life. |

In the same way Table 3 presents the seven types of negative parental constraints, with illustrative comments provided by the respondents. A number of these examples demonstrate that comments which were classified as negative constraints for the purpose of this analysis were more in the form of qualified support for their children’s participation in sport rather than outright opposition to it.
<table>
<thead>
<tr>
<th>Negative Constraint</th>
<th>Example of respondent’s comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure to Perform</td>
<td>- Both parents think I should do more of it.</td>
</tr>
<tr>
<td>Study more important</td>
<td>- They like me continuing sports as a fitness purpose but they still want me to take my studies at a higher priority as it is more important for my future right.</td>
</tr>
<tr>
<td></td>
<td>- They don’t mind me doing it but they want me to take school first.</td>
</tr>
<tr>
<td>Safety Concerns</td>
<td>- They all agree with that except if it is dangerous</td>
</tr>
<tr>
<td></td>
<td>- They really want me to play sports but also tell me not to get injured.</td>
</tr>
<tr>
<td>Time Consuming</td>
<td>- They think it’s excellent but sometimes they think I play too much my whole family is very sporty.</td>
</tr>
<tr>
<td></td>
<td>- They think it’s good to play lots of sport so long as it doesn’t take over my life eg [sic] school and mates. They support me lots.</td>
</tr>
<tr>
<td>Little or no interest in sport</td>
<td>- We aren’t particularly sporty family but my family supports me in whatever I chose to do. They encourage my involvement.</td>
</tr>
<tr>
<td></td>
<td>- They don't play or follow any sports.</td>
</tr>
<tr>
<td>Limits Friendships</td>
<td></td>
</tr>
<tr>
<td>Financial Burden</td>
<td>- … my mum thinks playing sport joining a team is costly which puts her off the idea a bit if [it’s] really expensive.</td>
</tr>
</tbody>
</table>

The frequency of these comments in total and across the school grouping is presented in Table 4A for students who participated in sport and in Table 4B for those students who played no sport.
<table>
<thead>
<tr>
<th>Parents' Influence</th>
<th>Schools</th>
<th>B N=17</th>
<th>C N=16</th>
<th>H N=18</th>
<th>P N=18</th>
<th>S N=6</th>
<th>Z N=14</th>
<th>Total N=89</th>
<th>% Total Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support &amp; Encouragement</td>
<td></td>
<td>11</td>
<td>6</td>
<td>12</td>
<td>11</td>
<td>4</td>
<td>6</td>
<td>50</td>
<td>51</td>
</tr>
<tr>
<td>Parental Involvement</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Approve feel proud</td>
<td></td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Whole Family Involvement</td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Parent as coach</td>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td>18</td>
<td>13</td>
<td>22</td>
<td>19</td>
<td>6</td>
<td>9</td>
<td>87</td>
<td>86</td>
</tr>
<tr>
<td>Pressure to Perform</td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Study more important</td>
<td></td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Safety Concerns</td>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Time Consuming</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Little interest in sport</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Limits Friendships</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total Comments</strong></td>
<td></td>
<td>23</td>
<td>17</td>
<td>23</td>
<td>19</td>
<td>6</td>
<td>9</td>
<td>98</td>
<td>100%</td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td></td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>
Among the students who participated in sport, there were 87 comments (86% of the total comments) which could be classified as positive parental support, as against 11 (11%) which could be interpreted as negative constraints. However, 15 of the students who played sport provided no comment on what their parents felt about their participation. The type of parental influence most frequently mentioned (51% of the total comments) was support and encouragement for their children's participation in sport. Another 12% of comments mentioned parents' feelings of pride and approval. Only 23% of the comments reported parents as being involved in their children's sport with 8% of comments having described the influence of the whole family being involved in sport and an additional 3% specifically mentioning the role of coach. The negative constraints from parents mentioned by the students included pressure to perform well in sport, reported in 3% of comments, and parental insistence that study was more important, mentioned in another 3%. A further 2% of comments reported parental concerns about safety in sport. One parent considered sport too time consuming; another thought it limited friendships, whilst a third was reported as having little interest in sport.

<table>
<thead>
<tr>
<th>Schools</th>
<th>Support Encourage</th>
<th>Whole Family Involved</th>
<th>Parents Proud</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H N=7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>S N=7</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Z N=8</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Total N=22</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 4B: Family Support Reported by Students Not Participating in Sport

<table>
<thead>
<tr>
<th>Schools</th>
<th>No Family Interest</th>
<th>Financial Burden</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H N=7</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>S N=7</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Z N=8</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

Note. All respondents in school B, C & D participated in sport.
Sixteen of the 23 comments made by the students who did not play sports also reported positive parental influences. Only three types of support were mentioned; eight spoke of general support and encouragement and three of feelings of pride and approval. Another five mentioned whole family involvement in sport. Of the six comments which represented negative parental constraints, five explained that their family had no interest in sport, while the sixth reported that the respondent's involvement in sport was a financial burden to the family.

Discussion
The 80% (N=89) rate of sport participation found among the respondents was somewhat higher than the overall rate of 75% reported in the 2006 ABS study and the average of 65% among secondary students reported in SA. The higher rate could be a reflection of the fact that schools B, C and H all had a policy of compulsory sports participation. All the students from these schools (N=51=46%) played sports. The Total Mentions of Sports Played show that most of these students played at least two sports, and at School P, many played three. Those not playing sport all came from Schools H, S and Z, which encouraged but did not enforce participation. Non-participation was greatest in School S, where nine out of 13 respondents were not involved. Approximately seven out of 22 respondents at School Z and six out of 25 at School H played no sport.

Family could be seen to have played a role in these figures. Parents who are strongly in favour of their children’s involvement in sport ensure that their children attend schools where participation in sport is compulsory, provided that they have the means to do so. Those who give priority to other activities, such as school studies or music, may choose to send their children to schools where sports participation is optional.

The 23 different sports which the students played are consistent with the wide range reported in previous surveys (Australian Bureau of Statistics, 2007), includes South Australia (Office for Recreation and Sport, 2007), although the percentages playing soccer and Australian Rules Football was somewhat higher in this study. Six of the nine most frequently mentioned sports involved team games. Given that a third (N=35) played a total of 14 different sports, those organising and funding sports would do well to provide a wide range of sporting activities to suit individual needs and interests.

Among those participating in sports, parental influence was seen predominantly in positive terms, 86 % describing various forms of parental support and only 11 % reporting negative constraints. In only 11% of cases, however, were parents actively involved themselves. The students who did not play sport also reported positive parental support, but mentioned only three of the
categories of influence given by students playing sport. Furthermore, the two types of parental negative constraint reported by non-participating students reached a total of six, as compared to the 16 positive comments. Five of these related to the respondents’ families having little or no interest in sport. Overall, the proportion of negative constraints to positive support comments among those not playing sport was thus higher than for those who participated in sport. Across all respondents, the most commonly mentioned negative constraint (mentioned six times) was the family’s lack of interest in sport.

**Conclusion**

This in-depth qualitative study confirmed that the majority of the Year 11 respondents from the six schools involved were playing sport. In most instances their participation was being actively encouraged by the school and the family, the two groups that most influenced their lives, socially and culturally. The schools either mandated or actively encouraged the playing of sports. Most parents were seen by their children to have a supportive influence in encouraging and facilitating their sports participation, a finding which supports previous studies on this topic. The range of views expressed by respondents in this qualitative study can be beneficial to teachers and sports co-ordinators in better understanding the students they are dealing with.

This research could be used as a pilot project for the development of a much larger statistical study covering a full cross section of senior secondary students in South Australia, including regional and rural students who were not part of this study. The negative constraints reported by a few respondents also point to the need for further in-depth investigation of family support for children’s sport among families of particular sub-groups, such as low socio-economic background and newly arrived immigrants.

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Enhancing moving, learning and achieving through sport teaching in physical education by learning from digital game design

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I watched the unbridled enthusiasm of my three boys as they loaded Assassins Creed onto the new computer, one with an interactive touch screen which I was informed was ‘just like the one on NCIS’. Their barely contained enthusiasm for the gaming experience they were about to share initiated a sort of ‘mental reckoning’. As a sport coach and sport teacher within physical education what could I learn from digital game design and the way digital games capture engagement, sustain and maintain it?

Physical educators can renovate and renew the design and enactment of sport teaching in physical education to enhance student learning by similarly attempting to accommodate the learning needs and preferences of the ‘wrap around technology’ generation (McLean, 2007). This paper will highlight how sport and digital game play have much in common and, therefore, sport teachers in physical education can enhance moving, learning and achieving by adopting the learning principles used in digital game design. Further, this paper will suggest that physical educators may not need to radically readjust curriculum practice to be consistent with digital learning principles. Renovating and renewing the design and enactment of sport curriculum through the assembly of pedagogies evident in the use of Teaching Games for Understanding (Bunker & Thorpe, 1982) as Game Sense (Den Duyn, 1996) within a Sport Education (Siedentop, 1994) curriculum framework is consistent with modern ‘digital’ learning principles.

Introduction: Sport and Physical Education

Sport is not all there is to physical education (PE), however, sport and physical education have an intertwined relationship. Sport is an integral part of physical education and has substantial cultural value in Australia (Coakley et al., 2010). It is therefore an important subject for inclusion in PE, perhaps even going so far as to legitimate the place of physical education within the school curriculum (Bailey & Kirk, 2009). Poignantly, critical theorists have highlighted that currently sport experiences in PE can be a marginalising experience for many students (for example; Laker, 2002).
The dominance of a multi-activity curriculum paradigm (Kirk, 1996; Alexander, 2008) emphasising ‘textbook technique’ reproduction within a climate of compliance contributes to this marginalising experience. It is arguably predisposed to favouring and rewarding the students with movement competencies developed largely outside the school setting as the short, frequently changing units of work in the PE curriculum do not provide students enough time to develop competency and confidence in their abilities. This type of curriculum design does not indicate a PE which is about learning, it reduces PE to a series of ‘come and try’ experiences. This is especially so if the less ‘sporty’ and physically developed students as a consequence come to understand more about what they cannot do than what is possible for them in PE (O’Conner, 2006).

Trost (2004) suggested that the traditional design of PE is based on unsubstantiated assumptions about skill learning, skill development and the promotion of active lifestyles. The multi-activity curriculum construction and accompanying narrow pedagogical emphasis highlighted by ‘textbook technique’ sport skill development limits potential learning outcomes and sport competencies valued in PE. The curriculum design and enactment based on this emphasis contributes little, if anything, to convince many students that they can succeed in learning in sport settings in PE. Nor does it encourage feelings that students may have something to contribute to the culture of sport in our communities if they are not already active in this area. According to Penney et al. (2008), the persistence of teaching focussing on effort, compliance and the reproduction of very specific movement patterns may be a reason PE continues to be situated at the margins of learning. I argue here that it is not sport itself that leads to less than educationally meaningful experiences in PE. It is the persistence of a hegemonic curriculum and instructional emphasis. Sport teaching in PE is arguably still enacted from a 20th century ‘factory’ paradigm of ‘boxing’ curriculum experiences into individual packages delivered via order, drill, compliance and a model of production predicated on reproduction. Thinking, creativity and active discovery are not obvious elements of the traditional prescriptive and well defined set of operations of the ‘physical education method’ (Metzler, 2005).

If the marginal status of PE in Australian education (Hardman & Marshall, 2005) is to be reconstructed as valued practice I argue sport learning experiences can enhance learning by investigating and following the learning principles in another culturally valued form of play, digital games.

Dennis Hemphill, Associate Professor in Sport Ethics at Victoria University, wrote in 2008 that “so long as sport is described simply as the demonstration of physical skill, it will remain a second rate form of knowledge ... However, if we use an alternative way to look at sport, it could stand alongside literacy and numeracy as an equally valued way of knowing” (2008, p.15). Continuing with the status quo can only result in the status quo. That is, a positioning of PE as...
possibly providing a valuable experience as an ‘energiser’ or break from the academic endeavours of the classroom, but not one that is necessarily seen to be valued, or of value, in contributing to learning and the goals of schooling agreed to by Commonwealth, State and Territory Ministers of Education (Ministerial Council on Education, Employment, Training and Youth Affairs, 2009).

**Today’s learners are Digital Natives**

Marc Prensky is an expert in games for learning. He calls the current generation of children ‘digital natives’ (2001a) and suggests “yesterdays education” (2005, p.62) delivered by teachers who are ‘digital immigrants’ (2001a) is not for today’s children. He explains the difficulties teachers operating from a different digital experience to their students as resting with the changed nature of students today. Niel McLean has also emphasised the generational difference, describing how the current “wrap around technology” generation (2007, p.3) is being taught by the ‘book’ and ‘screen’ generation. He has described the technological learning environment that this generation encounters as ‘multi-modal’ and ‘multi-literate’ as technology actively involves learners in the discourse, design, production and distribution of knowledge. Digital gaming is multi-literate as it encompasses multiple ways in which meaning can be created, communicated and used functionally. This means players must be games literate in order to be successful in understanding the meaning and functional use of the knowledge which underpins the interpretation and communication of meaning embedded in the play. Squire (2007) describes this as a “literacy of expertise” (p. 639).

Teaching ‘tricked up’ by digital white boards, digital cameras and the internet doesn’t essentially change the teacher centred ecology and reproductive pedagogy of the classroom. Prensky suggests the problem with reproductive pedagogy for learning is that today’s students are no longer the types of learners the ‘textbook’ paradigm of education was designed to teach. Prensky asserts that “children raised with the computer — think differently from the rest of us” (Pensky, 2001b, p. 3). Prensky argues that immersion in technology from a very young age changes the way children develop and adopt learning style preferences. As immersion in technology from a young age changes the learning preferences and learning conditioning of young people, educators need to consider this difference when they engage in curriculum planning and enactment. Prensky encourages reflection about whether the design and enactment of curriculum is ‘powering up’ or ‘powering down’ the engagement of students in their learning (2001a). Physical education teachers can benefit from considering whether the decisions they make in designing and enacting sport teaching is ‘powering up’ students by empowering them to act in clever, imaginative and skilful ways through game understanding.
While digital gaming can be considered ‘one of the bad guys’ acting to constrain physical activity, physical education teachers could learn from the design principles employed by digital game designers. As it turns out, there are many design similarities between planning for the digital game medium and the movement experience of physical education.

**Sport and Digital Games – much in common!**

The normative sport related games teaching approach in PE emphasising effort, compliance and learning by drill is inconsistent with the emerging understanding of the way this generation of children interact with learning environments as a consequence of their early immersion in digital game based learning. Digital games place participants in a context of play requiring participatory interaction which is clever, imaginative and skilful, while progressively challenging to the developing skill and game understanding of the player (Adams, 2010). Like sport, play is an essential element of digital games. In digital games, choices are not unlimited and undefined; like sport they are constrained by rules. The rules provide purpose, form and function to the play. The rules of a digital game provide a quantifiable outcome (Salen & Zimmerman, 2004). Similarly, the rules of a sport provide the “internal logic” of the game’s participatory interaction and the changing responses produced by players (Grehaigne, Richard & Griffin, 2005, p. 4). Unlike most sport experiences in physical education, digital games play involves action choices and freedom to act, and how to act in clever, imaginative and skilful ways. In digital gaming, a learner is able to demonstrate initiative and control of their learning through things like self paced progress, choices as to level of difficulty and optimum challenge.

**Digital Games and Sport - both are rule defined versions of play**

Game design expert Craig Lindley described digital games as “a goal-directed and competitive activity conducted within a framework of agreed rules. …The rules establish what as a player you can, or cannot do, and what the behavioral consequences of actions may be within the world of the game” (Lindley, 2003, p. 2). Sport is also a goal directed activity defined by a framework of agreed, or codified rules. A sports’ framework of rules provide participants with core playing principles (Hopper, 1998) that explain the complex interactions that occur within the game. This is also no different from digital gaming experience. For example, Salen and Zimerman (2004) in their extensive explanation of digital game design fundamentals explain that the rules of digital games limit and stylize player action by creating a structural system for player decision making. In this way, the game is defined and the logic of the game established. Salen and Zimerman’s explanation of the regulatory role of rules in digital game design contains strong parallels to the explanation of the fundamental role rules play in shaping play in sport, and in providing a means through which to interpret the play (Grehaigne, Richard & Griffin, 2005).
James Paul Gee believes that game designers face the same challenge as teachers; that is, “How do you get someone to learn something long, hard, and complex and yet enjoy it?” (2007, p. 2/3). Learning to play and participate competently in sport is a long and complex process. It takes an extended period of deliberate and directed ‘play’ to become skilful and understanding of the nature of play in individual sport (Starkes & Ericsson, 2003). Gee suggests that the designers of good digital games address this challenge by incorporating learning principles supported by current research in cognitive sciences (2007, 2009).

**Contemporary Learning Principles**

Cognitive sciences have emphasised learning with understanding and learners taking initiative and control of their learning (Bransford, Brown and Cocking (1999)). Bransford et al (1999) suggested that the concept of learners taking control of their learning forces most teachers into “rethinking what is taught, how it is taught, and how learning is assessed” (p.13). Research in cognitive sciences also emphasises that learning occurs when knowledge-centred environments containing well-organised bodies of knowledge exist. Bransford et al (1999) explained that these bodies of knowledge support the planning and strategic thinking that students need in order to become knowledgeable in ways that lead to understanding and the ability to subsequently transfer that learning.

Both Gee (2009) and Prensky (2001a) have pointed out that digital games are indeed knowledge-centred environments containing well-organised bodies of knowledge that must be transferred between different game contexts within the one game. “Digital games are, at their heart, problem solving spaces that use continual learning and provide pathways to mastery through entertainment and pleasure” (Gee, 2009). Gee (2003, 2007, 2009) has summarised that there are learning principles, emergent from cognitive science, used in good digital game design. They are summarised in Table 1.
Table 1. *Principles of learning used in (good) digital game design*

- Players engage through an environment where they ‘live’, learn and act through their commitment to an identity offered by the game, and this engagement occurs within the game rules;
- Action is placed in the context of an interactive relationship. There exists a context of interaction where nothing happens until the player makes a decision, and then the game reacts back;
- Players are co-designers by the decisions they make during games.;
- Risk taking is encouraged by lowering the consequences of failing. Failure is in essence feedback and therefore a learning encounter as failure provides immediate feedback about the progress of skill mastery and game understanding;
- Players customise a game to fit their learning and playing styles and level of ability or confidence in their ability;
- Players feel a real sense of control over what they are doing as they own the identity they occupy in the game, the degree of difficulty of challenge within the game, and the scenarios they have within the game;
- The problems players face are ordered so that the challenges are well understood. This leads to decision making that works well when confronted by the harder problems of the next level;
- Games offer a set of challenges and let players explore those challenges, with repetition through variation, until solutions are routinised. Then, new challenges are presented;
- The game is based on interactivity, therefore, play is the basis of developing game expertise. The game therefore provides information when the player is ready for it and can use it – ‘just in time and on demand’;
- Meaning is situated in the context of the action of the play;
- Games remain motivating by staying within the perception of achievement of the player. Games remain challenging but ‘do-able’ as they operate at the outer edge of a player’s competence;
- Games encourage ‘systems thinking’ rather than thinking about isolated events, facts and skills;
- Players are encouraged to explore thoroughly, think laterally and creatively at each level before moving on;
- Game design supports players to play before they are competent;
- Each player chooses an identity with specialised skills and functions, which the player can make available to other players if in a team;
- Players can develop team affiliation through a common endeavour or quest.
Gee (2003, 2007, 2009) asserted that these learning principles demonstrate that good digital game design requires learning principles that put players into experiential learning situations with the right constraints for learning from the experience. A similar theory for sport skill learning has been proposed (see for example, Davids et al., 2008). The interesting thing about the learning environments described by the learning principles summarised in Table 1 is that they place the learner at the centre of learning process and very much in control of the pace of the learning. They are, in other words, very learner focussed. The game allows the player an identity with specialised skills and functions. This is unlike traditional ‘textbook’ technique skill and drill sport teaching which places the technique at the focus of instruction. In digital game learning, game play comes first (Adams, 2010). A model for sport related games teaching that captures the ‘play first’ process supported by constraints-led learning theory has been described (Bunker & Thorpe, 1982; Chow et al., 2007; Davids et al., 2008; den Duyn, 1997). Like the digital games learning medium, this model for sport teaching involves game challenges and actions to engage the participant at the level of ‘optimal challenge’ (Mandigo & Holt, 2002). Players are taken on a continuous learning journey through, about and for the game where understanding is progressively developed in contextual reference of play.

**Learning through, about and for sport**

Hemphill (2008) suggested that as long as sport is simply the demonstration of physical skill it will remain a second rate form of knowledge. However, if an alternative way to design and enact sport experiences can be constructed it could stand alongside literacy and numeracy as an equally valued way of knowing. Just as games literacy provides a framework within which to think about expertise in digital gaming as the functional use of knowledge in multiple contexts, I contend Sport Literacy (Pill, 2009) is a scaffold through which to emphasise the contribution sport can make to learning.

Lit[eracy is used in this context to indicate the functional use of sport knowledge in multiple contexts. I suggested that there is a competency in comprehending and using the ‘text’ of sport, that this competency is acquired over time, and that it can be explicitly taught and transferred across varying sport forms Pill (2009). Four distinct understandings were associated with Sport Literacy.

- Sport is an applied, practiced and situated set of skills;
- Sport is a body of knowledge with meaning that can be interpreted, understood and used creatively;
- Sport is a socially and culturally constructed ‘text’ which can be communicated and read in various forms; and,
- Understanding Sport requires a learning process.
Sport Literacy ‘packages’ sport as an expression of intelligent behaviour, where intelligence is understood as the capacity to comprehend, understand and reason in a way that allows successful negotiation of a body of knowledge which is dynamic and evolutionary. This includes negotiating knowledge related to:

- The system of play inherent in sport forms;
- The structure and codification of sport;
- The socio-cultural meaning of sport;
- The history, culture and ritual of specific sports; and,
- The vocation and business of sport.

Sport Literacy articulates the authentic competencies evident in the pedagogically progressive sport curriculum models of Games Sense- Teaching Games for Understanding (GS/TGfU) (Den Duyn, 1996, 1997) and Sport Education (SE) (Siednetop, 1994). Whereas most treatments of these two models for sport teaching and learning position them as independent entities Sport Literacy treats GS/TGfU and SE as twinned models (TGfU/GS-SE). This deliberate twinning is to promote a framing system through which sport teaching evidences meaningful and authentic learning. I argue that this scaffolded is also consistent with the Twenty First Century learning principles previously outlined.

TGfU/GS-SE encourages a cycle of learning where *game appreciation is emphasised ahead of specialised and technical movement competencies*, to build confidence in a student’s comprehension of the nature of the game and capacity to engage with understanding. TGfU/GS-SE specifies an interactive playing environment through which *the game sets the problems and player decision making leads to awareness of solutions that support successful interaction in the play*. This is achieved through the application by the teacher of questions as pedagogy to guide student thinking and knowledge production.

TGfU/GS-SE encourages a participatory environment where player. Structured reflection about the nature of the play and the way game engagement has progressed lead to the production of new rules, game or practice conditions. This progresses the complexity of the game or improves player ability to perform during the game.

Within a TGfU/GS-SE participatory environment *failure is an opportunity to learn*. This is facilitated by the teacher use of divergent questions that *engage player cognition in developing game understanding*. For example, ‘What are three reasons that might explain why this team is not keeping possession for 5 consecutive passes?’ Furthermore, the *rules of sport are used as constraints* to be manipulated to enhance the capacity of all participants to be able to successfully participate in the game. This enables a sport experience to be customised to the abilities of the participants.
Customisation also occurs through as participants negotiate responsibility for an authentic sport role, such as coach, equipment manager, media manager, publicist etc., in addition to that of player. This *customisation of individual participation* to suit learning styles and learning preferences also assists to situate participant identity within the learning environment. Each player (with developmental appropriateness) is responsible for the completion of the actions that come with the role that is taken on within the team and the community of sport established in the unit of work. *Optimal challenge* is facilitated by this diversification of how students can be successful via the requirement to assume responsibility for an ‘authentic’ sport role in addition to that of player. Role responsibilities allow players to choose *an identity with specialised skills* and functions integral to the success of the team (for example; coach, statistician, media).

The tactical emphasis of TGfU/GS-SE skill learning encourages the design of *learning through a well ordered sequence of tactical questions or tactical problems*. An emphasis on tactical appreciation of sport also highlights the conceptual grouping of sports similar in nature. This means students have the possibility of consolidating their understanding of the strategies/tactical solutions through the transfer of understanding between games within the same category.

The game/sport is the basis for interaction in the participatory learning environment of TGfU/GS-SE. Learning to appreciate the rituals, culture, traditions and history of sport is inherent. The team participation feature also means that teaching for personal and social development, by means of the competencies required to contribute constructively to a team, are emphasised. An emphasis on learning the culture of sportforegrounds the *relationships* between players, the objects within the game, the other roles that are necessary for sport to occur, and the conditions and agencies necessary in the construction and cultivation of sport.

Extending the length of units through a season provides more time to *explore* the construction of a sport. Additionally, the potential to thematically link different sports through game categories provides more opportunities to *explore* the tactical construction of sport across units of work by teaching for transferability. Bell (2003) previously explained the centrality of teaching for transfer in a TGfU approach.

*Performance before competence* is encouraged through the use of modified games. For example, if students can throw and catch, volleyball can be modified to ‘throw and catch’ volleyball to enable game play that teaches a tactical appreciation of volleyball before players are competent at specialised volleyball techniques.
Engagement in the learning of sport in PE through a team in which students remain a member for the duration of the unit is fostered by authentic task requirements. These tasks can include (for example) the production of a team poster, team advertising, team newsletters, team website, team logo and colours.

**Conclusion**

Prensky explained that digital games do not sustain engagement by simply being “eye candy”. Digital games based learning is built on real challenges designed to produce real learning, “and lots of it” (2001a, p. 5). Similarly, PE needs to be more than busy, happy good (Placek, 1983) time if it is to be educationally meaningful and relevant. This paper has outlined how two valued forms of cultural play, digital gaming and sport, are both codified versions of play which permit interaction within a constraints based environment. Play in sport and digital games also have in common that they are goal directed activities. Because of the similarities in design I have argued that PE teachers can learn from the design principles used by digital game designers to enhance learning in sport related games in PE to ‘power up’ student moving, learning and achieving.

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Moving, learning and achieving in sport related games teaching by playing with purpose

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This paper will examine moving, learning and achieving in sport related games teaching and how they can be enhanced by ‘playing with purpose’. The purpose is proposed to be intelligent engagement in sport through game understanding developing from information-movement coupling (Davids et al., 2001) to develop ‘thinking players’ (den Duyn, 1997). Thinking players is not limited to an expression of game appreciation as tactical understanding (Bunker & Thorpe, 1982). It includes the ability to respond creatively and effectively to game problems (Hemphill, 2008).

Games and sport teaching in physical education has not consistently focussed on cognition, thinking and creativity as primary objectives of sport learning. The normative model of games teaching emphasises reproduction of stylised textbook techniques (Kirk, 2005; Pigott, 1982). This approach does not develop ‘intelligent’ players (Wein, 2000; 2007). This paper will therefore consider curriculum design features and instructional strategies which foreground intelligent engagement in sport as ‘playing with purpose’. Designing sport teaching and learning in physical education from this ‘intelligent’ perspective will be shown to be consistent with a “progressive pedagogically shift” (Kim et al., 2006, p. 361) towards productive pedagogies (Department of Education, 2002) that enhance quality sport teaching in physical education.

Introduction

As sport is a social institution (Coakley et al., 2010; Craig & Beedie, 2008) it is an appropriate focus for physical education. Phillips (1993) argued that the sheer number of people involved in sport suggest it is an area worth studying seriously. Consequently, sport has the potential to effect the development of individuals and groups as a popular lifestyle, recreational and vocational pursuit. Siedentop (1994) argued that knowledge of and about sport can led to reforms that enrich the sporting lives and development of individuals and communities. This conceptual paper will therefore explain how moving, learning and achieving in the sport component of the physical education curriculum are enhanced by playing with purpose.
The normative model of sport related games teaching purported earlier has been considered at the heart of the marginalisation of learning in physical education. The use of this model for sport teaching means that it is problematic whether physical education actually impacts upon the abilities students bring to lessons (Evans, 2004; O’Conner, 2006).

**Underlying Theory**

As a novice physical education teacher I understood that ‘pertinent practice makes perfect and permanent’. I look back at the linear progression evidenced in the ‘ideal unit plans’ that I developed during my physical education teacher education (PETE) and recall the pedagogical conversations about progressive vs. whole-part-whole practice, and massed vs. distributed practice. The information processing model that guided this understanding of sport skill development suggested three important considerations for learning:

- Attention is limited so a learner can only attend to a restricted number of things at one time;
- Attention is selective so attention can only be directed to a restricted number of perceptual cues; and,
- Attention is linked to awareness so the role of the teacher /coach is to direct learner attention to what is important.

(Magill, 2003)

In order to assist the learner with their selective attention sport teaching/coaching began with closed skill practice to master the ‘textbook techniques’ (Pigott, 1982) of the sport before these were placed in the open environment of game play. Closed skill practices are performed in a stable or predictable environment where the performer determines when to initiate the action (Magill, 2003). Using a part- to- whole linear progression, practice “starts with a narrowly-focused action without a lot of distractions (part), which is then progressed by adding more and more complexity to be almost game like (whole)” (Bain & McGown, p. 2).

Renshaw et al. (2007a) argued that the legacy of a generation of physical education teachers brought up on the information processing model is the separation of game understanding from decision making and action. The visual evidence of this is the frequent lack of transfer from practice tasks to game (Renshaw et al., 2007a).

Recent research in skill learning has questioned the value of a closed –open practice linear model of skill learning. For example, Renshaw et al. (2007b) investigated the information-movement coupling of batters facing a bowling a machine (Information-movement coupling is a term used to describe the information-movement relationship. That is, how the information available to the performer leads to changes in movement and action (Liukkonen, 2007)). They concluded that facing a
bowling machine alters a batters timing and coordination due to the reduced perceptual information. Not being able to use the perceptual information of a real bowler disrupted the information-movement coupling, causing disruptions in the timing and control of a batters movement. Renshaw and Davids (2004) explained that each run-up of bowler while similar, is never identical. Liukkonen (2007) explained that because perceived information and movements are closely coupled, changes in the available information to the performer will lead to changes in action and overall performance.

Glazier and Bauer (1998) observed the variability evident in a discus throwers attempt, while Glazier and David (2005) noted that golfers’ individual swings vary in order to satisfy the task and environmental constraints impacting upon performance. Knight (2004) concluded that golfers are best advised to explore a range of swings under varying environmental conditions than trying to copy a ‘perfect technique’. Wende (2005) also considered the relevance of game conditions for skill learning in waterpolo. She concluded that the removal of a defender and goalkeeper in shot practice results in changes in the coordination and timing of the shot. It is therefore necessary to structure practice to replicate game situations. Pinder et al (2010) researched the movement responses of developing batters and confirmed the need to ensure game representative batting tasks in practice.

Two implications arise from this research into information-movement coupling that are relevant to sport teaching in physical education and ‘playing with purpose’. Firstly, active exploration of all aspects of a motor skill permits greater success in skill performance to develop (Savelsbergh & van der Kemp, 2000). Learners should, therefore, be encouraged to explore movement opportunities so as to develop flexible and adaptable movement patterns (Williams & Hodges, 2005). Secondly, that exploratory practice is valuable:
- To assemble functional coordination structures to achieve a specific task goal (eg., controlling a ball); and,
- As it allows players to refine and adapt basic coordination structures to enhance movement flexibility (eg., controlling a ball in different ways and under different conditions).
(Davids et al., 2004)

An understanding of information-movement coupling also informs sport skill assessment. Farrow and Abernathy (2003), investigating information-movement coupling in the return of a tennis serve, concluded that it was important to examine motor expertise in a testing environment that replicates the performance context as closely as possible.

**Implications for Sport Teaching**

Chow et al. (2007) explained that sports are dynamic non-linear systems and as such, sport skill learning should also be non-linear. This can be achieved by pedagogical manipulation of three
elements; game constraints (such as changing game rules), performer constraints (such as how the performer is permitted to move), and environmental constraints (such as changing spaces or equipment). The primary role of the teacher/coach is then to identify key task, environmental and performer constraints and manipulate those in an imaginative but functional way in order to create an effective learning environment. Charlesworth (1994) described these as Designer Games. The teacher/coach achieves an effective learning environment by facilitating discovery learning and by guiding players through a range of potential movement solutions using problem solving participatory pedagogy in a practice context similar to the performance context (Charlesworth, 1994; Davids et al., 2004).

Playing with Purpose

A game-centred model for sport related games and sport has been linked with the constraint-led skill learning theory (Chow et al., 2007; Davids et al., 2008). Guided discovery of movement possibilities in contextual games and modified sport emphasises teaching sport for understanding (Mosston & Ashworth, 2002). The primary role of the teacher/coach in this paradigm is activator of learning through the pedagogical application of game modifications that encourage active exploration of information-movement couplings. These pedagogies include exaggeration and reduction (Bunker & Thorpe, 1982) of game constraints (Chow et al., 2007).

Learning is considered to be embodied and situated, emphasising individual and environmental interactions and focused on participation developing understanding rather than representation of knowledge (Chow et al., 2007). Understanding encompasses game sense (den Duyn, 1997) for specific sports and transferable conceptual knowledge of principles of play between sports (Gréhaigne et al., 2005; Hopper, 1998, Pill, 2007). For example, the problem of how the offensive team restarts after a break-down in continuity is solved in Rugby Union (Walla) with a ‘ball take’, in Rugby League with a ‘play of the ball’, and Touch with a ‘roll ball’. Each is a solution to a similar game context, but the sports differentiate in how this game situation is officiated. However, the tactics through which the offensive team attempt to gain a tactical advantage at the re-start, and the tactical considerations of the defensive team, are similar even though the re-starts are different.
Another example can be gleaned from looking at tactical similarities between court, pool and field invasion games. Basketball, netball, water-polo and Australian football all share similar principles relating to maintaining control and possession of the ball as they are all Invasion games (den Duyn, 1997). From a defensive rebound in basketball, if a pass down the centre of the court is blocked by the defence the player looks for a sideways ‘outlet’ pass to spread the defence. In other words, to take advantage of space out wide to transition the ball down the court or to draw the defenders to the ball, which creates space forward of the ball in mid-court. The parallels with netball and water-polo may be readily apparent, but the parallel to a similar game context in Australian Rules football is also there. When a kick in from the fullback line is prevented from going the direct path to goal down the centre of the ground by the defensive zone the player with the ball looks sideways for an ‘outlet pass’ into the pocket in order to continue forward movement down the side, or to draw the defence to the ball and thus open up space for the next offensive pass to be to the middle of the ground (author, 2011).
A teaching sequence to emphasise the objectives of teaching for transfer (Bell, 2003) and guiding learning through the manipulation of game constraints is outlined in Table 2.

**Table 2.**

**Introduction to Touch Football**
Assumptions; no Touch Football experience, all students can throw, catch and run with the ball.

Start with a game - objective = get the ball over your teams end line onto the ground with control and downward pressure (ie can't drop the ball on the ground)

initial rules
- Ball not allowed to hit the ground or go out of play
- Ball can only be passed backwards and by hand
- Each team has 6 chances (called touches) with the ball to score
- A chance ends when the player with the ball is touched by a member of the opposition team

Q What happens if you break one of the rules?
A Team loses the ball. The other team gets to start 6 chances
Q What happens when you get touched with the ball
A Chance ends
Q How does a new chance start?
Range of answers - put the ball on the ground and a team-mate picks it up, player tagged passes to a team mate, roll the ball. Teacher chooses one and goes with it. If it doesn't work, stop the game, re-ask question and try a new idea.
Q What does the other team need to do to give the team with the ball a chance to restart?
Range of possible answers. Choose one and go with it

**Skill Practice**
Introduce that Rugby L solves the problem of chance re-starts with a play of the ball, Rugby U with a 'ball take' and Touch with a roll ball. Demonstrate all three. Teach Roll-ball, students practice roll-ball; then return to the game

**Game Play**

Q What happens if you don't perform the roll ball correctly?
A. Broke the rule. Team loses the ball. Other team start 6 chances.
Game Play

Game Practice 1.
Four corner keeping off
Game skill focus eg. calling for the ball, give and go)

New Rule/Constraint (to reinforce learning)
Only allowed to pass the ball (backwards) to a team mate who has called for the ball
Q What happens if you pass the ball to a team-mate who has not called?
A. Broke the rule. Team loses the ball. They start 6 chances.
Q What happens if you pass the ball forwards to a team-mate?
A. Broke the rule. Team loses the ball. They start 6 chances.
Q. How does the rule that you can only pass the ball backwards change the way the game is played –– offensively –– defensively?

Play Game
Q If you pass the ball after you have been touched you are breaking the rule that your teams chance ends when the player with the ball is touched. What happens if you break a rule?
A. Broke the rule. Team loses the ball. They start 6 chances.

New Rule/Constraint
Defence must be in a line 5 meters from the role ball to give the team with the ball a fair chance to restart play.

Play Game

Productive Pedagogies
Productive pedagogies assert intellectual rigour and content relevance as strategies that recognise different learning abilities and, therefore, act as learner equity strategies. Pedagogy is not then confined to concerns about content and instructional strategy selection it is also a social justice issue as skills for deep learning are emancipating (Linguard, 2010) through their potential to act as equity strategies. This means that a broader range of ‘ability’ and learner competencies is catered for than in traditional sport-as-technique teaching. This places the physical education as a significant school factor in sport learning as it is the teacher that designs and enacts the sport curriculum, and chooses the pedagogical approach to engage student learning. Alignment of pedagogy to task purpose, what is
important to learn, and what learning looks like are central concerns of the physical education teacher concerned with a productive pedagogy. This alignment for sport related game learning is illustrated in Table 3.

The Productive Pedagogies model (Department of Education, 2002) for quality teaching involves four elements. All four elements are present where there is quality teaching. The four elements are evident in the conceptualisation of playing with purpose (Table 1). Specifically:

1. Intellectual quality is evidenced where there is an emphasis on teaching for deep learning engaging higher order thinking guided by substantive conversations (Department of Education, 2002). This is promoted in a game-centred model through its emphasis on contextual game problem solving and discovery learning prompted by the game, but guided by inquiry;

2. Interesting and motivating environments is evidenced where there is an expectation of student demonstration of academic engagement within a supportive class environment; and where students can be deterministic in the direction of the lesson (Department of Education, 2002). This is promoted in a game-centred model as learning is emergent due to the contextual game-centred nature of the learning environment (Bunker & Thorpe, 1982);

3. Recognition of the individual is evidenced where different styles of learning, learning needs and preferences are recognised (Department of Education, 2002). This is promoted in a game-centred model for sport knowledge and learning is not narrowly confined to stylised textbook technique reproduction and learning by drill. A game-centred model encourages pedagogical diversity through the use of specific instructional strategies to cater for particular individual or group learning (Australian Sports Commission, 2010). Additionally, by teaching for cognitive conceptual game understanding as equal in importance to physical motor skill development valued ability in sport is not constrained to motor performance demonstrations; and,

4. Connectedness is evidenced where efforts are made to integrate between two or more sets of knowledge (Department of Education, 2002). This is promoted in a game-centred model for sport as it emphasised the integration of conceptual game knowledge and understanding between sports within game categories and across game categories (Bunker & Thorpe, 1982); ie. game knowledge is transferrable.
Table 3. Play with Purpose in Action (author, 2010).

<table>
<thead>
<tr>
<th>Tactical problem</th>
<th>How do you support the player with the ball when in an off-the-ball position?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Understand that in order to maintain possession off-the-ball players must be open (create a passing lane) to receive a pass. Understand that in order to maintain possession the player with the ball must choose and execute the correct passing option.</td>
</tr>
<tr>
<td>Modified game</td>
<td>3v3 Give and Go Grid Ball (see Pill 2008).</td>
</tr>
</tbody>
</table>
| Examples of developmental questions | • How can the players without the ball help the player with the ball?  
• What should off-the-ball players be doing in support of their team-mate with the ball?  
• What should you do after you pass the ball?  
• What happens to the space when you move? And what does that mean for your team-mates?  
• What happens to the space if you do not move? And what does that mean for your team-mates?  
• How can you indicate that you are open to receive the ball?  
• How can you use space to your advantage in maintaining possession? |
| Practice task    | Give and Go 3v1 (see Griffin, Mitchell and Oslin 1997) or 3v2 Grid Ball (see Pill 2008) with passive defence. |
| Return to modified game | 3v3 Give and Go Grid Ball. |
| Conclusion       | What game principles did you apply in order to successfully maintain possession? |

Conclusion

This paper explained how moving, learning and achieving in sport related games teaching is achieved by ‘playing with purpose’. Curriculum design features and instructional strategies which foster intelligent engagement through understanding variations in perceptual-motor responses as issues with information-movement. Designing sport teaching and learning in physical education from this ‘intelligent’ perspective was shown to be consistent with a progressive pedagogical shift (Kim et. al., 2006) towards the productive pedagogies (Department of Education, 2002) that enhance quality sport
teaching in physical education. Pedagogical implications for sport teaching in physical education include that active exploration of sport skills permits greater success in skill performance to develop, and that sport skill learning tasks need to closely resemble contextual game situations in order to promote information-movement coupling.

Unlike the ideal unit plans that were part of my learning as a pre-service PETE “there is not a single recipe book for success” (Davids, 1998, p. 2). Carefully designed and enacted, skill learning emphasising information-movement coupling challenges the teacher/coach to design practice that provides opportunities for individuals to search and discover movement solutions. Structured games ‘played with purpose’ evidence exploratory sport learning (Davids, 1998) and they are a means through which to provide more flexible moving and learning opportunities to achieve deeper meaning in and through sport for the learner.

Table 4. A summary of moving, learning and achieving by playing with purpose.

| • Intellectual quality is promoted through a problem solving approach, where players are set tactical problems to solve in game contexts, or where problems are posed by the teacher/coach. |
| • Encouraging movement exploration in game contexts develops flexible and adaptable movement skills. |
| • Practice should replicate game conditions; ie, be contextual |
| • Small sided games are effective for game learning. |
| • Using guided discovery pedagogy enables learners to take responsibility for their game development and knowledge construction. |
| • Teachers/coaches manipulate the individual, environmental and task constraints to set the context for learning. |
| • Organising sport teaching through game categories encourages connectivity across the sport curriculum. |

References


Assessment in Senior Secondary Physical Education. Questions of judgement

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The ways in which various aspects of senior physical education courses should be assessed and whether some can, or indeed should be incorporated in external examinations, are matters of longstanding professional debate across Australia and internationally. Differences in current practice across Australasia reflect an ongoing lack of consensus about how assessment requirements and arrangements and particularly, examinations in senior physical education, can best address concerns to ensure validity, reliability, equity and feasibility. An issue never far from such debates is that of ‘professional judgement’ and more specifically, whether and how professional judgement does and/or should ‘come into play’ in assessment. This paper reports on research that has explored new approaches to examination assessment and marking in senior physical education, using digital technologies. It focuses specifically on the ways in which ‘professional judgement’ can be deemed to be inherent to two contrasting methods of assessment used in the project: ‘analytical standards-based’ assessment and ‘comparative pairs’ assessment. Details of each method of assessment are presented. Data arising directly from assessors’ comments and from analysis which explored inter-marker reliability for each method of assessment and compared results generated by internal teacher assessment, standards-based and comparative pairs assessment, is reported. Discussion explores whether the data arising can be seen as lending weight to arguments for (i) more faith to be placed in professional judgement and (ii) for the comparative pairs methods to be more widely employed in examination assessment in senior physical education.

Introduction
Assessment remains arguably one of the most contentious issues in relation to senior secondary physical education. The ways in which various aspects of senior physical education courses should be assessed and whether some can, or indeed should be incorporated in external examinations, are
matters of longstanding professional debate across Australia and internationally. In many instances, these debates have centred on physical education as a ‘performance-based subject’ (Macdonald & Brooker, 1997) and more specifically, the extent to which assessment requirements have supported efforts to promote interconnections between ‘theoretical’ and ‘practical’ dimensions of learning (see for example, Kirk, Penney, Burgess-Limerick, Gorely, & Maynard, 2002; Kirk, Burgess-Limerick, Kiss, Lahey, & Penney, 2004; Macdonald & Brooker, 1997; Thorburn 2007). Differences in assessment requirements and arrangements in senior physical education courses internationally reflect ongoing dilemmas and challenges in this regard. They also reflect a lack of consensus about how requirements and arrangements relating to assessment and particularly, examinations in senior physical education that are linked to tertiary entrance, can best address concerns to ensure validity, reliability, equity and feasibility.

As many readers will be aware, across Australia some senior physical education tertiary entrance courses feature a mandatory external examination, which in some instances incorporates a practical component. The respective weighting that is accorded to the external examination component and school-based assessment also varies. In Queensland standards-based teacher assessment is undertaken for all senior secondary authority subjects and there is no external examination component. In New Zealand NCEA (National Certificate of Educational Achievement) Physical Education (Level 1, 2 and 3) similarly has only internally assessed standards, meaning that all assessment is school based, carried out by teachers. Scholarship Physical Education (designed for the very best students and awarded to approximately 3% of the Level 3 cohort nationally) is examined solely via an external written examination (New Zealand Qualifications Authority, 2010). In Western Australia (WA), (the context of our research), students who are studying at least one pair of units from Stage 2 or 3 of the Physical Education Studies (PES) course sit a written and a practical (performance) examination in their final year of study (unless they are exempt). Stage 2 and 3 units represent the highest level of study in the course and each unit usually represents a semester of work. The examination comprises a written examination worth 70% of the total examination score and a practical (performance) examination worth 30% of the total examination score (Curriculum Council of WA, 2010).

A matter never far from debates about the merits of particular course and system requirements for assessment is that of ‘professional judgement’ and more specifically, whether and how professional judgement does and/or should ‘come into play’ in assessment. In raising this issue, we deliberately distinguish it from ‘teacher judgement’ and in so doing, seek to avoid attention centring on the merits or shortcomings of teacher as compared to external judgement. Our stance is that ‘professional judgement’ is inherent in all assessment. Our interest is in the particular nature of the
judgement and the processes associated with making judgements, in the context of two contrasting methods of assessment used in a research project undertaken in WA.

The digital assessment project

The three year project has been supported by funding from the Australian Research Council (ARC) and Curriculum Council of Western Australia. It has utilised digital technologies in exploring new approaches to examination assessment in Physical Education Studies and three other senior secondary courses; Engineering Studies, Applied Information Technology Studies, and Italian. The key point of commonality in selection of these courses was a concern for assessment in an examination context to directly engage with performance in authentic tasks. In referring to ‘authenticity’ we foreground Thorburn’s (2007) emphasis of the need for assessment in senior physical education that aligns with the conceptual underpinnings of contemporary curriculum documents, and Hay’s (2006, p. 317) view that authentic assessment ‘should be based in movement and capture the cognitive and psychomotor processes involved in the competent performance of physical activities’.

Details of the assessment tasks developed for the project, specific information about the new senior physical education studies course in WA and initial data from teachers and students involved in the project, have been provided elsewhere (Jones, Penney, Newhouse, & Campbell, 2009; Penney, Newhouse, Jones, & Campbell, in press). Here we provide an outline of the task framework before directing attention to the two methods used to assess student performance in the tasks: ‘analytical standards-based’ assessment and ‘comparative pairs’ assessment.

As explained previously (see Jones et al., 2009) the project sought to generate various forms of digitally based representations of student performance in the assessment tasks, enabling reliable assessment for the purposes of external examination to be explored. Each component of an integrated task generated digital evidence as follows (for further task and technical details, see Jones et al., 2009):

- Part 1. Structured on-line response to a tactical problem in a specific activity context: text and graphic format responses;
- Part 2. Performance of four skills pertinent to the tactical problem: video recordings of student performance;
- Part 3. Application of skills in a game/competitive performance context: video recordings of student performance;
The digital representations of student work generated from each part were uploaded to an online repository to be accessed by assessors, with all evidence for each student collated into a unique record. All marking was undertaken on-line and the same digital evidence was used in both methods of assessment.

For the analytical standards-based assessment, standards-based rubrics were developed for each part of the examination task with the PES course document used as the reference point in development (see Jones et al., 2009 for a complete task rubric). The on-line marking interface enabled the rubric and student evidence to be displayed simultaneously via a split screen. Assessors were required to make a number of judgments in relation to evidence from each part of the task. In each instance this involved a decision directly linked to the rubric. For example, one of the judgments required for ‘execution of the strategic response in a ‘live’ performance context (modified game situation) (part 3) focused on students’ ability to ‘make on-the-spot decisions to apply movement patterns in solving tactical problems’, with the rubric describing five standards. A judgment required in both part 1 and part 4 focused on students’ understanding of the tactical concepts of games and activities, again with the five standards described in the rubric. The on-line marking system enabled assessors to choose the order in which they undertook judgments relating to each part of the task and return to any judgment or aspect of student evidence at any time. For the analytical standards-based assessment, two assessors were assigned for each student’s work.

Comparative pairs assessment was then undertaken by a number of assessors (five in years 1 and 2 and 20 in year 3). As the name suggests, this method requires a direct comparison of two students’ performance in the task, with each student’s full evidence record from all parts of the task available to assessors. Pairings are automatically generated and assessors are required to decide which of the two students being compared has performed better in relation to the set criteria. A further point to note was that the task was adapted for various activity contexts and that comparative pairs marking therefore included comparisons of performance in different activity contexts. We acknowledge that task comparability and assessment across contexts are both matters worthy of extended discussion. While that is beyond the scope of this paper, the inclusion of varied activity contexts is important to note in considering the nature of judgments being made and processes involved in reaching a judgment.

Two different systems for comparative pairs marking have been used during the project. A brief description of each is provided here because of our interest in exploring the judgment process. Having been involved in the project as both researchers and assessors, we suggest that differences in the comparative pairs marking interface may mean that there are also notable differences in the processes assessors go through to reach a judgment.
In years 1 and 2, the comparative pairs marking interface enabled a split screen simultaneous side-by-side presentation of the two students’ work. Assessors could access and compare any of the students’ digital files from parts 1-4 of the task. They were required to make a total of four judgments for each pairing: three judgments relating to specific assessment criteria and one overall, holistic judgment. In each instance, the judgment required was a simple decision: *Is A better than B or vice versa?* Accompanying guidance for each criterion indicated the evidence deemed most pertinent to the decision required. For example, it was stated that evidence relating to criterion 2 ‘Execution of movement skills’ would be drawn from the individual skill performance extracts and may also be drawn from game play/competitive performance video extracts. In the second year, a field was added to enable markers to record their comments on the students’ work, so that they would not have to scroll through pages or view complete videos of the student work each time a particular student appeared in a pairing.

In the final year of the project a different comparative pairs interface was used. A key advantage of the new system was that reliability scores are generated on an ongoing basis, such that marking can cease once an agreed reliability score is achieved (rather than reliability scores only being able to be calculated after all marking has been undertaken). In undertaking comparative pairs assessment using this interface, assessors were only required to make a single judgment, ‘*who wins – A or B?*’ based on a holistic criterion. All digital evidence for both students in the pair was available and assessors could switch between students at any time and make notes about aspects of evidence, but could not simultaneously view evidence from both students.

**Comparative Pairs Assessment: Key findings**

Analysis of assessment data generated during each year of the project has explored inter-marker reliability for each method of assessment and has compared results generated by internal teacher assessment, standards-based and comparative pairs assessment. Data has also been gathered directly from assessors via interviews, with questions addressing both the task and the marking process. Below we present some key findings arising from the assessment data that are pertinent to consideration particularly, of whether there is a case for the comparative pairs method to be widely employed in examination assessment in senior physical education.

In year 1 data was gathered from four classes of Year 11 students (n=39), each focusing on a different activity context. Comparative pairs assessment involved five assessors making a total of 745 judgements. Separation Indexes (SIs) were calculated for each of the three specific criteria and the holistic criteria, to provide an indicator the overall internal consistency of judges. Sis are given as a
number from 0 to 1 with values closer to 1.00 being more desirable. This generated a reliable set of scores (SIs of 0.905 to 0.929) with scores and rankings highly correlated to that of the two external assessors using the analytical standards-referenced method (r = 0.88). The teachers’ marks for the assessment item were significantly moderately correlated with the results from the comparative pairs marking (p<0.01).

In year 2 data was again drawn from four year 11 classes all featuring different activity contexts and involved five assessors making a total of 250 judgments. Assessment of 27 students’ work using the comparative pairs method again produced a reliable set of scores (SI = 0.75) that was significantly correlated to the analytical marking scores (r = 0.69, p<0.01). The teachers’ marks for the assessment task were significantly moderately correlated with the results from the comparative pairs marking (r = 0.54, p<0.05). This was also true for the rankings where the rankings of the teachers’ marks were correlated with the comparative pairs method of marking (statistically significant, p<0.05) but not analytical.

In the final year of the project, 20 assessors were involved in comparative pairs assessment of the exam output for 108 students from 11 different year 11 class groups utilising six different activity contexts. It had been decided to stop marking once the Cronbach Alpha Reliability Coefficient was above 0.95. This occurred after the 13th round of marking when a total of 710 judgements had been made, with a coefficient of 0.958. The system also provided statistics on the consistency of the 20 judges, which showed that 46 (6.5%) of the 710 judgements appeared to be seriously inconsistent. There was a significant moderate correlation (r=0.73 p<0.01) between the scores generated by comparative pairs marking and the score determined by analytical marking, but also some notable differences in scores and rankings generated by the two methods. The ranking from the individual analytical assessors tended to be correlated low to moderate with the ranking from the pairs judging (r=0.21, p<0.05 and r=0.62, p<0.1). For some students there were substantial differences in the scores awarded by the different methods of marking and in the overall ranking in the population. Further investigation of data is pursuing these differences. There was a moderate to low significant correlation between the teacher’s score and the pairs judging score (r=0.46, p<0.01) and the teacher’s semester mark (r=0.39, p<0.01).

Discussion
The project has explored the application of the comparative pairs method of assessment in the context of a complex task in senior physical education studies. In each year a reliable set of scores have been generated via this method, that have also been shown to reasonably align with the results of analytic marking and teacher assessment. Some differences arising from the different methods require further
investigation. The findings provide a clear case for further research investigating the use of the comparative pairs method of assessment in physical education.

Feedback from assessors involved in the final year indicated their ease in working with the marking system, and pointed to recognition of some difficulty in making judgements between students undertaking the task in different activity contexts and/or when two students’ performance in the task was deemed to be very similar. Certainly, the task itself and the comparative pairs method are both influential in terms of the type of judgement required and processes involved in reaching a judgement. The differences in the comparative pairs marking interfaces in years 1 and 2 as compared to in year 3, can also in some ways be seen as having potentially important implications for the judgement process – and potentially, therefore, the judgement made.

The data and our experiences of making judgements using the comparative pairs method have raised questions for us about both the nature of professional judgement and processes of professional judgement inherent in the comparative pairs method, and how this may differ from judgements made using the analytic method. From our personal experience we relate what was required of assessors using the comparative pairs method to judge students’ performances in this task, to the notion of complex judgements as ‘configurational assessment’ (Kaplan, 1973, as cited in Crisp, 2010). As Crisp (2010, p.3) explains, the suggestion is that ‘judges have compounded criteria onto one uni-dimensional scale, not via a set of rules but through mental integration, and they unpack some of the criteria from this scale when justifying their judgements’. This and other issues arising from our data and project experience are undoubtedly worthy of professional discussion and further exploration through research.

Acknowledgement
The research discussed in this paper is as a result of the work of a research team organized by the Centre for Schooling and Learning Technologies at Edith Cowan University (http://csalt.education.ecu.edu.au/). The team was led by Paul Newhouse and John Williams and included senior researchers Dawn Penney, Cher Ping Lim, Jeremy Pagram, Andrew Jones, Martin Cooper, Alistair Campbell, project managers and many research assistants. The work of everyone in this team has contributed to the research outcomes presented in this paper.
References


Challenging Participants in Target Games Through Teaching Games for Understanding (TGfU) and Creating and Defining Games

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Teaching Games for Understanding (TGfU) places an emphasis on the play, where tactical and strategic problems are posed in a modified game environment, ultimately drawing upon students to make decisions. It places the focus of a lesson on the student in a game situation where cognitive skills such as ‘tactics’, decision-making and problem solving are critical. With isolated technique development utilised only when the student recognises the need for it’ (Webb and Thompson, 1998). In addition, games come under various categories: invasion, net/court/wall, striking/fielding and target games. The aim of target games is to get the implement either in or close to the target. They can also be divided into 2 subcategories: opposed (eg. lawn bowls) or unopposed (golf). This paper will focus on providing meaningful and challenging movement experiences through practical examples. Creating and Defining Games (CDG) provides an opportunity for a class to be involved in creating and developing/designing games (Almond 1983; Curtner-Smith 2005; Holt 2005 and Quay and Peters 2009) and provides further opportunities for participants to develop understanding of strategies in target games. A practical example will illustrate this.

Introduction – Teaching Games for Understanding in Australia

Teaching Games for Understanding (TGfU) began in the early 1980s but it was formally introduced to the Australian sporting community in 1996, when Rod Thorpe from Loughborough University, England visited and conducted ‘Game Sense’ workshops around the country. Ten years since its inception it has made little progress within the teaching community in Australia (Pearson, Webb & McKeen, 2005). This paper focused on student teachers knowledge, attitudes and skills on TGfU when entering a teacher education program and found that they had poor knowledge, understanding and experience of TGfU, thus questioning the extent that the approach has been adopted by Australian coaches and teachers of games over the last decade. However, the study did not specifically address the reasons for this.
Introduction to the TGfU Approach

The TGfU approach developed by Bunker and Thorpe placed a whole different focus on the teaching of games. The focus of the model is placing the student or athlete in a game situation where tactics, decision-making and problem solving is critical. Isolated skill development is only utilised when the student or athlete recognises the need for it (Webb & Thompson, 1998, p1). Other variations of the TGfU approach include: “Games Concept Approach” (Wright, Fry, McNeill, Tan, Tan and Schemp. 2001, cited in Light, 2003) and “game sense” (Webb & Thompson, 1998)

The Place of Games in the Curriculum

Sporting authorities and State Education bodies have promoted the TGfU approach via professional development and accreditation courses. In 2005, a new Personal Development, Health and Physical Education (PDHPE) Years 7–10 Syllabus replaced the current syllabus in NSW secondary schools. One area that has undergone major changes within the syllabus has been that of the teaching of games, with the move towards a Game Sense or Games for Understanding model. The original TGfU model proposed by Bunker and Thorpe (1982) advocated the following principles: game form, game appreciation, tactical awareness, decision-making, skill execution and performance.

This change has implications for practicing teachers in relation to both the content and teaching strategies traditionally utilised in the teaching of games. Teachers have been teaching games for many years in physical education lessons and with sporting teams. The difference with TGfU is the approach that is used. The key to this teaching method is the questioning technique and the relevance to the student of the introduction of rules and techniques. The focus is on the student and problem solving. In addition, fun is the key ingredient. TGfU is an approach to teaching that makes very effective use of active learning in that the students are learning through playing the games. The use of questioning is a powerful method of encouraging players to analyse their actions, both individually, and as a team. Questions can relate to a particular tactical, technical or rules aspect. Effective phrasing of questions can also help to guide the player to an answer, in the event that they are struggling with an activity. Age, experience and ability level of the players will affect the complexity of the questions used.

TGfU has been shown to result in improved learning outcomes for students. Games are a significant component of the physical education curriculum, with research suggesting that ‘65 per cent or more of the time spent in physical education is allotted to games’ (Werner, Thorpe & Bunker, 1996, p.28).
**Current Changes in the New South Wales Syllabus**

New syllabus outcomes (Board of Studies, 2003) highlights the orientation to thinking and levels of cognitive engagement. The Department for Education and Skills (2004) in England highlights the importance of inclusiveness in physical education with an emphasis on teachers having a deep knowledge and understanding of effective teaching strategies with a focus on student engagement and enjoyment. Whilst TGfU is not the only pedagogical model for teaching games, it is most certainly one that can be used effectively to achieve the student outcomes.

**What TGfU can Offer Relative to Traditional Teaching Methods**

Research (Light, 2002, 2003; Thomas, 1997a; Turner & Martinek, 1999; Werner et al, 1996) indicates the strengths of the TGfU approach and the desirability of it as one of the major approaches to quality teaching of games. Light (2002) highlighted the effectiveness of TGfU for engagement and cognitive learning. Higher order thinking occurs from questioning and discussion about tactics and strategies and also ‘through the intelligent movements of the body during games’ (Light, 2002, p.23). Cognitive development through decision-making and tactical exploration are combined with skill development within modified games to provide meaningful contexts. Light (2002) suggests that it is difficult for some physical educators to address cognition in games. TGfU is one pedagogical approach that may assist teachers and coaches to address this issue as the problem solving approach develops thinking players.

Werner et al, (1996) state that…‘while the teacher may be convinced that skill-based lessons are having a positive effect in that some immediate skill improvement is made, the social and skill related interactions might over time convince the youngsters of their lack of ability’ (p.32). The issue here is that isolated skill development and improvement may not necessarily transfer to a game situation where many interactions take place. Thorpe and Bunker (1986, cited in Allison & Thorpe, 1997) argued that a skill-based approach to teaching less physically able students is likely to: ‘…result in a sense of failure, a lack of enjoyment, poor self-concept and subsequently inhibition of long term participation’ (p.11). In contrast to this, the students who exhibited low physical and technical ability in the TGfU lessons consistently reported significantly higher and more positive scores for these same factors. ‘It appears that a skills-based approach serves only to highlight, confirm and reinforce – often publicly – the pupils lack of physical ability’ (Allison & Thorpe, 1997, p.12).

Given the decreased involvement of children in physical activity, TGfU is aimed at encouraging children to become more tactically aware and to make better decisions during the game. As well, it encourages children to begin thinking strategically about game concepts whilst developing skills within a realistic context and most importantly, having fun. Essentially by focusing on the game
(not necessarily the ‘full’ game), players are encouraged to develop a greater understanding of the game being played. Thomas (1997b) states that the desired effect of this is ‘players/students who are more tactically aware and are able to make better decisions during the game, thereby adding to their enjoyment of playing the game’ (p.3).

**Applying TGfU in Practice**

Activity analysis is an important part of teaching games effectively and is the first step that the teacher and coach needs to do in using the TGfU framework (Webb and Pearson 2008) before undertaking lesson and unit planning. They suggest analyzing the category or activity by listing all the elements required for an effective player in that category or activity. For example: what are the elements of an effective bocce player? These elements can then be subdivided into the following: techniques or skills, strategies/tactics, fitness components and knowledge of the rules. Here are some examples:

- Techniques or skills - throwing and rolling
- Strategies - knocking the opposition ball out
- Fitness - flexibility and power
- Knowledge of rules - starting the game is determined by a coin toss, which determines which team has the pallina and ball colour.

Following this analysis the teacher can then work out the specific problems and questions, which can be addressed for each of these components.

**Different Teaching Approaches**

There are different approaches when using TGfU, which include the full sided and small sided. Full sided refers to activities where there are larger numbers: e.g. four versus four, five versus five etc. In applying this to a target game like lawn bowls this would take place in fours where a team of four play against another team of four. Small sided consists of smaller numbers such as one versus one, two versus two etc.

**TGfU With Target Games**

Many invasion sports have a target element to them (e.g. shooting for goal). The aim of target games is to place a ball or other projectile near or on a target in order to achieve the best possible score.

Target games encourage and develop a high degree of precision in the physical skills used. The fundamental movement skills employed are hand–eye co-ordination (accuracy of hit, throw, etc) and concentration on a specific target.
Target games can be classified as unopposed (e.g. golf, archery) or opposed (e.g. bowls, bocce). In opposed games, the element of placement in relation to your opponents object is introduced in addition to accuracy. (Australian Sports Commission Game Sense Cards, 1999)

The following are examples of what can be undertaken with target games, beginning with simple games that use a large or small ball that is rolled towards a target and then gradually add other equipment such as Frisbees.

**The Small Sided Approach for Target Games**

This approach utilises small numbers such as an individual player, one versus one etc. This is in contrast to a full sided approach where there are greater numbers. e.g. in Lawn Bowls a game of fours (four against four).

**Activity 1: Target roll**

In pairs. Place a target 5 metres away e.g. a cone or marker between the pair. Practice rolling at the target with a large ball and then introduce a small ball.

*Questions:*

What do you look at when you are rolling the ball?
What is the correct technique for rolling a ball?

**Activity 2: Multiple target roll**

Groups of 4 or 5. Place a number of lines (you can use ropes) with different point values. The closest line you roll your ball to is your score. Let each person have 3 turns.

*Questions:*

How do you determine which line you roll the ball to?
What do you look at when rolling the ball?

**Activity 3: Frisbee throw**

In pairs throw a Frisbee to land in a hoop. How many throws are required to land in a hoop?

*Questions:*

What are you aiming at and why?
If it is going to the left or right of the target how do you correct it?
What are the different ways you can throw the Frisbee?
What is the correct technique for each of these ways?

**Activity 4: Frisbee golf**
Set-up a mini-golf course of 4 holes using hoops as the hole. Students can play the game in pairs.

*Question:*
How do you determine whose turn it is to start at each hole?

**The Full Sided Approach for Integrating Invasion/Target and Target Games**
Many invasion games have a target element to them so it is possible to integrate the two categories. Ultimate Frisbee will be used to illustrate integrating an invasion/target game and Bocce will be used to illustrate a target game. Ultimate is a game played with 5 or 6 per team where the object for a team is to pass the frisbee and score a point by passing to a teammate standing over or beyond the end line. The target factor is passing the Frisbee to a player over the line (target). The game begins with one team starting to pass at the centre line. If the Frisbee is dropped or intercepted the other team gains possession and starts passing from that location immediately. A defender may go no closer than 3 feet to guard the person with the Frisbee.

**Activity 1: Running Ultimate**
Start with a very open ended game where you allow the person with the Frisbee to run. A defender can effect a touch on the attacker, which requires them to stop, and then they have three seconds to pass the Frisbee.

*Questions:*
What are the two options the attacker (person with the Frisbee) has?
When do you use each of these options?
If you are on the attacking team without the Frisbee what are you trying to do?
As a defender what are your options?

**Activity 2: Ultimate Frisbee**
Now play the game where the attacker cannot run with the Frisbee

*Question:*
By adding this one rule how did it change the game?
Activity 3: Width Frisbee
Now place one person from each team on the sideline. This player may only move up and down the sideline but a team can only score if they have passed to their sideline player once during that possession.

Question:
How did the sideline player change the game?

Regent Sporting Goods (date unknown) state that Bocce can be played on almost any surface such as grass, dirt, beach etc. The object of the game is to roll the Bocce ball closest to the Pallina or target ball. Games can be played as follows:
   a. one player versus another-four balls each
   b. two players versus two players-two balls each
   c. four players versus four players—one ball per team player (Regent Sporting Goods, date unknown)

When applying the full-sided approach to Bocce you would be playing four versus four.

Questions:
What strategies can your team use to ensure your Bocce balls are closest to the Pallina?
What options are available to your team to use your opponents Bocce balls to your advantage?
How do you score in Bocce?

Challenging Participants Through Principles of Strategical and Tactical Analyses
It is appropriate to provide situations which require participants to develop skills around strategy and tactics of target games. If playing in a game of 4’s in lawn bowls or bocce we can ask the group of 4 to get together to determine strategies they will use on a wet or slow green. Similarly we can give them a situation in a game and ask them how they would adapt the tactics. For example, place the bowls in a case study scenario and ask them what options they have as a skip to win the shot.

There are principles of play underlying strategies and tactics which are important to engage and challenge participants for a greater understanding of target games. These principles can be given
to participants to analyse and have them creating a case study situation illustrating their understanding of the principle. The principles of play include cohesion, competency, improvement, economy, deception, surprise, opportunity, reserve and mobility (Grehaigne et al. 2005). Cohesion relates to all players working to achieve a common objective. This requires a harmonious team environment which includes positive feedback, encouragement and support. Competency refers to the roles that individuals undertake in a team situation. In lawn bowls the lead bowler attempts to place one bowl close to the jack and one behind the jack whereas the second player has to complement the lead by placing another bowl in the head and probably a position bowl in case the jack is moved. However, there are a number of scenarios because if the lead fails in their task the second will be required to take on a lead players role. Improvement refers to participants selecting consistent systems of play for the situation. In lawn bowls on a wet and slow green players should not bowl to the jack but rather aim at a point behind the jack because inevitably the slower green will bring the bowl back to the jack. Economy refers to reviewing strategies and tactics according to the situation. The second in bowls would review the situation when it is their turn which may require them to place another bowl close to the jack or play a positional bowl in case the jack gets moved. Deception requires tricking an opponent into making a poor response during game play. On a fast paced it may be beneficial to place the jack near the ditch to deceive the opponents on a draw shot placing their bowl in the ditch and out of play. Surprise is using unexpected actions in a game. This could be taking a different option than expected such as playing a different hand and pushing bowls up to the jack. Opportunity is taking advantage of an opponents mistakes. If an opponent places short or long bowls it may provide the opportunity to draw another shot. Reserve is creating a support network to ensure that if a desired play fails, it can be backed up by another. For example, subteams in bowls need to work with each other to achieve the desired result. A third and skip need to complement each other for example. Mobility is positional attack, based on continuity of play, requires preparation before the attack can be launched. This principle relates more to invasion games than target games.

**Creating and Defining Games (CDG)**

CDG provides an opportunity for a class to be involved in creating/developing and designing games (Almond 1983; Curtner-Smith 2005; Holt 2005 and Quay and Peters 2009) and provides further opportunities to develop understanding and enjoyment in target games. The basic structure for creating and designing games is a round robin process (Quay and Peters 2009) who advocate that groups of students as teams (4 teams in a class of 30) create a game using the structural variables provided by the teacher. The CDG variables include equipment, the number of participants, the skills, the space and time available, the issue of participation, simplicity of rules and scoring, the issue of safety. For example, challenge the students to design a game integrating golf (unopposed) and bocce (opposed) with 8-10 participants, involving rolling and throwing skills, maximum participation,
explaining the rules, scoring and safety aspects. An example of a game illustrating this could be Bocce/Golf (BOLF) which could be a combination of rolling the bocce balls to a hole rather than the pallina and the option is there to knock opposition out of the way.

The process would then be a round robin process. In a class of 30 students allocate 4 teams. Each team create a game and teaches it to the other team, in turn being taught the other teams game. One interchange between teams for one lesson. Play the game and have the participants discuss how enjoyable, how safe, how participatory and how easy is the game to understand. This enables feedback to be given to the game designers and also makes the participants reflect on the game they have played.

**Conclusion**

TGfU is still a relatively new concept for some teachers and coaches so it is essential that they understand the theoretical framework of this approach. Then they will be able to apply the problem solving approach by applying appropriate questions to the participants. This paper has specifically applied the TGfU approach to target games with practical examples illustrating the different teaching approaches. Challenging participants also through CDG enables them to apply many of the principles of TGfU in a practical environment and also provides feedback to the teacher/coach of participants understanding in target games.

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The Olympics and ultimacy

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One hundred and sixty little athletes took part in a twilight meet in Yass. They ran, they jumped, they threw and they hurdles. Two weeks after, they journeyed to the AIS in Canberra to join many others in similar pursuits. And the season extended throughout the summer months. At the same time, netball, cricket, basketball and swimming occupied many of the same youngsters along with others whose parents enjoined. And there was a barbecue aroma also in Yass involving individuals in their twilight years playing night bowls. A fun run initiated from the schools finished in Yass. All recreational, fun activities and competitions stemming from a community infrastructure encouraged recreation. Hundreds of local Yass residents, young and old, performed in these activities defined as recreation. Each child was dreaming of emulating his or her hero. This is called identification and its meaning is vital for community wellbeing and understanding.

Introduction

When a Sydney Swans game finishes on the Sydney Cricket Ground, hundreds of human beings, young children, older brothers and sisters, parents and community supporters await the final siren before invading the football field to bounce, kick, mark and chase the odd-shaped ball that bounces in all directions. Many will be wearing little versions of their heroes’ uniforms. All will be emulating their heroes’ skills and techniques performed at the elite level. Aristotle, in his classic book called Poetics, maintained that “Imitating is natural to human beings from childhood onwards (Bambrough, 1963)” The recreators are modeling their heroes leading to what we know as “the trickle-down effect” which is the principal reason for encouraging elite performance. It is a great mistake, committed once again by the Crawford Report (2010), to separate recreation from elite performance. They are inexplicably interwoven. All young people should be given the opportunity to practice as many activities as they have an interest in. And as they gain expertise, they should be given the support and infrastructure to take that interest to a condition of ultimacy. The motivation, diligence and mentoring needed to bring ultimacy to any worthwhile endeavour is the duty of a rational society and, when this breaks down, as it has several times in Australian history, essential meaning is lost and in its place mediocrity and slop intervene with catastrophic results.
Elite performance is a natural outgrowth of recreational interest. Those who argue that support should be taken from the elite and given to the masses are contributing to the eventual “slop” that is so harmful to human existence. Contrary to suggestions in the Crawford Report that there is no supporting evidence for major, elite infrastructure building, even a cursory look at the voluminous research, especially in the United States, gives lie to that assertion.

Hundreds of studies are reported each year in the various research journals examining the effects of human performance on health and on social/psychological wellbeing. Bourdeaudhuij, a Belgian researcher, tracked hundreds of studies in 2002 which showed that physical activity and wellbeing in adolescence was maintained through sports (Bourdeaudhuij, Ilis, et al 2002). In 1984 Tangen Foster concluded from his examination of many acts of his studies that risk sports were not only possible and inspiring but encouraged participation provided they had proper, supervisory conditions. Wiggins, in 198, traced the effect of the Olympics on special groups, women, blacks, minorities, disadvantaged children and concluded that this was an important stage on which a leveling effect could take place (Wiggins, 1983). Viktor Frankl (1959), himself a concentration inmate, found that where meaning was lost in incarcerated individuals, apathy, boredom and depression ensued. When self-concept was maintained survival was possible. In 1969, Cox concluded that both festivity and fancy, so common in Olympic participation, enriched human beings (Cox with L Noble reported in 1983). Eleanor Metheny, a researcher at Southern California University and a renowned leader in researching human behaviour, maintained that the Olympics engendered “play to win” rather than “beat opponents (Speech to NAPEHE, 1991.” This is a sophisticated concept that justifies world games as a positive experience for mankind.

But perhaps the best description of the Olympic effect is given by George Leonard in his classic book, Education and Ecstasy (Leonard, 2007). The effect of winning at the elite level gives true joy. He called it “Anana” which translated means “reasonable ecstasy and order”, an ecstasy which is neither immoral nor moral in itself. Olympic victories and supreme performances induce ecstasy both in the participant and in the observers. Australians have shown time and again that they appreciate, even demand, this ecstasy in their representatives.

In many ways the pole vault illustrates the types of ecstasy that are induced in the spectators. As the athlete plants the pole and begins the arch to hurtle the body up to the bar, there is hope. Many catch their breath as this occurs. When the vaulter hovers above the bar, extreme empathy is produced in the onlookers and then relief or disappointment follows the clearance as the body descends into the landing mats. Hope, empathy, relief, or hope, empathy and despair are all encompassed in this gallant adventure. Australians experienced these three human feelings in the pole
 vault at the recent Olympic Games in Beijing. The joy at Australian success on the world stage was in calculable but the Olympics also provide an opportunity to appreciate supreme effort.

There can only be one winner in each Olympic event, whether it be individual or team, so disappointment is very much the order of the day. But we are compensated by the gallantry of those who lose with dignity and ultimate endeavour. We saw a lass with considerably less talent than others in the final will her way to a silver medal in the women’s hurdles and we rejoiced. In 1956, when the competitors gathered for the final sprint in that classic event, the Men’s 1500 meters, one hundred thousand spectators and millions of others looking on at the new TV and listening to the excited descriptions over the radio roared as John Landy raced around the outside and challenged the leaders. He finished third and won bronze but it was such a joyous experience for those familiar with his gallant efforts in previous years to break four minutes that a minor placing induced genuine ecstasy and approval.

We identify with fellow Australians on the firing line and efforts to continue to give vital support to our Olympians are considered essential by the majority of spirited Australians. Of course, there are some mean-spirited individuals who resent money being spent on the Olympic chase and, in a democracy, they have their say. The majority money, however, is on the Australians who have handed the hat around when needed to assist aspiring heroes represent us with dignity and opportunity. John Coates is right, Mr. Crawford is wrong. Elite Olympic performers are very much part of the Australian psyche and to provide the necessary infrastructure for them to succeed on the world stage is an Australian ethic.

It is worth taking a moment to list and comment on the strengths and weaknesses of the Olympics.

**Strengths**

1. **Olympian effort involving individual excellence and especially good form**
   The early Greeks of fine appearance demanded that performers be prepared physically and mentally, that their bodies be ready for the performance and be of fine appearance (Plato). This insistence upon the development of the body, mind and spirit forms the basis for an idealism which continues today and is admired by all.

2. **Universal participation**
   Greek citizens rich or poor were welcomed which meant the noble and the peasant met on equal terms. The modern Olympic Games welcome all serious athletes from all countries, whatever
their social, financial or cultural position. The Games are interested in acknowledgement of the fastest and strongest individuals as being the best in the world.

3. **Talent identification**
   The Games’ events were spelled out with their rules and regulations known beforehand. Competitors had to contort themselves to these conditions in order to take part. The modern Olympics have added many sports but the conditions must be the same and be known beforehand. Even wildly differing techniques like the Fosbury Flop and the bendy pole remain the same in their essentials. All high jumpers must take-off on one foot and whatever the nature of the pole, it has to be anchored in a box.

4. **Sacrifice**
   The definition of the term “competition” leaves little doubt that the competitors would suffer. “Athletics” to the Greeks came from the root word “contest”, which meant struggling. It was defined further as “miserable” or “wretched.” The comforts of home and the ease of the ‘soft” Australian are not recognized in the Olympic ideal.

5. **Teamwork**
   Today we value this term greatly. The Greeks had few teams, Field Hockey and Chariot Racing, excepted, but the preparation of each individual involved a team of specialists, starting in the gymnasias and finishing on the track. Surely, this is one area which has developed and been honoured by modern traditions.

6. **The Trickle-Down Effect**
   The performance of the athletes and the special methods they employed were meant to be appreciated by the masses and, in technical matters, Olympian display can mean better living for the average citizen. The major justification for motor racing today is that it greatly improves the performance of the local jalopy. It is not hard to imagine that the charging chariots of ancient Greece, did not improve the domestic carriages in the city states, similarly.

7. **Ambition**
   Athletic contests define ambition. A glint in the eye of a child develops into participation which eventually arrives at the goal of Olympic victory. This is noble and to be encouraged and its purity is exemplary. “Aussie, Aussie, Aussie” developed into “Torah, Torah, Torah” arising from the inspiration of a courageous and beautiful Australian 23 years old from Cooma.
8. Modelling
Allied with ambition, the existence of the Olympic Games ensures that attention is focused in such a way that emulation and adoration are enabled (Aristotle). Here ethics feature strongly because modelling uplifts a community. The students of Cooma South Primary School and their parents are in ready evidence.

9. Art and Ritual
The Greeks made a huge issue of competing nude. They believed nudity met the conditions of strict participation. Some enthusiasts have suggested that we replicate these conditions and although naked modelling is noble, not all of the models are superb. Some of the more ignoble Greeks poked fun at fat Persians and reduced idealism to ridicule. When women were eventually permitted to run their festivals, nudity was allowed but given little credibility. In their day, many Greeks, like Plato recognized the need for women to be as fit and as healthy as men (Plato, The Republic, Ch. 7). Today’s festivals pay great homage to gender equity representing a gigantic step in the history of human endeavours. Australian Olympic successes would be scant indeed without the efforts of our women.

Problems and Weaknesses
1. Excessive Nationalism
Idolizing national representatives is mostly healthy, but when poor sporting behaviour supersedes genuine appreciation, nationalism becomes invidious. The applause within the stadium and around the world fortunately pays homage to superior efforts without regard to nationalities and cultures.

2. Boycotts
The boycott era seems to be behind us. It was hard not to be a resounding critic of nations calling for the exclusion of other nations in the ‘60’s, ‘70’s and ‘80’s. Boycotts rarely work and represent intrusion from political sources; they are a “soft” option.

3. Drugs
The modern Games, since 1936, have suffered from this blight. The use of performance-enhancing drugs endangers health and threatens the ethics of a balanced competition. Let us put it very clearly. Drugs “fart in the face” of international goodwill and development.
4. **Cheating**

The example of Nero’s bribery which gave him the chariot race has scarcely seen its equal in the modern era. But there are characters from less scrupulous enterprises who salute the ethic. “The end justifies the means.” Such characters are a pox on the face of Olympism.

5. **Commercialism**

The modern Games are so complex that commercial assistance from major business enterprises is essential. Television has used this support, unfortunately, to excess.

6. **Pride or “The Strut”**

Euripides said it brilliantly when talking, “of all the countless evils throughout Hellas, none is worse than the race of athletes . . . slaves of their belly and their jaw, they know not how to live well . . . in youth they strut about in splendour, the idols of the city, but when bitter old age comes on them, they are caste aside like worn-out cloaks (Medea and other plays, 1963).” Plato and Diogenes warned against idolizing athletes similarly.

7. **Dealing with a “Putrid” Press**

The vast majority of journalists covering the Games are interested in accuracy, poignancy and respect. The Press must never give false praise, but the presence of a small number of vitriolic, scandal-seeking gutter snipes masquerading as reporters is guaranteed to cause much heartache amongst sincere administrators, participants and the general citizenry. Freedom of the press does not mean unlimited licence to sacrifice truthfulness and responsibility. In Sydney in 2000, the “Gutter” Press using shallow, erroneous and ignorant information nearly drove every official out of his or her organizing seat in frustration and despair. In a free society we have no desire to close down the press but we do have a right to insist upon accurate and clean reporting.

**Conclusion**

It is easy for the cynic to have a field day with the weaknesses of the modern Games, but their promise is far greater than the retarding influences which impede fulfilment. Athletes’, coaches’, officials’ and administrators’ efforts far outnumber the dissidents in promoting genuine Olympism. May their efforts thrive!
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SECTION 3:
Moving, Learning, & Achieving
Improved Motor Learning, Competent Players & Participants
Effect of diurnal variation on the ability of basketball players - a study

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Nature has created many bounties and one among them is the rhythm. Every thing which exists in the universe is in accordance to a particular rhythm. Human body also follows a systematic rhythm and you cannot find a single organ in body, which works unrhythmically, and heart is one of the best examples with its rhythmic beats. Circadian rhythm is approximately 24 hourly patterns of some physiological activities. Circadian rhythm has been demonstrated in humans for changes in heart rate, metabolic rate, wakefulness, and flexibility. Circadian rhythm is also associated with some changes in levels of performance in sports. Due to lack of scientific investigation in the area, a clear picture of performance ability at different time of the day is not available. Keeping this fact in view the present study is taken to furnish evidences in this aspect. Method: The subjects selected for this study were from the Inter University coaching camp at Osmania University. A group of 20 basketball players whose age ranged between 18 to 22 years were selected randomly for this investigation. Single group design was chosen for this study. Johnson’s basketball ability test (Harold & Rosemary, 1979) was used as a criterion measure. The test was held at different times of the day and evening. Analysis of variance (F ratio) and scheffe’s post Hoc test were utilized as the statistical tools. Results: The results showed that the body follows a rhythm and as per the time the performance is effected. The basketballer’s performance in the test was recorded best during the evening time than in the morning. Conclusion: There was significant difference in the performance of the basketball players in the evening than in the day, suggesting that circadian rhythm affects the sports performance.

Introduction

It is a universally accepted fact that the earth and man’s existence is in accordance with certain rhythm which is a fundamental feature of nature (Kimura et.al; 2009). The entire living organisms which are alive in this universe obey certain rhythms (Stephenson Sally. 2010). Human body is no exception as all the systems of the body work in a rhythm and cohesion. It is difficult to point out any single organ in the body which works unrhythmically (Shephard, 1991). The best example is the heart
which is autogenic with its rhythmic beats. The prerequisite for good health is a combination of continues biorhythm of work and rest (Bear, Mark.F. et.al. 2007)). In every living organism these two aspects balance between them alternating equally for a peaceful coexistence and guarantee healthy life (Smith, Roger. S.et.al. 1997).

If we look at the human activities there are certain physiological activities which work on hourly pattern. Circadian rhythm is approximately 24 hourly patterns of such activities .The circadian rhythms have been demonstrated in humans for changes in heart rate, metabolic rate, wakefulness and flexibility (Conroy & O’Brien, 1974) The temperature at the rectal point shows distinct rhythmic changes in the course of 24 hours with the range of temperature being lowest early morning at about four hours, slowly increasing during the day and reaching a peak in the afternoon (Reilly & Boxter, 1983). The same is applicable to many other rhythms in the body (Refinetti & Menahar, 1992). Circadian rhythms also have profound effect on the sports activities as they are associated with several changes in the levels of performance (Bonnet, 1990).

Circadian rhythm influences the biological function and can have a profound impact on the athletic skills and performance in physical activity. Human body is the end product of thousands of years of evolution and it is essentially a biological organism. Among the rhythms which manifest themselves in the function of human body, biorhythm is one of them. All living organism tend to have fluctuations in the biological rhythms. The duration of such biological cycles ranges from a few hours to much longer periods. In the human body the 24 hours rhythm is the most prominent cycle which has control of variations of body temperature, pulse rate, respiratory rate, hormonal secretions, the amount of composition of urine excretion and various other functions of different organs (Kiana.1998).

There are innumerable varieties of rhythms which have been identified and they are termed as tidal, lunar, diurnal and seasonal. The most distinct biorhythm considered is diurnal variant which is the fundamental characteristic of all life occurring and happening in the daytime (Adams, et.al; 2004) Human body is eclectic in nature which is a combination of Psychological, Physiological, Biochemical and Physical system at each hour of the day. Thus the hypothesis of this research is that the effect of exercises on the athlete ultimately depends upon which rhythm the athlete is on his circadian map.

The literature in the above area is circumspect and due to lack of scientific investigation in the field a clear picture on the performance of an athlete at different times of the day is not available. With the idea of enhancing the insight into this field and the present circumstances in view the investigator thought to foray deep into the area to furnish evidences which might be of some help to
the coaches, trainers and physical education teachers in selecting the training program and competitions.

**Method**

Twenty basketball players of Osmania University who were undergoing rigorous coaching camp for participation in the All India Inter University Tournament were randomly selected from a group of 50 players for the study. The ages of the participants ranged between 19 and 24 years. Single group design (Jerry & Nelson, 1990) was chosen for the study since through this inter subject variability is controlled.

The schedule of most of the training sessions and competitions are either in the morning hours or in the evening hours. This was taken as the focal point since it was the base on which the tests under the study were administered. The time schedule selected for the test was at 6.00 hours and 10.00 hours in the morning sessions and at 14.00 hours and 18.00 hours in the afternoon and evening sessions.

Johnson’s playing ability test (Harold & Rosemary, 1979) was utilized as the criterion measure to test the hypothesis. The above test battery includes 1. Field goal speed test 2. Throw for accuracy 3. Speed dribble test. The requisite data was collected under similar conditions at 6.00 hours, 10.00 hours, 14.00 hours and 18.00 hours. Under the field goal speed test the number of baskets scored in 30 seconds were taken as the score. The number of correct baskets scored in 10 chances composed the score of the throw for accuracy and the point scored after crossing the number of hurdles (obstacles) in 30 seconds was taken in as the score in speed dribble test. The score of all the three items of the test battery for Johnson’s basketball playing ability test was added up to find the score for basketball playing ability of a player.

The statistical tools used for the analysis of the data for the study was Analysis of variance (F-ratio) (Gelman, A. 2005) to find the significant difference. Whenever F–ratio was found significant Scheffe’s post hoc test was applied.

**Results and Discussion**

All the subjects who were selected for the study completed the tests without any incident and injury. The results related to the findings are presented in the tables 1 and 2.
Table 1: Analysis of variance of the means of basketball playing ability Scores at 6.00 hours, 10.00 hours, 14.00 hours, and 18.00 hours

<table>
<thead>
<tr>
<th>Sources of Variance</th>
<th>Sum of Square</th>
<th>Df</th>
<th>Mean sum of Square</th>
<th>F- ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of S. Sr.</td>
<td>1229.85</td>
<td>79</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Between Subjects</td>
<td>3682.75</td>
<td>19</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Within Subjects</td>
<td>1554.00</td>
<td>60</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Treatment</td>
<td>0328.15</td>
<td>3</td>
<td>109.38</td>
<td>5.07 *</td>
</tr>
<tr>
<td>Residual</td>
<td>1229.85</td>
<td>57</td>
<td>021.57</td>
<td>---</td>
</tr>
</tbody>
</table>

N = 20

* = Significant at 0.05 level of confidence F .05 (3.57) = 2.78

Table 1 indicates that there was significant difference among the four scores of the study as the obtained F- ratio of 5.07 was higher than the required F- ratio of 2.78.

Since the F- ratio was found to be significant, Scheffe’s post hoc test (Kirk Roger, 1998) was applied to determine the significance difference between the paired means. The results are presented in Table -2.
Table 2: Paired means and difference between the means for the basketball playing ability scores at 6.00 hours, 10.00 hours, 14.00 hours and 18.00 hours

<table>
<thead>
<tr>
<th>Basketball Playing Ability</th>
<th>Difference between Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.00 hours</td>
<td>10.00 hours</td>
</tr>
<tr>
<td>48.9</td>
<td>47.5</td>
</tr>
<tr>
<td>48.9</td>
<td>----</td>
</tr>
<tr>
<td>48.9</td>
<td>----</td>
</tr>
<tr>
<td>----</td>
<td>47.5</td>
</tr>
<tr>
<td>----</td>
<td>47.5</td>
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<tr>
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<td>----</td>
</tr>
</tbody>
</table>

* = Significant at 0.05 level of confidence. Confidence interval = 4.088

Table 2 points out the difference of paired means. There is no significant difference between paired means for 6.00 hours and 10.00 hours, 6.00 hours and 14.00 hours, 6.00 hours and 18.00 hours, 14.00 hours and 18.00 hours as the scores were found to be 1.4, 2.6, 3.7 and 1.1 respectively. Whereas it was found to be significant between the paired means for 10.00 hours and 14.00 hours, 10.00 hours and 18.00 hours as the scores were found to be 4.1 and 5.1 respectively as the confidence interval of 4.088 were less than these values.

The results point out that player’s exhibit many changes in their playing ability as per the standing in the circadian map. The analysis of the data point out the best performance of the players is in the evening session when compared to the morning session. The participants showed better skills and performance in all the three tests of the study. This may be due to the fact that the biological functions are at their optimum in the evening than in the morning session.
Conclusions

In the introduction it was hypothesized that in all sports activities the circadian rhythm plays a vital role in performance as it affects the biological functions of the body and because the players may perform their best at some particular time of the day. It is concluded from the study that the basketball playing ability of the subjects was more likely to be at its peak in the evening sessions than in the morning session. Further studies are necessary to confirm the effects of the circadian rhythm of sport/athletic performance.

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SECTION 4:
Moving, Learning, & Achieving Enhanced Early Childhood Development
Parental involvement in junior sport

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In response to reports of poor parental behaviour in junior Australian sport, the study, presented within this paper makes a contribution towards understanding parent-perceptions of parental involvement in junior Australian Rules football. Employing a basic interpretive design, this research uses in-depth qualitative data obtained during three separate focus group interviews from 15 parents of junior Australian Rules football participants. Parents provided rich, descriptive information which, through a comprehensive thematic analysis, led to the emergence of six principal themes. This paper focuses on two of the key findings, which explore parental attitudes and experiences related to participation and verbal reinforcement. This research not only draws closer attention to understanding parental involvement in junior Australian Rules football, but also extends the knowledge base of sport-sociology literature.

Introduction

In Australia, approximately 1.7 million children aged between five and 14 engage in at least one form of organised junior sport each year (Australian Bureau of Statistics [ABS], 2010). Of those children, it is reported that over 240,000 boys and girls participate in modified versions of Australian Rules football (ABS, 2010). Within South Australia, all organised junior sports adhere to a state government policy under the Children’s Protection Act (1993), South Australia (Government of South Australia [GoSA], 2008). Entitled Principles of good practice for recreation and sport, this policy encourages the positive participation of parents, coaches and children in junior sport (GoSA, 2008). Despite policy intentions to “promote the wellbeing and best interests of children” (GoSA, 2008, p. 4), reports of poor parental behaviour have become more frequent, with particularly focus on the junior Australia Rules football context. Commonly referred to in the media as ‘the ugly parent syndrome’, a number of reports have depicted instances of aggressive parental behavior from the sideline (Flower, 2009), verbal abuse towards junior umpires (Flower, 2010; Flower, 2009), physical violence towards opposition parents (Vernon, 2010; Butler & Flower, 2009; van den Nieuwenhof, 2005) and assault on junior participants (Flower, 2009). While these reports highlight a potential social issue within junior Australian sport, it should be acknowledged that there is currently a lack of research evidence to substantiate such claims.
Conceptually, elite sport is based on a competitive model whereby participation is oriented towards achievement (Siegenthaler & Leticia Gonzalez, 1997). However, junior sport adopts a more holistic model, circular around the notion of ‘fun’ and ‘play’ (Harwood & Knight, 2009; Cote, 1999). Cote (1999) defines this phase of sport engagement as the ‘sampling stage’, whereby the notion of fun is considered a fundamental underpinning of the experience. Parents are a major contributing factor within this phase and largely influence children’s ability, and desire, to continue involvement in sport (Harwood & Knight 2009; Keegan, Harwood, Spray & Lavallee, 2009). Not only do parents fulfill the salient roles of modeling appropriate behaviour (Anderssen & Wold, 2002) and advocating healthy attitudes towards sport participation (Ornelas, Perreira & Guadalupe, 2007), parents also contribute the financial, logistical and emotional support that enables participation (Kirk, Carlson, O’Connor, Burke, Davis & Glover, 1997b).

However, in many situations, parents can also negatively impact children’s sporting experiences (Fraser-Thomas & Cote, 2009; Kanters, Bocarro & Casper, 2008; LaVoi & Stellino, 2008; Gould, Lauer, Rolo, Jannes &Pennisi, 2006; Hellstedt, 1990). According to Hellstedt (1990), many children perceive parental involvement in junior sport as sources of ‘forceful’ pressure. Fraser-Thomas & Cote (2009) found that many parents financially coerce children in return for competitive success, while Gould et al, (2006) purports that some parents engage in violent confrontations with other parents during children’s sport competition. Given that early sporting experiences predict children’s engagement or disengagement in sport into adulthood (Kjonniksen, Fjortoft & Wold, 2009), the importance of positive parental involvement cannot be underestimated. In this regard, most research has focused on children’s and coaches’ perspectives of parental behaviour (i.e. Fraser-Thomas & Cote, 2009; Shields, Bredemeier, LaVoi & Power, 2005; Coakley, 1992; Hellstedt, 1990). However, the present study explores the personal and emotional perspectives of parents as the contextual experts of research inquiry in response to reports of poor parental behavior in junior Australian Rules football, making a valuable contribution to the current field of literature.

Method
Participants
Utilizing a purposeful sampling strategy, 15 parents (11 male, four female) of Under 12 junior football participants were recruited to voluntarily take part in the study. Participants resided in the southern regions of Adelaide, a region identified as one of the lowest socioeconomic areas in South Australia (ABS, 2008). Notwithstanding the associations between populated disadvantaged suburbs and low levels of participation in physical activity (Kavanagh, Golfer, King, Jolley, Crawford & Turrell, 2005; Gordon-Larsen, McMurray, & Popkin, 2000), Australian Rules football is considered a
major sporting code for this region because of its affordability to many Australian families (Kirk et al., 1997b).

**Procedure**

Parents were recruited from local junior football clubs within the southern regions of Adelaide. Permission was sought after, and approved, by the relevant Australian Rules football association to conduct the research. Via email, letters of interest were sent to 10 junior Australian Rules football clubs within the chosen region, of which three clubs responded. The three clubs willingly assisted the recruitment process by making packages available to potential participants for the study, that being, parents of junior footballers. Each package consisted of (I) a letter of introduction, (II) a letter of consent, and (III) an information sheet pertaining to the study. Once sufficient participation numbers and consent were obtained, parents mutually agreed on a time, date and location to participate in a single focus group discussion. Employing a semi-structured approach, the focus groups – comprising of two focus groups with fathers and one focus group with mothers – were invited to share their attitudes, experiences and overall perceptions of the junior Australian Rules football experience and aspects related to participation, the perceived role and purpose of junior sport, and contextual issues within junior Australian Rules football. All interviews were audio recorded, transcribed verbatim and thematically analysed. This process led to the emergence of six principal themes consistent across all three focus group interviews. The names and identities of participants and their associated clubs were given pseudonyms to protect their anonymity. The research was granted project approval by the Social and Behavioural Research Ethics Committee prior to data collection.

**Results**

The following results section details two of the six principal findings from the research relating to (I) parent perceptions on the role and purpose of participation, and (II) parental verbal reinforcement.

**Participation in junior Australian Rules football**

Two conceptual ideas surrounding participation emerged in the data; competitive success, and social development. Although ‘fun’ and ‘enjoyment’ were synonymous responses across the focus group interviews, a more compelling theme resonated when discussing children’s participation. Parents discussed the importance of ‘success’, and the way in which winning was perceived to impact schooling, friendships and bullying. Participant responses were measured when concurrently discussing both participation and competitive outcomes, and while the term ‘winning’ was not considered the ultimate purpose of participation, it was significant for many parents. Comments included ‘only the best is good enough’, ‘it is increasingly important to win, more than ever before’, and ‘winning is important, no-one would deny that’, although, at least one parent disagreed:
You need to teach parents that it’s kids footy. There’s no premiership at the end of it, you’re not winning the farmhouse, you know. It’s kids footy and the main reason they are playing kids footy is to have fun, play with their mates to have fun...Maybe if the parents and everyone was a bit more chilled out, the over the top stuff on the sideline probably wouldn’t happen.

Although the winning rhetoric was pertinent across the data, parents also shared the perception that children’s participation and continuation in sport was largely influenced by establishing friendships, creating positive memories and learning basic social skills. Regular comments made were based on the ideas of ‘having a sense of belonging’, ‘making friends’, ‘earning respect’, and ‘developing social skills’.

Another significant finding from the study was the idea that children’s participation in sport impacted the schooling experience. The concepts of ‘friendship’, ‘bullying’ and social capital in school were frequently discussed in relation to children’s engagement in physical activity and sport. As one parent illustrated, the outcomes of junior sport participation may influence other achievement domains such as school:

In the school yard, my son goes to school and all the kids play for one of the opposition clubs, and you know, you’ve got to win to not get bullied pretty much, that’s the way it is.

Furthermore, parents perceived an overlap between sport and school participation. The contention that you ‘play for fun’ was de-emphasized, and often replaced with a socio-cultural focus on success. One parent illustrates:

It doesn’t matter if it’s recess, it doesn’t matter if it’s lunch, it doesn’t matter if you’re home playing Monopoly with your brother, you play to win. As much as parents say ‘play for fun’, at the end of the day, you play to win.

Verbal reinforcement in junior Australian Rules football

Upon initial investigation, both mothers and fathers openly expressed issues and concerns with positive and negative verbal reinforcement. Participants recalled with accuracy, details of undesirable parental behaviour at junior Australian Rules football games from past and present seasons. Majority of the shared experiences were underlined by aggressive and/or critical semantics:
You see, when a parent says something to their kid, you can just see the kid just, it does not have a positive at all, any sort of criticism, not even harsh or anything like that, but you can just see the kids, they don’t really respond to it.

Participants articulated concerns with other parent spectators who were perceived as being too harsh on their own child, the umpire (who are often children too) or other children, highlighted by this comment:

_A classic example, we had our carnival a couple of weeks ago, basically stayed for the final, and that umpire, from both sides, because there was so much riding on it, just copped it._

Other participants held different perceptions about parental verbal reinforcement, highlighted by this fascinating comment:

_That’s the way I treat my son. I always tell him straight, pretty much straight out. I am very honest with [my son]. If he has a bad game, good game, whatever, I am completely honest, and I tell him if he has a good game, I tell him if he has an average one, but it’s not about trying to give him a downer, just trying to give him the bits and pieces to work on if he chooses to follow it._

The rhetoric that ‘negative comments are unacceptable’ was frequently debated between parents as the interviews unfolded. For example, many participants perceived tiers of negative verbal reinforcement to be somewhat socially acceptable within the context of junior Australian Rules football as long as it ‘was not too over the top’. Others claimed that criticism was necessary for developing ‘boys into men’. However, most parents accepted the ideology that negative verbal reinforcement was part of the junior sporting experience. As described over, parents recognized that negative parental behaviour was inappropriate, but also acknowledged its ongoing existence within junior Australian Rules football:

...You’re always going to have parents that have an opinion on an umpire, have an opinion on a kid, and have an opinion on an opponent... I don’t think you’re going to be able to stop it.

Moreover, participants also challenged the view that only positive verbal reinforcement was acceptable in junior sport. Some parents who were currently coaching, or have coached in the past, challenged the notion of continually providing children with encouragement and positive verbal reinforcement. According to at least one parent, ongoing positive reinforcement towards children with low performance ability may be ‘setting children up for a fall’:
I think that sometimes we’re told to coach a different way that I think we should coach them... I think that doesn’t prepare them for life...and you tell them they’re just as good as Johnnie or Pete or whoever and they find out in the real world when they grow up that they’re not really as good as the person next door...

Discussion
This study contributes to the academic research base that widely acknowledges parents as a major contributing factor in children’s sporting experiences. Whilst the findings are not symbolic of all parents involved in junior sport, they do offer a range of insights around the notions of verbal reinforcement and the function of participation. Significantly, these results reinforce the importance placed on early learning experiences in sport for enjoyment and intrinsic motivation (for example, Harwood & Knight, 2009; Cote, 1999). Moreover, the conceptual ideas of ‘friendship’, ‘fun’ and ‘social development’ was perceived to motivate children, and result from, participation in junior Australian Rules football. However, participation and competitive success were also discussed interchangeably; a finding which corroborates the argument posited by Siegenthaler & Leticia Gonzalez (1997), and contradicts Cote’s (1999) description of children’s early experiences in sport. Also noteworthy is that many parents truly emphasized the importance of success, while other parents maintained that competitive outcomes were not important. These perceptions may reflect a mixed understanding of the purpose and role of sport, and may be contributing to the social construction of winning and success tenors of participation.

The present study also suggests that for many participants, the junior Australian Rules football setting ascribes an alternative construction of ‘acceptable’ parental behaviour. More succinctly, there appears to be a culturally significant consent for tiers of negative verbal reinforcement in junior Australian Rules football. This is concerning when one considers the implications of negative verbal reinforcement for children in sport such as heightened anxiety, stress and even dropout (Butcher, Linder & Johns, 2002). Although the study establishes a deeper understanding of self-perceived parental involvement in junior Australian Rules football, renewed scholastic attention should more broadly explore the junior Australian Rules football context as a major contribution to the field of sport-sociology. Under such conditions, parents, coaches, educators and sport organisations may improve the holistic experience of junior sport for all children and contribute to their ongoing participation.

References


A recent Masters study by the author (Lovell, 2010) a neuro-sensory motor intervention program for young children with coordination delay examined research and practice within motor development to develop a comprehensive neuro-sensory-motor model (NSM) for the design of motor intervention programs. The study focused on the use of the intervention program with a small group of seven children who were tested for and concluded to exhibit coordination delay. Following the 14 week intervention program all the subjects in this study advanced their motor coordination to the average range. More importantly the analysis of the characteristics and responses of the study subjects to the NSM program has led to development of an integrated model which outlines how underlying motor patterns are functionally connected to the CNS.

Introduction
This study proposed that the design of a program for coordination delays should reflect understanding of the development and functions of sensory and motor aspects of motor coordination by the central nervous system.

After the initial testing of gross and fine motor control skills using Bruininks-Oseretsky test of motor proficiency (2005), two obvious clusters emerged in the pretest results. These clusters were determined by their neurological, sensory and motor components, as the balance cluster and the bilateral cluster. The balance cluster associates with Shumway-Cook and Woollacott (2007) who present the concept that an immature postural system is interlinked with the inhibition of the reflexes, particularly the Moro reflex thus constraining coordinated movements and the ability to attend. The bilateral cluster tendency supports the selection of lateral, cross patterned limbed activities together with crossing the midline exercises to stimulate neural pathways between right and left sides of the nervous system (Leonard, 1998).
Neurological Basis for Cluster Patterns

**Balance Cluster**
Neurological and physical structures include:
- **Peripheral vestibular system**- three semicircular canals and two otoliths
- **Central vestibular system**- brain stem system (pons and medulla) and four major vestibular nuclei
  - Assimilated/integrated reflexes: the Moro, TLR
  - Head-righting reflexes
- **Cerebellum**- midline vermis zone (fastigial nucleus) and flocculonodular lobe (vestibulocerebellum)
  - Intermediate zone (interpositus nucleus)
- **Base of Cerebral cortex** – thalamus and basal ganglia
- **Ocular muscles**- three pairs of extraocular orientated in planes close to the ear canals
- **Skeletal system** muscles and ligaments

**Bilateral Cluster**
Neurological and physical structures include:
- **Cerebral cortex**- corpus callosum and right and left hemispheres
- **Brain stem midline structure** (pons and lower medulla: corticospinal fibres laterally cross the midline)- Assimilated/integrated reflexes: ATNR, TLR
- **Cerebellum**- midline vermis zone (fastigial nucleus) and flocculonodular lobe (vestibulocerebellum)
  - Intermediate zone (interpositus nucleus)
  - Lateral zone (dentate nucleus)
- **Limbs**: right arm/leg and left arm/leg

Diagram 1. Showing anatomical structures associated with the balance and bilateral clusters

The clusters’ concept emerged from the pretest results of the seven subjects in this study (ages ranging from 5-7 years) with all participants recording below average results when tested using the BOT-2 Bruininks-Oseretsky test of motor proficiency (2005) particularly in the balance subtest and in vestibular functioning. The BOT-2 bilateral subtests, namely bilateral coordination, manual dexterity, running speed and agility subtest, also recorded below average scores by the subjects in the pretest recordings.

Thus balance and bilateral activities became the focus of a 14 week intervention program with the fundamental aim being to increase the overall motor coordination level of the subjects to a post-test average result.
What defines balance?

Balance is a combination of postural responses to gravity, eye movements and head movements linked to the vestibular sensory system, although interdependent with other sensory systems (Berthoz, 2000).

**Figure 1. The peripheral vestibular structure showing the semicircular canals and the otoliths.**

(www.answers.com/topic/vestibular-system-1)

Maintenance of postural control necessary for all movement depends on an active sensorimotor system. Steindl, Kunz, Schrott-Fischer and Scholtz, (2006) suggest that the system needs afferent information from the vestibular, visual and somatosensory systems (proprioceptive and tactile) to integrate and be evaluated within the cognitive system. This enables motor responses to be generated to assist to stabilize the body.

More specifically the balance system is dependent on accurate responses to and from receptors in the peripheral vestibular structure (inner ear), the vestibular nuclei (in the brain stem), cerebellum, vestibulospinal tract and ocular motor regions of the nervous system (Furman and Whitney, 2000; Leonard, 1998).
This summary is a valuable and concise overview that enables educators to observe movement behaviours involved in balance actions including beam balancing, jumping, hopping, kicking and catching.

**How relevant is the balance sensory system to coordination?**

The development of balance is a basic and fundamental characteristic of normal early childhood motor development (Sugden and Chambers, 2005). Noted tests of motor development and coordination including Movement ABC, The MAND and BOT-2 all include a balance subtest as children with coordination delay often ‘fail’ the balance item (Geuze, 2003). The importance of balance has been recognised as a factor in low motor coordination results in the literature. Several studies (Estil, Whiting, Sigmundsson & Ingvaldsen, 2003; Forseth and Sigmundsson, 2003; Geuze, 2003) have linked low static balance to difficulty in eye-hand and general coordination disorders. Iwanaga,

These studies are consistent with the findings produced in the Lovell (2010) research. The following graphs present the results derived from the BOT-s pretest scores and determined both subject eligibility for the research and components of the intervention program. In this study seven young children with coordination difficulties and ages ranging from 5-7 years were assessed using the BOT-2 test of Motor Proficiency. Each subject scored at pretest one standard deviation ‘below’ average on the total motor composite test (Figure 3).

![Bar chart showing total motor composite scores for subjects B, N, S, M, L, T, and Z.](image)

**Figure 3. Summary of Pre test Total Motor Composite: Scores: 40-60 = average; 30-40=1SD below average; below 30=2SD below average.**

Figure 4 below outlines a trend with all subjects producing age equivalent scores lower than the actual age or descriptive ‘below’ average results. These pretest results depict variance of competence both between subjects and within subtests. Several subjects did not achieve an age equivalent score on any subtest.
The categories in Figure 5 are divided into five descriptive sections (‘well below’ to ‘above’ average) to describe levels of motor proficiency in the eight motor subtests. The results represented in this graph are shown in the order of highest to lowest motor dysfunction. The balance subtest showed a high level of motor deficiency with the bilateral subtest recording a similar result.

Subsequently all 7 subjects scored ‘below’ to ‘well below’ average on the balance subtest which consisted of both static and dynamic tests. Based on these results, the 14 week intervention program was heavily weighted towards various types of balance activities. Actions specific to the peripheral and central vestibular structures were included, together with dynamic and static balance poses.
What defines bilateral skills?

The term **bilateral** is coined as the ability of the body to coordinate both right and left sides in symmetrical or asymmetrical cross patterned manner (Brack and Baker-Nobles, 2004). In contrast **laterality** relates to an awareness and control of the each side of one’s own body and knowing the difference between each side (Cherry, Godwin and Staples, 1989). Generally the term laterality is associated with handedness, sidedness, body awareness and body control. Same sided movements involving the arms and legs are predictable developmental motor patterns generally occurring between the ages of 2-4.5 years. This action is observed in early throwing patterns and normally matures at around age 5 years into a cross patterned (bilateral) stance (Gallahue and Ozman, 2005; Wickstrom, (1983).
How relevant is bilateral development to overall coordination?

Several authors outline that the brainstem is a specific area where the neurological system detects sensory impulses from the left sided receptors and these impulses are received on the opposite side of both the cerebral cortex and the subcortical brainstem region (Cherry, Godwin and Staples, 1989; Estil and Whiting, 2002; Forseth and Sigmundsson, 2003; Goddard, 2002; Surburg and Easton, 1999). Within the medulla the sensory and motor neurons interlink, and motor fibres from the left side of the cerebral cortex cross over to the right side of the spinal cord (Beaton, 2004; Berthoz, 2000, Shumway-Cook and Woolacott, 2007). Leonard (1998) also suggests association areas of the sensorimotor cortex maintain dense bilateral connections to each other.
Bruininks and Bruininks (2005) state that the bilateral coordination requires body control, sequential and simultaneous coordination of both upper and lower limbs. In this author’s study a common observation of subjects when throwing a ball at a target was to step in an immature lateral pattern, even though the average age of subjects is 6.2 years.

The BOT-2 bilateral subtest depicted in Figure 5 produced six out of seven subjects with ‘below’ average scores including one subject scoring ‘well below’. The remaining subject’s score was ‘just’ average, although the raw score was still below actual age equivalents. As with the balance subtest the bilateral results did not include any scores in the ‘average’ category. Lateral and bilateral (cross patterned) actions are also observed in two other BOT-2 subtests: namely manual dexterity, and running speed and agility with both these subtests recording high motor dysfunction ranking.

The preponderance of low scores for this subtest indicated a strong need for bilateral (planning actions across the midline) and lateral (same sided actions) activities in the intervention program. Cross patterned actions involving all four limbs were also included in this program. *Neuro-sensory motor activities target these skills and enhance overall development.*

**The neuro-sensory motor (NSM) intervention program**

Extensive evaluation of existing intervention programs from the fields of physical education, education, occupational therapy, physiotherapy and neurology explored the connection between theory and practice in gross and fine motor coordination delay.

Following the evaluation of theses pretest results and existing movement intervention programs (Cheatum and Hammond, 2000; Geigert, 2007; Kurtz, 2003; Murray, 2005; Pheloung, 2006) a NSM intervention program was devised and specifically included;

- vestibular activities to assist in developing balance control
- bilateral and lateral activities to develop automatic bimanual and across the midline actions
- motor planning to encourage moving and thinking actions
- timing activities to fine tune the cerebella output responses
- sensory proprioceptive and tactile activities to develop sensory processing responses
- fundamental and rudimentary motor skills to further enhance development of right and left sides and upper and lower sides of the body

The program was undertaken in small groups three times a week for 30 minutes for the duration of 14 weeks. The selection of activities maintained a strong focus to develop vestibular/balance and
bilateral functioning tailored to meet the individual needs of the participants. A typical example of activities is presented below.

![Figure 8. Spinning around stimulates the balance system](image)

**Selection of activities included in the NSM Intervention program**

**Balance and Vestibular Activities**
- Spin around on feet (stimulates semi circular canal)
- Log roll
- Rock on different body parts on floor and on equipment (stimulates otoliths)
- Roll on stomach and back on large fit ball
- Bean bag pass ‘over the head/through the legs’ to partner
- Robot partner zap (back to back touch pointer fingers at waist/hip/ear)

**Lateral Awareness Activities**
- Homolateral Lizard action (awareness of right then left sides)
- Hop (dynamic sidedness and balance)
- Gallop (dynamic sidedness)
- Launch board (one foot, balance and effort)
- Seated/standing and crossing the midline actions: right hand to left knee/ear/shoulder then left hand to right…..
- Action song “here is my right hand, hold it up high here is my left hand, touch the sky right hand, left hand, roll them around left hand, right hand, pound, pound, pound!!”

**Cross lateral Awareness Activities**
- Cross lateral lizard (coordinating right/left limbs)
- Skip touching right hand to left knee and reverse
- Step over step (left foot steps across right and reverse)
- Bean bag through legs ‘figure of 8’ pass (crossing the midline)
- Eye tracking ‘figure of 8’ patterns (crossing the midline)

**Goals achieved**

The post-test results confirm positive changes to all subjects with the BOT-2 (TMC) overall motor coordination now registering within the ‘average’ score range (figure 10). It is important to state that each individual entered the intervention program with varying neuro-sensory motor levels and an initial aim was to individually bring motor composite scores (TMC) up to the average functioning level.

**Fig 10 Summary of total motor composite: Pre and post-test:**

*Black line denotes average range (40-60).*

In the pre-test scores, subjects produced low results in the BOT-2 subtests including balance, bilateral coordination, manual dexterity and running speed and agility. These items all scored positively in the post-test particularly the balance and bilateral coordination categories (Figure 11).
Enhancement of Overall Development

The NSM intervention program was created with an emphasis towards balance, bilateral and lateral activities due to the pretest scores on the BOT-2 and following a review of both the current literature and existing sensory motor intervention programs. This intervention approach focuses on the underlying processes of movement through the integration of sensory reception within the neurological system to improve motor coordination ((Ayres, 1985; Burns, 1992; Franklin and Maher, 2000; Goddard, 2002; Payne and Isaacs; 1999, Pheloung, 2006)).

The program included six motor activity headings: vestibular, bilateral/lateral/midline, proprioceptive and tactile, locomotion, eye responses, timing and motor planning. Fundamental motor skills areas of locomotion, manipulation and stability were acknowledged and incorporated within the various activity headings. Ball catching as an example was included while rocking on a rocking board or propelling from the launch board.

Specific fine motor activities were not included in the intervention program although improvements occurred in both fine motor subtests. Interestingly Miyahara, Piek, & Barrett (2008)
highlight the relationship between sensorimotor components and fine motor skills with the inclusion of the vestibular sensory system in their study. They conclude that the drawing errors in young school aged children were more likely to result from postural instability. This recent study can be paralleled to the present study’s trend of low precision score results together with very low scores on the balance subtest.

**Conclusion**

The neuro-sensory motor (NSM) intervention approach produced very positive changes to both gross and fine motor coordination of the seven participants. The specific emphasis towards the balance and bilateral cluster activities appeared to not only improve these BOT-2 subtest areas but produced positive changes to fine motor control, upper limb coordination and strength and agility.

Teachers of young children require straightforward, evaluated and practical activities to assist with both gross and fine motor development and additional intervention activities to assist those exhibiting inadequate coordination skills.

**References**


SECTION 5:
Moving, Learning, & Achieving a More Effective Active Curriculum
This paper outlines contemporary benefits, issues and challenges generalist primary teachers face when teaching Physical Education (PE). It is based on research with five Sydney-based New South Wales Department of Education and Training (NSW DET) primary school teachers. The study utilised semi-structured interviews to collect data enabling the participants to detail their understanding of the issues and challenges they face when teaching PE. Data analysis identified six major categories including (1) School Environment, (2) School Personnel, (3) Needs of a Generalist Teacher, (4) Social Influences on PE, (5) Purpose of PE and, (6) Importance of PE that are discussed in this paper.

Introduction

In 2006, the Schools Physical Activity and Nutrition Survey (SPANS) was conducted as a response to New South Wales (NSW) Government concerns over rising rates of obesity among children (Booth et al., 2006). The survey found that children increasingly spend time in sedentary behaviours and as a result, obesity rates continued to rise among the younger generations. The SPANS report also highlighted the need to help students learn to participate in physical activity with competence and confidence in order to combat this trend (Booth et al, 2006). Therefore, a significant responsibility falls on the teachers of primary school students to provide regular quality experiences in physical education (PE) classes.

There has been much debate about the significance of PE teaching within primary schools. In 1993, the Senate Standing Committee on Environment, Recreation and the Arts (SSCERA) published a report that identified numerous problems regarding the subject of PE within Australian primary schools. These included:

- A ‘crowded curriculum’.
- A lack of importance placed on the subject of PE.
- Reduced numbers of specialist PE teachers in primary schools.
• PE being delivered by teachers in an ad hoc manner.
• Poorly designed and conducted PE programs.
• Decreased support services for teachers regarding PE.
• Decreasing opportunities of inservice teacher training of PE (pp. v – 13).

These issues were identified nearly 20 years ago and are still apparent in today’s primary schools (Commonwealth Government of Australia [CGA], 2009).

Given the inherent lack of progress made in addressing primary school PE programs, the CGA commissioned research to identify areas in need of reform within school, community and elite level sport (see CGA, 2009). The final report highlighted that there was a lack of consistency in the application of PE in Australian schools and that schools have placed less emphasis on PE than in the past. The report made clear that if physical activity and sport is to improve, PE teaching in the primary school years must be enhanced (CGA, 2009). Particular emphasis was placed upon the lack of specialised PE teachers employed within primary schools and the negative effects that has on students’ skill development in PE. These are important points because some of the problems identified by the SSCERA and CGA reports replicate previous research findings from national and international primary school contexts (DeCorby, Halas, Dixon, Wintrup & Janzen, 2005; Hardman & Marshall, 2000; Morgan & Hansen, 2007, 2008).

Previous research has primarily implemented surveys to investigate barriers and problems that generalist primary teachers face when teaching PE. Rarely have teachers been given the opportunity to describe the contemporary issues and challenges from their own perspectives. The present study aimed to gain a better understanding of how PE is being taught by interviewing current NSW Department of Education and Training (DET) generalist primary school teachers. This paper reports on a range of contemporary benefits, issues and challenges when teaching PE in NSW DET public schools.

Methodology
Sample
As the current study focuses on the issues and challenges of generalist primary school teachers, schools that employed specialist PDHPE teachers were not included in the study. This is because previous research has shown that schools with specialist PDHPE staff are less likely to experience as many issues and challenges when teaching PE (see CGA, 2009; Morgan & Hansen, 2008). Of the 42 NSW DET schools recruited for participation, five staff from different schools agreed to participate in the study (as shown in Table 1 below).
Table 1 - Participant Information

<table>
<thead>
<tr>
<th>School Region</th>
<th>Gender</th>
<th>Grade</th>
<th>Fulltime teaching experience (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Sydney</td>
<td>M</td>
<td>Year 5</td>
<td>0-5</td>
</tr>
<tr>
<td>Northern Sydney</td>
<td>F</td>
<td>Deputy Principal</td>
<td>20+</td>
</tr>
<tr>
<td>Northern Sydney</td>
<td>M</td>
<td>Year 5/6</td>
<td>5-10</td>
</tr>
<tr>
<td>Central Sydney</td>
<td>F</td>
<td>Year 4/5/6</td>
<td>5-10</td>
</tr>
<tr>
<td>Western Sydney</td>
<td>F</td>
<td>Year 5/6</td>
<td>0-5</td>
</tr>
</tbody>
</table>

Data collection and Analysis

The semi-structured interviews were conducted in 2010 with one individual at a time, face-to-face and were audiotaped (with permission from participants). Each interview involved seven main questions focused on a range of topic areas - teaching experiences of PE, enhancers and challenges of teaching PE, school organisation of PE and lesson preparation. The interviewer probed for more information about topics of interest as they arose during the interview (Gratton & Jones, 2004). Each interview lasted 30-60 minutes and was undertaken at a time and location convenient to the participant (e.g. school meeting room or classroom).

Based on previous qualitative methodology recommendations, an interpretative data analysis technique was used to examine the interview data (Becker, 2009; Grbich, 2007; King & Horrocks, 2010; Patton, 2002). All verbatim interview transcripts were read with the chief investigator looking for important phrases within the data that were tagged with specific ‘codes’ based on key words from the participant responses (King & Horrocks, 2010). Individual code words and quotes sharing similar emphasis were then grouped together and electronically cut-and-pasted into a new document to form lower level themes (Grbich, 2007; King & Horrocks, 2010). The lower level themes were then analysed (using the same process outlined above) and grouped together where relationships occurred to form the six major categories.

Results and Discussion

Data analysis revealed six major categories regarding the contemporary benefits, issues and challenges that generalist primary school teachers face when teaching PE including: (1) School Environment, (2) School Personnel, (3) Needs of a Generalist Teacher, (4) Social Influences on PE, (5) Purpose of PE and, (6) Importance of PE. Participants are identified as Male (M) or Female (F) and based on the educational regions of Sydney in which they teach. For example, FCS represents a
female participant from the Central Sydney area. The comments below are representative samples of the collective participants in this study. The small sample of participants restricts the applicability of this study to the wider primary school teacher community in NSW and Australia. The findings should not be taken out of context from the participant group and the reader is encouraged to make their own generalisations beyond the research framework.

School Environment
The school environment represents the school’s basic necessities for teaching PE such as sports ovals, indoors halls, sports equipment and resources. As in previous research, the current study found that a lack of equipment and space as well as poor facilities were key issues and challenges that primary school teachers face when teaching PE (CGA, 2009; DeCorby et al., 2005; Hardman & Marshall, 2000; Morgan & Hansen, 2007, 2008). For example, FCS discusses the lack of equipment in PE:

Interviewer: I would to talk about what you think makes PE teaching easier for you?

FCS: Equipment, equipment, equipment… We just need the basics to get sport en masse going. Like in order to have groups of kids doing drills instead of two balls and one teacher out the front and 60 kids watching you… (FCS).

However, teachers in the present study acknowledged that government resources often helped to provide key funds for new equipment. For example, MNWS suggested that:

[The] ‘Premier’s Sporting Challenge’ has been fantastic in the last three, four years … we are picking up $4,000 a year at the moment because we’re involved (MNWS).

This comment suggests that government grants and funding associated with participation in physical activity can be beneficial for teaching PE in NSW primary schools. Incentives such as the ‘Premier’s Sporting Challenge’ need to be promoted widely amongst NSW primary schools to help address issues associated with limited or poor equipment for teaching PE.

School Personnel
Teachers in the present study recognised the importance of support from the principal when teaching PE. In fact, supportive principals and other generalist teaching staff enabled greater access to professional development in PE and fostered better attitudes towards the teaching and funding of PE. FNS comments about the supportive environment for PDHPE:
FNS: Yeah there’s a committee, the PD Health PE Committee… each key learning area has a committee and we have a very active committee here. [It’s] fantastic at getting resources, [the] Premiers Sporting Challenge have been wonderful, a government initiative to be able to bring more resources into the school… They’re always looking out for the free clinics… looking out for an opportunity so if you’ve got a very good committee that’s driving it and supporting it with resources (FNS).

Conversely, a lack of support from school staff acted as a substantial issue and challenge for primary school teachers when teaching PE. These findings reflect the results from previous research that suggested school support for PE is important for quality implementation of PE in primary schools (Morgan & Hansen, 2007, 2008).

Having experience, knowledge and interest in sports greatly assisted teacher’s ability and confidence when teaching PE. For example, MNES suggested that:

… my love of sport makes it much easier for me … it’s been a lot easier for me to learn a lot about sports because it’s been a positive experience and I’ve always enjoyed it (MNES).

The data analysis also showed that early career teachers were more likely to be enthusiastic towards teaching PE than more experienced teachers. Experienced teachers also perceived early career teachers to be more suited to school roles in PE and sport:

I just find that the younger teachers are often settled with taking on that side of the programming and the older teachers are really not into it (FCS).

These findings demonstrate that there appears to be some tension between younger and older teachers with regards to taking on responsibilities for organising sport and PE. Alternatively, the comment may suggest that youthfulness is seen as a requisite for teaching PE. These issues have not been investigated by previous literature but could be examined as part of future research.

Needs of a Generalist Teacher

This category represented professional aspects of the teaching role and referred to topics such as knowledge, confidence and training in PE. For example, participant FNS suggested that a lack of knowledge and specialist training in gymnastics led to issues with confidence when teaching PE:
… some things I didn’t feel confident in. Gymnastics is one, I don’t feel confident to teach that … sometimes you have to say, that’s not my area of expertise, let’s bring in a specialist (FNS).

This comment was supported by FWS who discussed the need for more training in gymnastics:

…I haven’t actually taught gymnastics before because we haven’t had the proper equipment to do it and yet that is mandatory to have.

The current findings support previous research where primary teachers have expressed the need for extensive training in PE to feel confident when teaching sports such as gymnastics (DeCorby et al., 2005; Morgan & Hansen, 2007, 2008). Given that gymnastics is a key area of the syllabus, this comment highlights the value of employing specialist staff for the implementation of specific PE programs in primary schools.

**Social Influences on PE**

The participants agreed that changing student interests (e.g. playing computer games), sedentary behaviour (e.g. watching television) and a lack of parental support for physical activity have led to student disinterest in PE. For example, FNS stated that:

… they’re [parents are] either working and the kids aren’t outside, they’re in after school care or they’re too afraid to let their kids go down to the park. When they don’t take them down to the park, they’re sitting inside in front of the TV.

Similarly, FWS suggested that:

… if you come from a family that encourages sport at home and is happy to … have a kick around on the weekend, then those kids skills develop much faster. I think parents don’t have time for that or just don’t value it so the kids spend a lot of time inside on computer games.

These participants highlight that students whose parents support physical activity are more likely to improve their physical skills in schools. However, the perceived a lack of safety for children and employment led to students spending more time inside and prevented them from developing fundamental movement skills during ‘play’. This issue has been mentioned previously in the *Future of Sport in Australia* report which suggested that parents who provided more opportunities for children to ‘play’ would enhance the learning and development of their children (CGA, 2009). If
parents encourage their children to be physically active outside of school time, students may take more interest and become more confident during PE lessons within the school environment. School’s also have a role in encouraging students to be physically active, before during and after school as part of ‘free time’ and in PE.

Two teachers mentioned an innovative strategy using competition to increase student engagement during PE lessons:

Kids love a competition and I’ve always been a massive believer in competition, friendly competition, and competition that … encourages participation. We’re not playing for money here … if you don’t win, you’ve still done your best and you’ve tried hard (MNWS).

You can have competition points when they go to each station. I’ve always found that works best (FNS).

The findings of the current study suggest that ‘friendly competition’ can enhance engagement in PE teaching by focusing on participation, self-improvement and good sportsmanship. While some students may be motivated more via competition outlets, it is important to acknowledge that not all students or staff will be comfortable with constant competition. If such a technique was used inappropriately by placing too much emphasis on winning, then the educational outcomes of PE could be compromised and result in negative experiences for students (SSCERA, 1993). Careful consideration of the educational context is necessary to implement this strategy effectively as some students may respond more positively than others to this approach.

**Purpose of PE**

This category highlights how teachers understood, prepared for, and organised, the structure and responsibilities associated with teaching PE. Many teachers in this study described competitive school sport (Primary School Sports Association, PSSA) and fitness as PE. For example:

Interviewer: How about your teaching of PE at this school, how has that been?

FWS: PE at our school … everyone has fitness for at least three days a week for at least half an hour... and then on a Friday we have sport while PSSA is on so we play against other schools (FWS).

School sport and fitness do not necessarily provide students with developmentally appropriate opportunities to gain competence and confidence in a variety of skills in the same way as a PE class. If teachers in primary settings do not understand the different roles that PE and sport play in
children’s development, more work needs to be done in communicating the different outcomes of PE, fitness and sport settings. Professional development could clarify the purposes of each, stressing the importance of an educational context within PE – to assist students in moving competently and confidently when they ultimately take part in fitness and sport.

Another disturbing finding was the way that teachers describe their roles during PE lessons. For example, MNES stated that:

… teachers would just stay together and supervise all the classes … it was an activity where you have like say ten activities then the teachers would just spread themselves out around the area and just observe and make sure that everything runs smoothly (MNES).

Further analysis revealed that PE often involved many classes being taught simultaneously with students rotating around multiple activity stations throughout a lesson. The ‘rotational’ or ‘tabloid’ style has been documented as a popular structure for organising PE in primary schools (Morgan & Hansen, 2007) and teachers in the current study perceived this rotational strategy to be beneficial for (1) sharing expertise with the planning and programming of PE and, (2) assisting teachers who lacked confidence in their ability to teach PE. However, these findings may suggest that PE is being taught as supervised play rather than a truly educational experience for students (CGA, 2009; DeCorby et al, 2005; Hardman & Marshall, 2000). An overemphasis on rotational supervisory roles may not assist students to meet specific educational requirements such as learning to move with competence and confidence in various physical activities (Board of Studies, 2007).

**Importance of PE**

PE was often compared to other key learning areas and participants directly discussed the pressure from parents and government agencies to perform in subjects other than PE:

...when it comes down to parents and executives seeing results, all they see is the results from maths and English … whereas with PE, as long as it’s covered and as long as the outcomes get addressed, the Department is happy… (MNES).

One participant also highlighted that a lack of assistance with planning, programming and implementing PDHPE exists within the primary school setting:

... with all of the issues related to childhood obesity and sedentary children … we’ve got a maths consultant, … a literacy consultant, … an HSIE and science
consultant, ... a creative and practical arts consultant ... but we don’t have a consultant for PDHPE. There’s not somebody in our district who is going out to schools and saying to them ‘what PE programs are you teaching, what are we doing to address these issues?’ (MNWS)

Our findings support previous research that discussed the relative lack of importance placed on teaching PE when compared to other primary school subjects. Teachers in the present study also supported recommendations that PE in NSW DET schools would improve by employing consultants to assist with teaching (Morgan & Hansen, 2007, 2008; SSCERA, 1993). While hiring PE specialists would be financially costly to the Government (Morgan & Hansen, 2007), the preventative health measure of employing PE consultants may be more cost effective than treatment related to the costs of future health issues.

Conclusion
According to the teachers in the present study, interest in PE appears to be diminishing due to increasingly varied student interests and Government and parental pressure to develop numeracy and literacy skills. This is despite the growing concerns over rising physical inactivity, obesity and the negative physical and mental health related outcomes associated with these issues. A lack of facilities, ageing staff and poor understanding of the role that PE plays in a child’s development hinders adequate provision in the participating NSW DET schools.

An inability to differentiate between PE, fitness and sport along with difficulties associated with planning and implementing PE lessons was linked to a lack of training and highlighted the need to acquire further knowledge in PE. A lack of training was also highly influential with respect to teachers’ low levels of confidence when teaching PE. This heightens the argument for placing specialist PE teachers in primary schools to adequately promote the different dimensions of PE and sport within primary school settings. Employing specialist PE staff in NSW DET primary schools may maximise physical and psychological benefits for students while also reducing unnecessary pressure on generalist primary staff to competently teach all KLA’s to an adequate level.
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Federal, state and territory ministers have called for the prioritisation of Health and Physical Education (HPE) within Phase 3 of the Australian Curriculum Development plan. They have endorsed the inclusion of HPE as a core learning requirement for all students in each year from K-10 (MCEECDYA, 2010, p. 2). As Health and Physical Education has been confirmed as a subject in Phase 3 of the Australian Curriculum, an opportunity exists for HPE teachers to shape the philosophy, content and implementation of the subject. However, if Allen’s view is shared by a significant percentage of the community, then the input from HPE teachers will be minimal (and possibly non-existent).

Introduction

For the HPE teacher in all sectors and all settings to be heard, they must have not only professional credibility but be professionally active; involved in what Sachs (2003) calls democratic professionalism. It is possible that PE specialist in the primary school may become an endangered species; already the Global Financial Crisis has resulted in the laying off of elementary PE teachers in some American states (Schneider, Konukman & Stier Jr, 2010). Of the Australian states and territories only Queensland has PE specialists servicing the majority of state primary schools in metropolitan and regional areas.

This paper gives a background to the investigation of how PE specialists in primary schools in Queensland are understood in the discourses of teacher professionalism. It is hoped that through research in this area a case can be made for the continued employment of specialist PE teachers in Australian primary schools.

Teacher professionalism is an area of contested discourses where the understanding of the primary school PE specialist teacher is uncertain. Allen’s unflattering and inaccurate view should be disputed but there is a dearth of literature on the subject of professionalism and the PE specialist teacher operating in the primary school, both in Australia and internationally.
Queensland has employed specialist physical education teachers in primary schools for over sixty years yet debate continues on the role of these teachers and the delivery of the subject. The Primary PE Network Newsletter (Edition 2 Semester One 2009) produced by the Queensland Department of Education and Training describes the role of the primary physical education specialist as a collection of verbs; plan, teach, assess, collect, judge, report and in the area of Health; advocate. This mechanical description of the role does not reflect a professional disposition. Professionalism as envisaged by Hargreaves and Shirley (2009, p.88) has three principles underpinning it; high quality teachers, positive and powerful professional organisations and lively learning communities. This is not apparent in the role description nor is it apparent in the perception of teacher professionalism by those wielding political power.

The primary school PE specialist teacher struggles with perceptions of professionalism as well as subject status and marginalisation in the curriculum. A starting point in the investigation of teacher professionalism and the primary PE teacher is a review of literature on this subject. This review is organised under the headings; A Historical Perspective, Subject Status and Teacher Professionalism.

A Historical Perspective

Physical Education has historically been subject to economic, social and political discourses. From its military discourse beginnings as drill and fitness instruction through to its position as a panacea to childhood obesity it has adopted and adapted different arguments as to its place in the curriculum. Within the competing discourses are themes which remain consistent; educating the whole child, educating for citizenship, educating for sport participation.

The competing discourses influence not only the status of the subject as part of a curriculum but the professional standing of the person teaching it. The Queensland experience provides examples of changing discourses in Health and Physical Education and their influence on the professionalism of the primary school practitioner.

Queensland became a separate colony from New South Wales in 1859. School facilities for primary aged children in Queensland were organised under the Education Act of 1860 where a Board of General Education was given the authority to establish and administer primary schools. “The basis of the colonial curriculum was the 3R’s. In addition object lessons (‘show and tell’ lessons), drill and gymnastics and vocal music were supposed to be taught, but in practice these relatively new subjects were often ignored or poorly taught” (Logan & Clarke, 1984, p. 3). Those who have a post-modernist view of history may see a repetition of the colonial curriculum in the 21st Century Australian
Curriculum with the “big four” subjects of English, mathematics, history and science leading the phase by phase production of a national curriculum.

From the late 1800s to the 1930s a military discourse centred on fitness was in operation in Queensland schools. The objective of drill and gymnastics was to promote physical fitness necessary for the defence of the nation (Tainton, Peckham & Hacker, 1984). This military discourse, based on prescribed activities that were to be rigidly adhered to by teachers, was the dominant discourse through World War 1 and up until the early 1930s. In Queensland sixteen teachers were appointed as physical training instructors in 1926 and their professionalism and status was constructed around an instructional rather than an educational role.

In 1935 there was a philosophical shift when the Queensland syllabus adopted the English model of education through the body (physical education) rather than education of the body (physical training) (Tainton, Peckham & Hacker, 1984, p.5). The discourse was one of individual development through movement, influenced by the child-centred focus emerging in primary education. There was a concern that the curriculum attended to the “whole child”. The focus shifted from regulated and formal drill sessions to teaching games and sports and participation in dance and swimming.

The Queensland Physical Education program of 1947 was described as “varied and attractive” including physical training exercises, folk dancing, swimming, games, gymnastics, national games and athletics. The philosophy underpinning the focus on team sports and games was one of socialisation and cooperation. This philosophy is seen in Western (as in Western European) HPE programs where; “programs have focused attention on the provision of learning environments, such as competitive games or sports, as the ideal training ground to provoke and instil behaviours or attitudes that are inextricably linked to notions of good citizenship” (McCuaig & Hay, 2009, p.203).

The National Fitness Act of 1941 “was instrumental in establishing three-year diploma courses for specialist PE teachers in most of Australia’s universities, a development which heralded the emergence of a home-grown physical education profession” (Kirk, 2004, p. 58). In 1943 teachers who had completed a Diploma in Physical Education attended a School of Instruction at Ascot State School, Brisbane with the aim of giving practising teachers an “appreciation of the methods of (physical education) which would be put into operation in Queensland primary schools (Director General’s Report, 1943, p. 80) and selecting a nucleus of a physical education staff to be appointed in metropolitan and country schools to conduct Schools of Instruction for classroom teachers. The Director General’s Report of 1943 (p. 80) directed teachers “to conduct Physical Education activities commensurate with a child’s age and development in a happy, recreational atmosphere.”
A prescriptive syllabus containing detailed lesson plans was introduced in 1952 (Tainton, Peckham & Hacker, 1984) and by the end of the decade PE specialist teachers were working as advisors to classroom teachers throughout Queensland. In the period 1960 to 1970 PE specialist teachers were appointed to primary schools to conduct programs for students (Tainton, Peckham & Hacker, 1984).

In 1972 the new syllabus for Health and Physical Education; Health and Physical Education for Primary Schools: Curriculum Guide was introduced (Tainton, Peckham & Hacker, 1984). The syllabus was a change in direction to previous syllabi as it assumed that the classroom teacher would have more responsibility for teaching physical education programs. Classroom teachers worked closely with the PE specialist teacher in planning and delivering the Health and Physical Education program. At the end of the 1970’s there was a ratio of one PE specialist teacher to 1000 primary school students. It was in this decade that a number of advisory teachers for Health and Physical Education in Queensland were appointed (Tainton, Peckham & Hacker, 1984).

In the 1980’s Daily Physical Education; the 15/30 Program (15 minutes of fitness activities and 30 minutes of skill development each day) was introduced with trial in 1980 and an uptake of fifty schools in 1982 (Tainton, Peckham & Hacker, 1984). This program became the responsibility of the classroom teacher with the PE specialist teacher taking on more of an advisory/leadership role.

The public sector reforms under Labor Premier Wayne Goss in the early 1990’s saw the demise of the Physical Education Branch of the Department of Education in 1992. Industrial action by the Queensland Teachers’ Union heralded the introduction of two hours non-contact time for primary classroom teachers in 1995 (QTU Information Paper 2009). The introduction of this non-contact time resulted in classroom teachers not attending the PE specialist teacher’s lesson and this had implications for the role.

A dominant discourse of neo-liberalism operating in Western nations during the last decades of the twentieth century affected the position of Health and Physical Education in the curriculum. Neo-liberalism is understood as “a means of governing which emphasises individual responsibility and involving governments actively supporting such principles. These principles are promoted by more managerial practices which involve the assertion of rank by superiors to achieve cost-effective and efficient economic outcomes” (Hardy, 2009, p.74). Therefore the subject Health and Physical Education had to market itself as a means of improving an individual’s health; a lifestyle perspective where teachers “are faced with the daunting prospect of trying to turn diverse groups of students into an identikit healthy citizen (Lupton as cited in Dinan Thompson, 2009, p. 196). The outcome of
having healthy citizens will be a reduction in health costs to a community - a cost-effective and efficient economic outcome.

The new millennium did not bring with it a renaissance for the physical education specialist in the Primary School but the continuation of the educational reform based on the economic principles of the free market.

The role of the PE specialist teacher operating in the primary school has not been an evolutionary one. From the commanding officer/instructor role in the military discourse, through the games master/mistress (games playing/social development discourse) to the teacher/advisor of the 1980s the PE specialist teacher has adapted to the dominant discourse. Over the last 15 years the specialist has struggled with the demands of neo-liberalism, a discourse which seeks economic outcomes. This has resulted in HPE marketing itself as a method of addressing childhood obesity with the teacher’s role becoming that of health provider. With the introduction of the Australian Curriculum the opportunity exists for PE specialist teachers to be more proactive in defining their role. To do this they have to be aware of factors affecting the status of the subject so that strategies can be employed to raise both the status and profile of the subject and its practitioners.

The Status of the Subject

Physical Education has been accorded the status of a fundamental right guaranteed within education systems by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 1978). But being a fundamental right does not confer status in terms of rank and relative performance. Curriculum values certain bodies of knowledge over others as it involves a process of selecting, legitimating and evaluating (Dinan Thompson, 2009, p. 262). Penny, Emmel and Hetherington stated “... Health and Physical Education remains marginalised, overlooked and/or excluded from education debate...” (2008, p. 2) and they question if this marginalisation is reflected in the development of a national curriculum. The inclusion of Health and Physical Education in the Australian Curriculum should indicate it has importance and status. However, inclusion is but the first step in a course of action that includes implementation, resourcing and indicative time.

The status of Physical Education in Australia has been a cause of concern at least as far back as the late 1960s where recommendations were given to promote the profession including the provision of advisory staff in regions to assist physical education teachers. (The Training of Teachers of Physical Education in Queensland, 1967.)

Similar recommendations to improve the status of the subject were made in the 1992 Senate Standing Committee’s investigation and report on Physical and Sport Education including that; “The
Commonwealth, State and Territory governments are obliged to continue to co-operate to ensure that physical and sport education is given a higher profile in school curricula “(Government Response to A Report by The Senate Standing Committee, 1992, p.3). Recently the Crawford Report on The Future of Sport in Australia (2009, p. 122) indicated in its assessment and findings with reference to the national curriculum that “there is a high risk that physical education will not be given appropriate priority while it is part of a broader key learning area (Health and Physical Education)”. Three reports over five decades came to virtually the same findings and recommendations about the place and status of Physical Education in the curriculum structures in Australian schools.

Status of a subject implies a hierarchical order in a curriculum. Hendry (1975) when writing about English schools in the 1970s describes a prestige curriculum, similar to a pyramid in structure with Modern Language and Sixth Form Mathematics teachers at the top of the pyramid, the secondary modern teacher somewhat below them, then lower yet, the specialist teacher with the P E specialist teacher ranked the lowest of the specialists just above the lowest group: infant school teachers.

“The study of physical education has traditionally been a low-status subject within sociology, yet there is little justification for this as all education involves a physical education of the body” (Shilling, 2004, p. xx). Shilling exposes the mind/body or Cartesian dualism that has dominated Western thinking and sees the body as inferior to the mind. This dualism results in knowledge in school settings being, “compartmentalised as important ‘conceptual’ subjects (e.g. maths) and less important subjects using the body (e.g. PE)” (Hunter in Tinning, McCuaig &lisahunter, 2006, p. 125). Even within the subject at a secondary school level there is a ‘theory’ and ‘prac’ delineation of lessons supporting a mind-body separation.

While the Australian Curriculum focuses on Years K-10, Physical Education in Queensland primary schools involves Years Prep to 7. This lack of continuity is reflective of the subject’s status. “Numerous case studies illustrate the ambivalent space in which physical education is located by definition, quality, quantity and status in the elementary curriculum” (Hunter, 2006). In Queensland state schools the subject is taught by PE specialist teachers generally in lots of 30 minute lessons. It is possible the low quantity (30 minutes per class) affects the presumed low status. Other factors which may also affect the status of the subject besides time-tabling include provision of facilities, funding, reporting and systemic priorities.

Teacher Professionalism

There is relatively little research on professionalism and the primary school physical education specialist. Hendry in the 1970s saw the professional understanding of the physical education teacher
in the primary school as “survival in a marginal role” where people operate in an organisational setting in a role peripheral to the main functionings of the institution” (Hendry, 1975, p. 465). PE specialist teachers in primary schools operating in contemporary settings may feel they are “outsiders” like their predecessors.

In the contested arena of teacher professionalism there is “a struggle for voice and discursive practices amid a cacophony of past and present voices, lived experiences and available practices” (Britzman, 1991, p.8). Sachs has identified “managerial professionalism” as one of two discourses “dominating educational policies around teacher professionalism” (Sachs, 2003, p. 25). Managerial professionalism arose from the public sector reforms of the 1980s and 1990s which were based on “the application of market theory and private sector management principles, procedures and structures to the public sector.” (Sachs, 2003, p. 20). Managerial professionalism reflects the neo-liberal approach to educational reform.

If neo-liberalism is shaping education, the physical education specialist in the primary school is operating in an environment that is standards driven and sees education as a market. They could be described as providers of an increasingly marginalised product: the subject Health and Physical Education. They may operate as managerial professionals, service deliverers and skills facilitators; perhaps satisfied they exercise control in this discourse or frustrated that their voice is not heard.

The other dominant discourse operating or “circulating” about teacher professionalism according to Sachs (2003, p.27) is “democratic professionalism.” Democratic professionalism emphasises collaboration, cooperation and the demystifying of professional work. In this discourse the teacher contributes to the wider community individually and as part of a collective, they have responsibility outside their own classroom. The old concept of teacher professionalism which was characterised by exclusive membership through the acquisition of specific knowledge, practitioner autonomy and external regulation needs to change to be more inclusive, collaborative, proactive and enquiry oriented.

Democratic Professionalism is reflected in Hargreaves and Shirley’s description of the Fourth Way of educational reform. The Fourth Way is “defined by inspiration, innovation, social justice and sustainability” (Hargreaves & Shirley, 2009, p. 29). For teachers to learn they need to “get outside their own classrooms and connect with other teachers” so that all educational sectors can work together on “transcendent agendas that help each other and serve the common good” (Hargreaves & Shirley, 2009, p. 30). Both democratic professionalism and the Fourth Way endorse professionally shared targets instead of bureaucratically imposed ones and both believe the move towards a more democratic way of operating must come from teachers and educational leaders.
Summary

While there is considerable research on teacher professionalism in general, there is a dearth of literature and research on the construction of teacher professionalism for primary school PE specialists both globally and locally. The strands of historical perspective, subject status and teacher professionalism interweave to cast a light on the position of the PE specialist in the professional landscape.

From its historical beginnings as being on the outer of the colonial curriculum through military and health discourses to acknowledgement in the Australian Curriculum, Physical Education has continually had to justify its inclusion in educational settings and curriculum. The Cartesian dualism of Western society acts to marginalise the subject and its practitioners with physical education perceived as a non-academic, insignificant subject involving movement but little cognition. The political climate of neo-liberalism has resulted in a further diminishment in status by its determination that Physical Education and its teachers do not serve the economic cause.

Opportunity exists for specialist PE teachers to contribute to the construction of the HPE subject in the Australian Curriculum and become activists working towards a democratic discourse of teacher professionalism. The primary school specialist PE teacher needs to be heard.

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Promoting Healthy Communities Through an Active Curriculum

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A tactical response project to support the inclusion of regular physical activity within the curriculum which was cultivated and implemented as a rejoinder to the Smart Moves – Physical Activity Program (2008) developed for Queensland State Schools.

The project involved consultation with and resource pooling from partner organisations responsible for physical activity, health and well-being within the local community. Fourth year education students developed integrated units of work using these resources and drew outcomes from both the Health and Physical Education (HPE) and Studies of Society and Environment (SOSE) Curriculum documents. An active curriculum and kinaesthetic learning is promoted by embedding physical activity as a crucial element within the units of work.

Arising from this, a collaborative, web-based learning community has been established to support both pre-service and existing educators with the knowledge, skills, resources and confidence to deliver a meaningful, effective and active curriculum to their students.

The outcomes of this project are significant to three stakeholders from the study, those being children, pre-service teachers and current teachers. For children, the project increases the time and opportunity to participate in meaningful physical activity within the curriculum. This project allows pre-service teachers to participate in professional dialogue and mutual sharing of ideas and resources and provides a framework for collaboration with their colleagues.

The project achieves meaningful outcomes for practicing teachers by acknowledging the planning and preparation workload of current teachers, and provides tangible support for classroom teachers to effectively facilitate physical activity to their students on a daily basis. The website also provides a platform for professional discourse within the education community across the region, supports higher order thinking skills, engages professional reflection and helps to raise the confidence and morale of teachers within the Fraser Coast community. Recommendations for future directions, expansion and sustainability of the website are also discussed.
Introduction
The worldwide rise in obesity and inactivity in children has spurred many levels of the Australian government into action to be accountable for the health and well being of its youngest citizens and future generations. A number of studies (Dobbins, 2001; Hands & Parker, 2003; Olds & Ridley, 2008; Raitakari, 1994; Shilton & Brown, 2004) have revealed a significant increase in childhood overweight and obesity statistics with an equally significant decline in physical activity participation rates at school. Many government initiatives have been developed within schools to promote participation in physical activity and raise awareness of good nutrition practices. A great deal of emphasis has been placed upon teachers, sport and community groups to provide physical activity for children, both within and outside of schools.

One such policy, implemented in Queensland, Smart Moves (Queensland Government Department of Education Training and the Arts Local Government Planning Sport and Recreation, 2006) was directed squarely at schools, and placed the onus on classroom teachers to deliver the physical activity, health and well being message in their classrooms.
Smart Moves is a Queensland Government policy initiative to:

“....increase the curriculum time in which students are effectively engaged in physical activity and improve the quality of that activity....all primary schools must allocate 30 minutes per day of physical activity of at least moderate intensity....”

(Queensland Government Department of Education Training and the Arts Local Government Planning Sport and Recreation, 2006  p.3 )

The impetus for this project arose from the perceived problems both educators and pre-service educators were experiencing implementing the Smart Moves policy. The need for specialist support and morale building within the teaching profession became apparent, and was identified as a key outcome for the project. In order to achieve this it was essential to form a united front where educators could engage in professional discourse, share ideas and resources, collaborate to create a sense of community and provide a professional support mechanism for teachers.

The aim of the project was threefold: to support teachers to deliver meaningful and regular physical activity to students; to provide education students with the knowledge and skills to create integrated units of work involving physical activity; and to increase participation in daily physical activity for children.
Method

A participative inquiry method was employed for this study, as it involves a co-operative inquiry into an identified problem, as well as participatory action research to transform existing practices (Fals-Borda & Rahman, 1991). The central problem within this research is ‘how to support pre-service and in-service teachers in effectively implementing Smart Moves within schools’.

The researcher identified this central problem through numerous discussions with practicing teachers who were mentors for pre-service teachers, around implementing Smart Moves. During these discussions, most primary school classroom teachers admitted to being hesitant to implement Smart Moves with their students. When questioned further, most attributed lack of knowledge, skills and time as barriers to their ability to provide effective opportunities for their students to participate in regular physical activity during school time. When discussing this issue with pre-service teachers, many voiced similar concerns with their own teaching practice.

As a result of these initial investigations, and in an effort to scaffold pre-service teachers and adequately prepare them for teaching, the researcher encouraged them to seek out community organisations who had vested interests in promoting physical activity to children. Invitations were then sent out to these groups to form a reference group to promote physical activity to children.

A series of three community meetings were held to explore existing support structures and resources used to promote health and physical activity within our community. From these meetings resources were pooled, and ideas as to how to best support teachers were shared. The reference group was composed of representatives from federal, state and local levels of government, as well as University of Southern Queensland Faculty of Education academics. The group identified a central focus of supporting teachers and pre-service teachers to gather knowledge, skills and confidence to deliver physical activity to children. This resulted in the formation of a “Healthy Communities” reference group. The specifics of which can be seen in Table 1 below. These meetings forged partnerships between stakeholders who committed to a collaborative approach to effectively assist teachers and pre-service teachers to promote physical activity to children in schools. Classroom teachers and pre-service teachers were targeted in this study as they were able to address these wellness issues in ways that were relevant to the student’s particular stage of physical, social, emotional and cognitive development (O’Connor & Parker, 1995). Table 1 provides a detailed list of partners and their identified roles within this reference group.
Table 1: Healthy Communities Reference Group partners

<table>
<thead>
<tr>
<th>TITLE</th>
<th>GROUP</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active After Schools Co-ordinator</td>
<td>Australian Sports Commission</td>
<td>Personnel to deliver Community Coaching Program to Education students</td>
</tr>
<tr>
<td>Fraser Coast Community Health and Nutrition</td>
<td>Queensland Health</td>
<td>Personnel to hold workshop on Nutrition</td>
</tr>
<tr>
<td>Youth Development Officer</td>
<td>Fraser Coast Regional Council</td>
<td>Support for website by promoting it to schools</td>
</tr>
<tr>
<td>Physical Activity Health Promotions Officer</td>
<td>Wide Bay Population Health</td>
<td>Personnel to assist in delivering Traditional Indigenous Games to Education students</td>
</tr>
<tr>
<td>Sport and Recreation Officer</td>
<td>Queensland Government</td>
<td>Support for website by promoting it to schools</td>
</tr>
<tr>
<td>5 Education Lecturers</td>
<td>University of Southern Queensland</td>
<td>Personnel to lecture Education students over a semester in creating units of work that promote a Healthy School Community</td>
</tr>
</tbody>
</table>

As a result of these community meetings several needs were identified relating to teachers, education students and children. Initially community groups agreed on a common goal to assist teachers and pre-service teachers to provide opportunities for children to participate in regular physical activity. Principals, teachers and education students from within the University were identified as key stakeholders to ensure equitable opportunity existed for all children to participate in physical activity in school time. Ideas and resources to enhance children’s participation in physical activity could be put into a usable format for teachers in schools.

Several barriers teachers faced in promoting physical activity to children were identified, in particular, time, resources and knowledge. Once these needs were identified and a plan made to address these barriers to provide achievable outcomes, the Healthy Communities Reference Group received funding from the Queensland Government’s Eat Well Be Active Community Partnerships Program (2007) to work towards these outcomes.
A tactical response plan was formulated whereby the Healthy Communities reference group would pool resources and final year Education students would use these to develop integrated units of work. These units provided many hands-on learning experiences that involved students moving their whole body and being out of breath. The physical activity students’ undertake within the units of work, are designed to reinforce educational outcomes from their classroom lessons. The key learning area of Studies of Society and the Environment (SOSE) was used as a vehicle to allow physical activity to be integrated within the SOSE content. Pre-service students had to demonstrate learning experiences that reflected intellectual quality, recognition of differences, supportive environments and connectedness as foundational elements of their pedagogy. In order to achieve this, students incorporated strategies based on Gardner’s theory of *Multiple Intelligences* (Gardner, 1983), De Bono’s *Six Thinking Hats* (De Bono, 1990) and Mosston and Ashworth’s *Spectrum of Teaching Styles* (Mosston & Ashworth, 2002) within their learning experiences. This allowed students to demonstrate inclusive practices and utilise authentic assessment as part of the unit of work. The lessons within these unit plans demonstrated an inquiry-based, student-centred approach to teaching and learning, and follow the 5E format used within the *Primary Connections* (Australian Government Quality Teacher Programme, 2008) resource for science teachers.

These units of work were primarily an integration of two key learning areas: *Studies of Society and the Environment (SOSE)* and *Health and Physical Education (HPE)*, in the *Essential Learnings* component of the Queensland Curriculum (Queensland Studies Authority, 2009). These units incorporated a variety of resources from the partnership reference group who fostered a collaborative approach to promoting physical activity to children.

**Results**

The partnership formed within the reference group was a viable one in that it successfully procured a grant to create a web resource to facilitate professional dialogue and sharing of resources. The Healthy communities website was introduced to teachers within the Fraser coast via a regional professional development seminar, and through a series of mail-outs to schools within the region so that they could access the website. By tracking access to the site it is evident that teachers and pre-service educators have been accessing the materials provided. This pooling of resources and a sharing of knowledge and expertise also allowed fourth year education students at USQ more material with which to write units of work incorporating physical activity.

The creation of the website (Louth, 2009) and subsequent sharing of ideas, skills, knowledge and resources showcased the work of the University’s pre-service educators and enhanced their professional standing within the educational community of the Fraser Coast. Many students used the
site as evidence to support their learning and competence within their e-portfolios for their prospective employers.

Participation on the website occurred at two levels, each aligning with several Professional Standards for Teachers, as outlined by the Queensland College of Teachers (QCOT) (2007). The first level of participation involved downloading units from the website and providing feedback. In doing so teachers demonstrated they could contribute effectively to professional teams and contribute to reflective practice and ongoing professional renewal. The second level of participation occurred when teachers contributed units to the website, this way they have shown they can design and implement engaging and flexible learning experiences for individuals and groups. These learning experiences were intellectually challenging and developed language, literacy and numeracy. By engaging with the Healthy Communities website, teachers achieve several standards outlined by QCOT and can use this when reapplying for Queensland teacher registration. Users need to join the USQ community site to access the information and certificates of their engagement would be sent to them.

The website encourages a streamlined approach to collecting feedback on the units using the Six Thinking Hats (De Bono, 1990), to make contributing feedback less time consuming and more structured. Coloured hat icons were highlighted on the website so participants could upload their comments in the appropriate category. In addition to this, it also gave immediate reflections to other teachers who had not yet taught that unit. For example, the yellow hat for positive comments, the black hat to highlight areas of concern, and the green hat for creative alternatives within the lessons.

The interactive nature of the website allows teachers to engage with collaborative professional communities and become involved with design, implementation and reflection of learning experiences.

Conclusion
This project united professional and academic groups striving to enhance children’s participation in physical activity. It provided a practical solution to the problem many teachers face in implementing Smart Moves policy in schools.

The Healthy Communities Website has been developed to support teachers to include regular physical activity within the daily curriculum. The website resources assisted practising and pre-service teachers to develop their knowledge and skills in facilitating physical activity, through their access and participation in the website. Sharing of the resources allowed teachers time to adapt and deliver this material effectively, and this is evidenced through feedback reported on the website.
Teacher educators and trainee teachers benefited from the site as it provided a model which emphasised a kinaesthetic approach (Lazear, 1999) to teaching and learning. This helped support and maintain healthy communities, within classrooms, schools, and the wider society. Future directions for this website are to expand the scope of topics to include all key learning areas, and to promote its use to teachers both nationally and internationally.

The action research method employed in this study is one which has a global aim of assisting teachers to engage their students in physical activity to promote wellness. Over time continuous improvement and reframing of original solutions to problems occurred. In this way, the objectives of the study were sustainable, in line with government requirements for the curriculum, and flexible enough to adapt to the changing needs of the teaching profession.

As a result of this project pre-service and in-service teachers from all areas have been afforded equitable access to resources to enable them to deliver meaningful physical activity to their students. This collaborative resource empowered teachers with the confidence, knowledge and skills to incorporate a healthy lifestyles approach to teaching and communicating with children via physical activity in their schools and communities. In this way children participated in daily physical activity that was meaningful, supportive, connected to their learning environment and contributed to their general health and wellbeing.

The interactive and sustainable nature of the Healthy Communities Website demonstrated the successful achievement of the aims of the project which were: to support teachers to deliver meaningful and regular physical activity to students; to provide education students with the knowledge and skills to create integrated units of work involving physical activity; and to increase participation in daily physical activity for children. The units of work within this resource provide models for educators to assist children to learn through whole body kinaesthetic experiences, hence increase the amount of daily physical activity for students. In this way, the website promotes health and well-being by providing a model for a more physically active curriculum.

Acknowledgement
The author acknowledges the contributions of the students from the University Of Southern Queensland Fraser Coast Campus Faculty Of Education and the funding support of the Eat Well Be Active Campaign, Department of Communities, Queensland Government.
References


The strategies that teachers’ believe work in healthy lifestyle programs – A case study of the Canning Stock Route Challenge

Ross Williams - Murdoch University, Australia

Numerous healthy lifestyle programs have operated in Australian schools and the effectiveness of these is well established. However little attention has been afforded to the strategies teachers believe make these programs work in classrooms. The purpose of this study was to identify the strategies that users of a Western Australian healthy lifestyle program known as Canning Stock Route Challenge, believed worked in their classroom. The CSRC is a packaged program that combines physical activity challenges and accompanying health education lessons to target the risk factors leading to Type 2 diabetes. It aims to develop knowledge, understandings and skills to promote a healthy lifestyle among school-aged children. Data was gathered from experienced users of the CSRC through a questionnaire and emergent themes from the survey were clustered into groups. These themes were explored in follow up semi-structured interviews. Study participants believed 4 key strategies made the CSRC work in their schools: (1) Use of incentives to motivate teachers and students; (2) Adaption of content to suit the local context; (3) The integration of learning areas; (4) Enlistment of support from the local community. Teachers revealed that decisions about the selection and implementation of strategies depended on a range of factors including individual student needs, desired educational outcomes, availability of resources and environmental conditions.

Introduction

The summative evaluation of healthy lifestyle programs in schools has received substantial attention from policy makers and funding bodies in order to quantify returns for investments (The Collaboration Book of Case Studies for Community Based Obesity Prevention, 2010; Hearn, Miller, Campbell-Pope & Waters, 2006; Kahn, Ramsey, Brownson, Heath, Howze & Powell, 2002). Less attention has been afforded to the formative evaluation of such programs and in particular the implementation process within schools (Newman, Smith & Nutbeam, 1992).

The literature describing what actually happens when programs are implemented by teachers in ‘real life classroom settings’ is limited (Newman et al, 1992). Whilst some studies have isolated teacher related variables e.g. attitudes, characteristics and training, far less attention has been given to
the role teachers play in that process (Sy & Glanz, 2008; Goodman, Jorgensen, Steckler, Allegrante, Altman, Brown & Burdine, 1994).

The purpose of this study was to identify the strategies that users of a Western Australian healthy lifestyle program known as Canning Stock Route Challenge (CSRC), believed worked in their classroom. It acknowledges the important role that teacher beliefs play in program implementation (Green & Kreuter 1999; Berman & McLaughlin, 1976; Basch, Sliepcevich & Gold, 1985). The study formed part of a larger review of the CSRC commissioned by the Western Australian Country Health Service (WACHS) in 2009, funded by Healthways WA, aimed at reconceptualising and updating the CSRC in line with current thinking and evidence based practice. These findings informed the development of a new program called ‘Take the Challenge’ to be implemented across Western Australian schools in 2011.

Healthy Lifestyle Programs
The effectiveness of healthy lifestyle programs is well established in the literature. For example ‘Kids On Walk About – The Upper Hunter School Challenge’ (Hunter New England Health Service, 2005); ‘Kimberly Health Challenge’ (Bowcock, 2005); ‘Active-Ate’ (Waters, Cross & House, 2004); ‘Murray River Quest’ (Sullivan, 2003); ‘The Northern Territory Hunting for Health Challenge. Healthy Lifestyle – Healthy Life’ (Clark, 2003) and the ‘Canning Stock Route Challenge’ (Chambers & O’Brien, 2006; D’Cruz D’Mello, 2003). The common thread weaving through all these programs is the promotion of positive health behaviours in the early years of schooling. The evidence suggests that interventions that target healthy behaviours at these early stages will increase the likelihood of these behaviours continuing into adulthood (Burke, 2001; Birch, 1999; National Health and Medical Research Council, 1996).

The Canning Stock Route Challenge
The CSRC is a packaged program that combines physical activity challenges and accompanying health education lessons to target the risk factors leading to Type 2 diabetes. It aims to develop knowledge, understandings and skills to promote healthy lifestyles among school-aged children (Radich, 1999). The four key messages of the CSRC are: 1. Stay healthy; 2. Be more active; 3. Make healthy food choices; 4. Beat Type 2 diabetes.

The CSRC is a competition-based challenge conducted over an 8-week period where classes aim to complete a ‘virtual journey’ over the entire length of the Canning Stock Route (CSR). Located in the northern part of WA, the CSR stretches from Wiluna to Halls Creek. It passes 58 wells along
the way that were originally dug to water cattle on their journey from the Kimberley south to the Goldfields.

In the CSRC, classes accumulate ‘travel time’ by participating in physical activities of their choice. For every 15 minutes of activity completed, classes progress 1 well. Progress is recorded by placing stickers on maps provided for that purpose. After 10 wells, students participate in a healthy lifestyle lesson from the CSRC lesson book. All participating classes/schools receive a package of resources including a lesson book, a Canning Stock Route map and stickers, instructions, registration and activity record forms. Since its inception in 1996, 45,000 students from the north-west of WA have participated in the CSRC (Chambers & O’Brien 2006; Bowcock, 2005).

Methodology
The aim of this study was to identify the strategies experienced users of the CSRC believed made the program work in their classrooms. The research design used grounded theory principles to glean information from the teachers’ perspective. Mixed methods were utilized to triangulate data in an effort to strengthen validity of the findings (Denscombe, 2005; Mills, 2003; Sagor, 2000; Wolcott, 1988).

An online questionnaire was utilised to establish baseline data about teacher beliefs and use of strategies. These were explored and amplified in follow up semi-structured interviews. Documentary analysis of materials supplied by participants allowed for further exploration and confirmation of strategies used by participants.

Sample
Experienced users of the CSRC program (i.e. implemented the CSRC at least once), were invited to participate in the study post intervention in November 2009 (n=100). They were recruited by Western Australian Country Health Service (WACHS) regional officers from Kimberely, Gascoyne, Wheatbelt and Pilbara areas of WA. They were mainly classroom teachers although some had multiple roles in schools e.g. Principals, Deputy Principals and health personnel made up the rest of the sample. For the purposes of this study they were referred to as ‘participants’ or ‘teachers’ rather than their specific title because some assumed dual roles within schools.

Questionnaire
An initial online questionnaire used closed and open-ended questions to identify the strategies users believed worked best. Participants selected from strategies provided in the CSRC package (closed
questions) and were offered the opportunity to provide details of any modified strategies they had used as part of the program (open questions). The questionnaire was structured as follows:

Table 1: Questionnaire Structure

<table>
<thead>
<tr>
<th>Questions</th>
<th>Type of question</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>Closed</td>
<td>Demographic data e.g. years of experience using CSRC.</td>
</tr>
<tr>
<td>6-14</td>
<td>Open-ended</td>
<td>Specific strategies used in individual classrooms.</td>
</tr>
<tr>
<td>15-19</td>
<td>Likert scales</td>
<td>The CSRC strategies teachers believed worked in their classrooms.</td>
</tr>
</tbody>
</table>

The questionnaire was available online and/or in hard copy. All participants had 1 month to complete the survey. Questionnaire data was collated into an Microsoft excel database and strategies were clustered according to emergent themes. These were used as reference points in designing questions for follow up interviews.

Documentary Analysis

To verify, clarify and confirm the strategies used by teachers, documents were collected and analysed following administration of the questionnaire. These included teacher planning documents and student products e.g. CDs, DVDs and class projects. WACHS staff regularly collected these materials as part of the judging process for intra-class and inter-school competitions.

Focus Group Interviews

Semi-structured interviews were used to confirm the themes emerging from the initial questionnaire. They provided a forum for participants to elaborate on points of interest (Denscombe, 2005). The interviewer was also able to further probe participant beliefs. 3 Focus groups were formed consisting of approximately 8 participants, with at least 1 representative from each of the 3 developmental phases of schooling as described in the WA Curriculum Framework - Early Childhood, Middle Childhood and Early Adolescence phases. All interviews were conducted by the main investigator plus 1 research assistant and they were conducted over a 2 hour period in different venues across WA. All were recorded and transcribed for post interview analysis.

Triangulation of data, allowed for clarification and verification from all three sources (Lincoln and Guba, 1985).
Results

31 of the original target group of 100 teachers responded to the online survey. All participants were experienced teachers having used the CSRC at least once and the majority (70%) were full time classroom teachers. The remaining 30% assumed multiple roles e.g. Principals with teaching responsibilities. Questionnaire data revealed a wide range of strategies that teachers believed worked in their classrooms. These were clustered into recurring themes and grouped; (1) Use of incentives to motivate teachers and students; (2) Adaption of content to suit the local context; (3) The integration of learning areas; (4) Enlistment of support from the local community.

Within these groupings, it became clear that daily fitness activities were the most commonly mentioned strategy used (open-ended responses 6-14 questionnaire). This finding was confirmed in the interview transcripts. Teachers also strongly supported the use of the motivating incentives provided as part of the CSRC package e.g. stickers, maps and merit certificates (see Items 3 & 12 in Table 2).

Table 2 - Questionnaire results

<table>
<thead>
<tr>
<th>Item 3</th>
<th>Participation stickers used with maps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>55%</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item 12</th>
<th>Merit certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>57.9%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

Discussion

The response rate of 31 out of a target group of 100 may have been due to the competing demands that teachers face in a busy school environment. It is likely school assessments and reporting requirements during the final term of the school year may have lowered the response rate. Participants also explained the difficulties they had in completing online questionnaires mainly due to poor Internet connections. One WACHS officer overcame this issue by reproducing the online survey in hard copy and distributing this to participants.
Strategies that teachers believe make the CSRC work in their classrooms

1. Use of incentives to motivate teachers and students
Questionnaire data revealed that teachers strongly supported the use of CSRC incentives the e.g. maps and stickers and merit certificates.

   Teachers’ believed incentives motivated students and promoted competition between them e.g:

   “The kids loved to track their progress (sic: on maps). It became a bit of a competition and also became a geography lesson.” (Interview, Teacher G, DET remote school).

Some teachers believed by using maps as part of the CSRC, that this contributed to the achievement of outcomes in other curriculum learning areas such as Studies of Society and the Environment e.g.

   “Maps are especially important for the little kids because they have no idea of distance and local maps help.” (Interview, Teacher A, CEO school).

Teachers indicated that the competitive elements of the CSRC had a motivating influence on both students and teachers. 3 different types of competitions became apparent from interview transcripts; inter-class, intra-class and inter-school competitions. Whilst all forms of competition co-existed, some took prominence over others at different times. The offer of extrinsic prizes to competition winners did motivate teachers and students alike. Use of incentives as motivators have been confirmed as important motivating strategies in similar programs (Lepere, 2008).

2. Adaption of content to suit the local context
Teachers indicated that strategies were carefully selected so as to best meet student needs. Teachers often adapted and/or modified CSRC strategies, to suit their classes needs e.g.

   “…every school will be different in what they do. You need to see that material and manipulate it.” (Interview, Teacher T, CEO remote school).

Teachers believed that the adaption of content and strategies was vital to successful implementation of the program in situ. This supports the view in the literature that variation or adaption of programs allows teachers to account for contextual differences (McGlaughlin, 1998).
example, when using CSRC maps, teachers designed learning strategies that took account of areas that had social, cultural and historical significance. In some cases teachers organized visits to places on maps to promote familiarity with the area and to enhance the educational experience e.g. camps, excursions, and sports trips. Teachers explained that there were distinct differences between school communities in terms of language, flora and fauna and access to resources (including human resources). All of these factors influenced their choice of strategies e.g.

“Connection with the local environment is important. Using local animals that recognise are important in terms of their learning and language development.” (Interview, Teacher A, CEO school).

One teacher worked with local community elders to teach students about locating natural or ‘bush food’ in their community. A range of educational outcomes were achieved e.g. knowledge about alternative healthy foods and a growing awareness of the cultural aspects of their community. Healthy food collected in the bush was later prepared and eaten at school, an event that was described by one teacher as a significant educational outcome.

The fact that teachers took account of contextual considerations in selecting strategies may well indicate both a healthy and invigorating approach toward program implementation (Kumanyika, 2001; McLaughlin, 1998).

3. The integration of learning areas

Teachers were well aware of the issue of the ‘crowded curriculum’ and used constructive, practical and creative measures to counteract these pressures. They believed the integration of learning opportunities, helped them to alleviate these pressures whilst maintaining positive educational outcomes. Teachers identified daily fitness activities as important strategies in the CSRC program and explained how they often used cross-curricular approaches within these. Documentary analysis of student work confirmed these approaches e.g. students walked to a venue to sketch an object (Art), creation of school gardens - to grow vegetables (Science and Mathematics), collecting ‘bush food’ (physical activity through bush walks), and preparing and eating healthy food in class (Technology and Enterprise). Other examples of integration across the learning areas included:
Table 3: Integration of learning areas

<table>
<thead>
<tr>
<th>Learning Area</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Graphing map routes, using scales, measuring distance, and taking heart rates.</td>
</tr>
<tr>
<td>Technology &amp; Enterprise</td>
<td>Using media e.g. digital cameras, websites and creating PowerPoints.</td>
</tr>
<tr>
<td>Science</td>
<td>Reading and understanding nutritional panels on cereal boxes e.g. “In maths we were investigating food quantities and ingredients on nutritional panels. It made a big impact on kids’ choices of food.” (Interview, Teacher B, DET school).</td>
</tr>
<tr>
<td>English</td>
<td>Shelf talkers and procedural writing (recipes).</td>
</tr>
<tr>
<td>Studies of Society and the Environment</td>
<td>Using maps, learning about the environment, interpretation and awareness of culture (including traditional sources of food) e.g. “On our bush trips, students would bring back wild tomato, bush gum, bush coconut and we made an effort to include these in cooking lessons.” (Interview, Teacher M, CEO, Remote school).</td>
</tr>
</tbody>
</table>

It became clear that teachers often chose ‘student-centred’ strategies that relied on ‘active’ and ‘hands-on’ learning e.g. student participation in preparation, cooking and eating of healthy foods. Teachers also linked CSRC strategies to existing curriculum innovations and proven methodologies e.g. daily fitness programs were strategically linked to core literacy and numeracy programs including ‘First Steps’ (literacy) and ‘Getting it Right’ (numeracy) (Teacher S, DET remote school). Existing curriculum incursions such as ‘Blue Earth’ and ‘Garnduwa’ (organizations providing physical activities for school children), were seen as complementary strategies allowing further opportunities for providing variety in choosing physical activities. The general feelings/perceptions of teachers about the value of the cross-curricular strategies was best summed up in this comment:

“A lot of teachers complain about overcrowded curriculum and how they are going to fit in all the KLAs (sic: Key Learning Areas). This (sic: CSRC) was one of the easiest integrated units we’ve managed because, yes it had a health focus but we had everything in there - SOSE, the Arts, Science everything!” (Interview, Teacher T, CEO Remote school).
4. Enlistment of support from the local community

- Given that the majority of young people’s physical activity occurs outside school, there is now growing recognition of the importance of community based programs and the involvement of the community at all levels if interventions are to be effective (Cale & Harris, 2006). The importance of community engagement and the development of collaborative partnerships became clear in teacher responses e.g.

“Engaging families in the area of nutrition has a major impact on children’s choices. Engaging parents in making healthy choices, planning with pre-schools and day care, working with maternal and child health services.” (Online survey, HPO J).

One teacher asked a local community member to show students where they could find healthy foods in the local environment. They collected wild berries, goanna and snake described locally as ‘bush tucker’ e.g.

“…our boys go on a hunting trip once a week. We would cook this food and at the end of the lesson they would take it home.” (Interview, Teacher M, CEO Remote School).

Other examples were given of links made to community stores e.g.

“Working with the local store is vital. It is such a central place and it can have a vital effect on the community.” (Interview, Teacher M, CEO Remote School).

Teachers explained the need for productive relationships with community stores. In one instance an agreement was set in place between the school and local store whereby food for sale was classified according to its relative nutritional value e.g. green was used to describe ‘go food’ and amber to describe ‘sometimes food’ [Source: Online Survey, Questions 1-4]. Students designed small colour coded cards called ‘shelf talkers’ to assist them and others in making healthy food choices.

Finally it should be noted that teachers often implemented multiple strategies simultaneously from all of the 4 groups identified in this study. Their selection of strategies depended on a range of contextual factors e.g. student needs, desired educational outcomes, availability of resources and environmental conditions.

Recommendations for Further Research

This research study was limited to a small sample located in a particular context – the north west of WA. The applicability of these findings to other school settings with different characteristics was not tested in this study. Whilst these findings may have limited generalisability to other school contexts,
teacher beliefs about strategies that work in their classrooms, were particularly illuminating. These findings have implications for the development of future health and physical activity programs, especially where interventions make fixed assumptions about teacher beliefs and behaviours e.g. ‘one size fits all’ or includes strategies that are ‘overly prescriptive.’

**Conclusion**

Experienced users of the CSRC identified a number of strategies they believed worked in their classrooms. These strategies were clustered according to emergent themes and grouped into 4 broad categories (1). *Use of incentives to motivate teachers and students*; (2). *Adaption of content to suit the local context*; (3). *The integration of learning areas*; (4). *Enlistment of support from the local community*. Teachers revealed that decisions on the selection and implementation of strategies depended on a range of contextual factors including individual student needs, desired educational outcomes, availability of resources and environmental conditions.

**References**


Turning the Switch On! The Teachers’ Ability to Influence Student Motivation in Physical Education

Dana Perlman, Phil Pearson, Ken McKeen and Greg Forres - University of Wollongong, Australia

Student motivation is an area of importance in physical education due to the association with enhanced levels of effort, participation and aspects of learning (Tjeerdsma-Blankenship, 2008; Chen, 2001). Physical education specialists are routinely challenged by students who demonstrate behaviours indicative of low levels of motivation, such as high rates of absenteeism and severely low levels of active participation within the class setting (Ntoumanis, Peensgaard, Martin & Pipe, 2004). Bryan and Solmon (2007) indicate that the teacher is a primary driver for the development and implementation of experiences that support and/or thwart student motivation. Therefore, the purpose of this study was to examine the influence of a motivational intervention on 27 pre-service physical education teacher’s (PTs) abilities to develop and implement motivational instruction during a practicum field experience. Motivation and related intervention within this study was grounded in achievement goal theory (AGT); whereby students are motivated when engaged in an educational context that is supportive of their perceptions of competence. Data were collected from PTs narrative lesson plans and actual teaching episodes during the practicum using a pretest/post-test design. Analysis of data utilized a two-pronged approach; content analysis of lesson plans, whilst teaching episodes were systematically observed and analyzed using the Physical Education Climate Assessment Instrument (Curtner-Smith & Todorovich, 2002). Data revealed that an AGT-based intervention could facilitate positive changes in a teacher’s ability to design and implement educational experiences that support student motivation.

Introduction

The importance of motivation within physical education has taken centre-stage, due to the strong association with enhanced levels of learning (Tjeerdsma-Blankenship, 2008; Chen, 2001). Physical education teachers are continuously challenged by students who demonstrate behaviours associated with low levels of motivation such as being late for class or not engaging within the learning task (Ntoumanis et al., 2004). A primary influence on student motivation within the physical education setting is the teacher (Bryan & Solmon, 2007; Turner & Patrick, 2004; Deci & Ryan, 2002). Despite this, teachers utilize instructional practices that negatively influence the motivation of their students.
Thus it is imperative that research examines interventions that can facilitate changes in teacher’s abilities to create a learning context that supports student motivation.

**Motivational Framework**

The term motivation within this study was grounded within achievement goal theory (AGT: Ames, 1992; Nicholls, 1989). AGT hypothesizes that the learning context or climate is a primary factor influencing student motivation (Ames, 1992; Ames & Archer, 1988). The learning context that influences student motivation should support a student’s perception of competence or success (Ames, 1992). Xiang and Lee (2002) indicate that competence within a social setting can be classified into two categories: task or ego. Task oriented or involved climates are supportive of personal measures (e.g. meeting a personal goal), whilst an ego context focuses on success through social comparisons (e.g. winning no matter how well a student plays) (Ames, 1992).

Operational definitions of a task and ego context have been delineated by Epstein (1988; 1989) through the use of an acronym called TARGET. TARGET stands for Task, Authority, Recognition, Grouping, Evaluation and Time. Table 1 provides an overview of the TARGET principles for a task and ego context. Todorovich and Curtner-Smith (2002) suggest that practitioners can utilize the TARGET concepts to create a climate that is supportive of a task or ego climate. It is important to note that task and ego contexts are different yet not dichotomous, meaning a learning context can provide students with a degree of both task and ego support (Roberts, 2001).

**Table 1: TARGET Principles by Goal-Orientations**

<table>
<thead>
<tr>
<th></th>
<th>Task</th>
<th>Ego</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task</strong></td>
<td>Variety of tasks and diverse level of challenge</td>
<td>Singular class-based challenge</td>
</tr>
<tr>
<td><strong>Authority</strong></td>
<td>Students are provided a degree of control over learning</td>
<td>Teacher is in control of the learning</td>
</tr>
<tr>
<td><strong>Recognition</strong></td>
<td>Conducted privately based on individual performance</td>
<td>Conducted in a public manner</td>
</tr>
<tr>
<td><strong>Grouping</strong></td>
<td>Diverse ability groups</td>
<td>Based on the concept of ability</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td>Based on individual performance and/or growth</td>
<td>Based on comparison with peers</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Flexibility allow for students to complete a task</td>
<td>Time to complete task is fixed</td>
</tr>
</tbody>
</table>

*(Adapted from Ames, 1992; Epstein, 1989)*
While task and ego are different, students tend to flourish in a task-oriented learning context (Treasure & Roberts, 2001). For instance, Xiang, Bruene and McBride (2004) found that students demonstrated increased levels of effort when engaged in a highly task-oriented climate. Furthermore, students are more motivated (Theeboom De Knop & Weiss, 1995) and veer toward more challenging activities (Solmon, 1996) within a task climate. On the other hand, Treasure (1997) found that students demonstrated high levels of negative affect within a highly ego climate. Students have also reported a variety of negative outcomes within an ego climate, such as lower levels of motivation (Papaioannou, 1994). As such, it seems that teachers should attempt to create a more task-oriented learning climate.

Currently, research on TARGET has been focused on the applied students benefits of text with limited investigation into interventions focused on changing teachers toward adopting a more motivationally supportive context. To date, one study has examined changes in teacher instruction from a TARGET perspective (Perlman & Goc Karp, 2007). Perlman and Goc Karp (2007) found that providing pre-service physical education teachers with a TARGET intervention could facilitate a small level of change in implementation of a task climate. Results of the Perlman and Goc Karp (2007) study demonstrated that change in instructional practices could occur yet further investigation is needed. Limitations within this study were identified as examination of changes in classroom teachers with a noticeable absence investigating pre-service teachers (PTs) pursuing a physical education specialist degree. Therefore, the purpose of this study was to examine the changes in PTs ability to design and implement a motivational climate. Specifically, this study was guided by the following research questions:

1. Does a TARGET intervention change PTs ability to design a task-oriented motivational climate?
2. Does a TARGET intervention change PTs ability to design an ego-oriented motivational climate?
3. Does a TARGET intervention change PTs ability to implement a task-oriented motivational climate?
4. Does a TARGET intervention change PTs ability to implement an ego-oriented motivational climate?

Methods

Participants & Settings
Participants within this study were 27 (Male=17; Female=10) physical education PTs enrolled in a required 3-credit physical education methods course. The methods course was grounded in the Children Moving (Graham, Holt/Hale & Parker, 2004) textbook and lasted 16 weeks. In addition, PTs
were exposed to a combined lecture and field experience model. 4\textsuperscript{th}-6\textsuperscript{th} grade students from a local private school were transported to the university as part of the field experience.

During the field experience, PTs were required to design and implement a total of 4 lessons. Each lesson lasted 30 minutes and focused on a pre-determined skill theme (e.g. striking). The field experience was conducted in two phases (weeks 5-8 and 12-15) of the academic term. PTs were required to teach a total of 2 lessons during each field experience phase. It is important to note, that each PT was required to design and submit a narrative lesson plan one week before each teaching day. Furthermore, each teaching day was video and audio recorded for later analysis.

Before data collection, PTs were randomly assigned to either the treatment or control group. As a result, 14 (Male=9; Female=5) PTs were assigned to the treatment group and 13 (Male=8; Female=5) PTs to the control group. PTs engaged in the treatment group were exposed to an online TARGET intervention while PTs assigned to the control group were provided no additional information or learning module.

**TARGET Intervention**

PTs engaged in the TARGET training program were provided an overview of AGT (Ames, 1992), benefits of a task climate (Ames, 1992; Ames & Archer, 1988) and instructional practices for creating a motivational climate as espoused by TARGET (Epstein, 1988; 1989). The intervention was delivered online via the regular course website and delivered during weeks 9-10.

Within the online module, PTs developed sample lesson plans, mini-tasks and instructional statements that illustrated their ability to plan a lesson while infusing TARGET principles. An expert in development of a TARGET-based motivational climate unaffiliated with the study provided a secondary check that all information was appropriate and accurately represented the intent of the intervention. In addition, during implementation, the same expert supported PTs in their understanding of content and successful completion of the online intervention.

**Data Collection and Analysis**

Before beginning the study, university research approval and participant consent was provided. This study employed a pretest/posttest design. All data collected within week 5-8 were considered as pretest data, while posttest data were collected during the week 12-15 phase of the field experience.

Analysis of each narrative lesson plan was conducted using a quantitative content analysis approach (Rourke & Anderson, 2004). The researcher coded and analyzed each lesson plan using pre-
assigned codes of the TARGET principles. This provided each lesson plan with a frequency of task and ego-involved components. Furthermore, due to each PT designing and teaching two lessons per phase (i.e. pretest and posttest) frequencies were averaged over the two lesson plans.

Video recordings of teaching were analyzed using the Physical Education Climate Assessment Instrument (PECAI: Curtner-Smith & Todorovich, 2002). Observational analysis of each taught lesson using the PECAI coded each TARGET structure whether the element established a task or ego-involved climate for each lesson task (e.g. warm-up). A neutral code was utilized if elements of a task or ego climate were absent (See Table 2 for a sample data collection sheet).

Table 2: Sample Data Collection Sheet for Observation of Instruction

<table>
<thead>
<tr>
<th>TARGET Element</th>
<th>Task</th>
<th>Ego</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Grouping</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

It should be noted that for the purpose of this study, neutral codes were omitted from the analysis as they provided no additional information related to the development of a motivational climate. Coding of each lesson plan continued until all lesson tasks (e.g. warm-up, skill-drill, etc.) were presented. Analysis of each lesson plan provided each teacher with a total frequency of task and ego elements. Frequencies were averaged across two lesson plans (i.e. pretest and posttest) and provided an overall level of a task and ego climate implemented within PTs instruction. Todorovich and Curtner-Smith (2002) recommend that data be collapsed to illustrate the overall degree of a motivational climate developed by a teacher. Validity and reliability for the PECAI for use in physical education is well established (Todorvich & Curtner-Smith, 2002). Inter-rater reliability check was conducted with one lesson per PT and was deemed acceptable (92% agreement).

Analysis of data began with descriptive statistics (Mean and Standard Deviations) of all dependent variables on pretest and posttest scores. Next, each research question was analyzed using
separate (2 X 2) (Group X Time) repeated measures ANOVA. Due to the use of multiple ANOVA calculations within the implementation aspects of this study, a Bonferroni adjustment was calculated (p≤.0125).

Results

Table 3 provides results for descriptive statistics and reliability analysis.

**Table 3: Descriptive Statistics (Mean and Standard Deviations)**

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task – Pretest</td>
<td>17.57</td>
<td>4.83</td>
<td>17.69</td>
<td>3.63</td>
</tr>
<tr>
<td>Task – Posttest</td>
<td>21.07</td>
<td>3.87</td>
<td>17.03</td>
<td>3.89</td>
</tr>
<tr>
<td>Ego – Pretest</td>
<td>16.00</td>
<td>4.99</td>
<td>19.69</td>
<td>5.57</td>
</tr>
<tr>
<td>Ego – Posttest</td>
<td>15.42</td>
<td>4.48</td>
<td>18.23</td>
<td>5.42</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task – Pretest</td>
<td>16.07</td>
<td>5.38</td>
<td>16.53</td>
<td>4.40</td>
</tr>
<tr>
<td>Task – Posttest</td>
<td>20.64</td>
<td>2.24</td>
<td>17.00</td>
<td>5.01</td>
</tr>
<tr>
<td>Ego – Pretest</td>
<td>13.64</td>
<td>5.07</td>
<td>13.15</td>
<td>4.31</td>
</tr>
<tr>
<td>Ego – Posttest</td>
<td>9.35</td>
<td>2.24</td>
<td>12.84</td>
<td>4.94</td>
</tr>
</tbody>
</table>

ANOVA calculations revealed significant main (Time) and interaction (Time X Treatment) effects for design (Time) F(1,25)=8.995, p≤.0125, η²=.265, (Time X Treatment) F(1,25)=8.00, p≤.0125, η²=.199 and implementation (Time) F(1,25)=9.147, p≤.0125, η²=.268, (Time X Treatment) F(1,25)=7.210, p≤.0125, η²=.196 of a task-involved learning climate with PTs engaged in the TARGET intervention demonstrating higher levels of each measure compared with the control group. In addition, a significant result associated with implementation of an ego-involved learning climate (Time) F(1,25)=8.015, p≤.0125, η²=.243, (Time X Treatment) F(1,25)=6.011, p≤.0125, η²=.194 whereby, PTs engaged in the treatment group demonstrated a decrease in the amount of ego elements within their teaching compared with the control group. Results indicated a lack of significance in
regards to design (Time) $F(1,25)=0.036$, $p \leq .0125$, $\eta^2=.001$, (Time X Treatment) $F(1,25)=3.946$, $p \leq .0125$, $\eta^2=.136$ of an ego-involved climate.

Discussion

The primary emphasis of this research was to examine the influence of a TARGET intervention on the design and implementation of a motivational climate. Specifically, this study was interested in investigating PTs ability to design and apply their instructional practices towards a task-oriented climate. Results of this study indicated that an intervention brought about significant change in the development and implementation of a motivational climate within primary physical education. Specifically, PTs exposed to the TARGET intervention were significantly more able to design and implement a task-involved learning climate.

The significant findings associated with both design and implementation of a task-involved climate was most interesting. These results are supportive of the Perlman and Goc Karp (2007) study that indicated that primary general education PTs were more efficacious in their design and implementation of a task climate following an AGT-based intervention. A reason for the significance within the treatment group may have been the clarity of translating the TARGET structures into practice. For instance, PTs were taught that designing a single task might not provide an adequate level of challenge for all students. Thus PTs were advised to create multiple tasks with diverse levels of challenge that focused on a single learning goal (i.e. support for the Task element of TARGET). This led to PTs creating tasks that allowed students to progress in difficulty (e.g. making 30%, 50% and 70%) within a specific skill theme.

It is also important to note the significant change in the implementation of ego elements within PTs teaching. The significant decrease from the PTs in the treatment group illustrates the focus on developing a task climate, thus omitting elements of an ego-climate. While task and ego are not dichotomous, PTs may not have been able to delineate the difference and viewed each climate at polar ends of the spectrum and followed a framework whereby omission of an ego element is important to the development of a task climate.

Conclusion

These findings suggest that it is possible to change PTs abilities to design and implement a task-oriented motivational climate. Results may lend support for the claim that teachers commonly utilize instruction that is unsupportive of student motivation (Reeve, 2009). Teachers may not be provided a working framework that can be easily translated to the diverse educational settings. As such, professional development and teacher training may utilize TARGET as a guiding framework for
assisting professionals in the K-12 physical education setting. This study is not without limitations, as the relatively small sample size does not allow for results to be generalized. Future studies may utilize a larger sample size, as well as, take into account the influence of factors such as school setting and units of study that may influence the pedagogical practices (e.g. development of the motivational climate).

References


Reeve, J. (2009). Why teachers adopt a controlling motivational style toward students and how they can become more autonomy supportive. *Educational Psychologist, 44*(3), 159-175.


Self-identified and Observed Teaching Styles of Senior Physical Education Teachers in Queensland Schools

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Teaching styles, methods, models, approaches, strategies, and techniques (Mosston and Ashworth, 2002) are valued for what they claim they can achieve. In recent times curriculum documents and governments in Scotland, England and Queensland, Australia have called for a range of teaching approaches to meet the variety of learner differences and allow students to make more independent decision making in physical education (Hardy and Mawer, 1999). Prior to 2005, no research had been conducted on the teaching styles that teachers of Physical Education use in Queensland. This paper will present the findings of research completed on the reported teaching styles (based on the work of Mosston & Ashworth, 2002) that 110 teachers of Queensland Senior Physical Education believed they used and the teaching styles that were observed as being used by nine participants across three one hour lessons of senior physical education. It was found that teachers reported using a variety of styles yet when video-recorded lessons of nine participants teaching were coded a variety of styles were not observed. These results have implications for the delivery of the Queensland Senior Physical Education Syllabus in terms of its learning experiences and assessment.

Background

In 1998 the Board of Senior Secondary School Studies published the Queensland Senior Physical Education Syllabus (QSPES). The QSPES integrated theoretical knowledge and practical performance and assessed higher order thinking (e.g.-evaluating) in physical activity. At the time of publication it was credited with being ‘unique’ and it was suggested that “there is very little else currently underway in the English-speaking world to match developments in Queensland” (Penney and Kirk, 1998, p 43). Besides the integration of selected aspects from ‘theory’ (Focus Areas) with performance (Physical Activities) the QSPES also stated teaching styles or approaches that should be used such as “guided discovery, inquiry, cooperative learning, individualised instruction, games for understanding and sport education” (QSA, 2004, p 28).1
While the QSPES suggested such teaching approaches or styles it did not suggest when they should be used or what objectives they would best suit. Similarly no research had been completed on what teaching styles were being used by physical education teachers in Queensland prior to the writing of the QSPES (2004). Cothran, Kulinna, Banville, Choi, Amade-Escot, MacPhail, Macdonald, Richard, Sarmento, and Kirk (2005) completed a study titled *A Cross-Cultural Investigation of the Use of Teaching Styles*, which presented a questionnaire to teachers with scenarios of teaching styles based on the 11 styles identified by Mosston & Ashworth (2002). They found that “teachers worldwide reported using a wide variety of styles” (Cothran et al., 2005, p 199). Considering this limited amount of research about the utilisation of teaching styles by teachers of physical education in Queensland and the importance the QSPES puts on the use of specific teaching styles (in meeting QSPES objectives), it seems important that research was conducted to ascertain what is happening in Queensland Senior Physical Education classes.

**Research Method**

The study questionnaires developed for Part A were sent out to an estimated 286 specialist physical education teachers in 77 schools. The schools included both Government schools (known as State or Government schools due to their management being administered by the State Government of Queensland) and Private or Independent Schools. Questionnaires were sent out to a representative sample of all of the 346 schools who had reported that they were teaching Senior Physical Education in the year prior. These schools surveyed represented schools from all the Education Queensland (EQ) regions throughout the state. The 37 schools that responded represent close to just over 10% of schools teaching Senior Physical Education in the state of Queensland. There were a total of 110 individual teacher respondents (from the 37 schools) to the questionnaire. From the respondents 27 teachers stated that they would be interested in participating in Part B of the research which would involve having three lessons over the time of a unit of work being videotaped and coded according to an instrument developed. Coincidentally, the number of participants who expressed interest in participating in Part B was also close to a quarter (24.5%) of total questionnaire respondents.

Initial approval to conduct the study was obtained through the Ethics Approval process at QUT and all subsequent consent was obtained from the relevant authorities.

**Participants and Setting**

It could be suggested that the 27 teachers who volunteered to be participants in Part B of the research and have their classes videotaped were confident in their ability as teachers because they were willing to have the researcher in their classes. The nine individuals who were finally selected as participants for Part B of this research were teachers of Senior Physical Education and had a variety of
characteristics representative of teachers of Senior Physical Education. There were six males and three females in the observed group. State school teachers comprised six of the group and the rest were from private schools. The characteristics of the final group were:

- Female teacher from a girls only private school (11 years or more teaching)
- Male teacher at a government* school (5-10 years teaching)
- Male teacher at a rural government school (5-10 years teaching)
- Female Teacher at a government school (5-10 years teaching)
- Female Teacher at a government school (0-4 years teaching)
- Male Teacher from a co-ed private school (11 years or more teaching)
- Male Teacher from a boys only private school (11 years or more teaching)
- Male Teacher at a government school (0-4 years teaching but had a 15 year career in another field)
- Male teacher at a government school (11 years or more teaching)

(* All government schools are co-educational.)

comprised six of the group and the rest were from private schools.

The participants chosen for Part B of the study could also be seen as possessing high quality knowledge about the QSPES and dedicated teachers. Evidence for this view could be found in some of the extra duties they undertook outside of their usual roles or duties of teaching. For example, three of the participants were part-time university level tutors, and three were on Panels or Panel Chairs (an Education Queensland course monitoring service for all subjects in the various regions around Queensland to ensure consistency of standards). Three of the participants were also Heads of Departments (HODs). This HOD role means that they were involved in middle management or managerial tasks (such as curriculum aspects including work programs) for the subject area of Physical Education within their school. With regards to the variety of school settings six of the schools were State/Government (or Public) co-educational schools, with one of these being in a rural area. Three of the schools were private schools (one single sex boys, one single sex females and one co-educational).

Teachers were observed and videotaped teaching Senior Physical Education classes in weeks two, five and seven of a 10 week term. Each Senior Physical Education unit of work or physical activity was – in most cases – around nine weeks long. This length of time could be virtually guaranteed due to the Queensland Senior Physical Education Syllabus stipulating the length of all units of work being 55 hours per semester (2004).
Of a total of 27 lessons that were videotaped five of the classes observed were year 11 (students approximately 16 years old) and four were year 12 classes (approximately 17 years old). In total 15 lessons were taught to year 11 classes and 12 lessons were taught to year 12 classes. Twenty-one of the lessons videotaped were co-educational classes while three lessons involved only boys in classes and three were only for girls. Classes ranged in numbers from 12 to 40. The lesson length ranged from 42 minutes to 60 minutes. All lessons observed, except for the Aerobics lessons, were in an outside setting such as on an oval/pitch/grass playing area or court.

Physical activities being taught included Touch Football – a non-tackle version of Rugby League – (6 lessons), Netball (6), Gaelic Football (3), Softball (3), Competitive Aerobics (3), Archery (3) and Orienteering (3). Overall the sample of physical activities observed included content from the four areas of physical activity mentioned in the QSPES (2004).³

Coding
Two coders were used to code the videotaped lessons. The first coder was the researcher who was a four year trained teacher with 12 years of teaching experiences and two postgraduate qualifications. The second coder was also a four year trained specialist physical education teacher who had been teaching for three years. The second coder had studied Spectrum of Teaching Styles literature and theory during their degree program and was also trained by the researcher for nine hours in the operation of the coding instrument.

To increase inter-observer reliability, to become familiar with recognising teaching styles and to become competent with the using of the coding sheet, both coders practised coding live and recorded physical education lessons. The fact that all lessons had been videotaped meant that the coders were able to stop the lessons at any time to consult notes or texts to clear up any confusion.

The researcher was also able to consult with Prof. Sara Ashworth extensively during the coding process to clarify some scenarios. To do this, the researcher sent descriptions of the episode in question, and the exact words used by the teacher during the episode. Prof. Ashworth would then describe the decision the teacher was making or the ones the teacher was asking the learner/s to make. This was invaluable to the coders and contributed to the accuracy of the coded lessons.

Teacher’s Self-Reported Usage of Teaching Styles
The table below (Table 1) shows the breakdown of responses for data collected with the questionnaire tool for Part A of the research project. The teaching styles from the Spectrum of Teaching Styles are listed in the first column. Respondents to the questionnaire had been asked to first read a given
scenario that described a teaching style and then indicate how often they used this teaching style to teach their Senior Physical Education class during the year.

<table>
<thead>
<tr>
<th>Teaching Style</th>
<th>Not at All</th>
<th>Minimally</th>
<th>Here &amp; There</th>
<th>Often</th>
<th>Most of the Time</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command-A</td>
<td>6</td>
<td>19</td>
<td>38</td>
<td>40</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Practice-B</td>
<td>0</td>
<td>6</td>
<td>26</td>
<td>68</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Reciprocal-C</td>
<td>5</td>
<td>32</td>
<td>56</td>
<td>17</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Self Check-D</td>
<td>16</td>
<td>36</td>
<td>39</td>
<td>15</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Inclusion-E</td>
<td>23</td>
<td>35</td>
<td>36</td>
<td>16</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Guided Discovery-F</td>
<td>17</td>
<td>30</td>
<td>24</td>
<td>35</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Convergent Discovery-G</td>
<td>8</td>
<td>25</td>
<td>38</td>
<td>37</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Divergent Discovery-H</td>
<td>4</td>
<td>25</td>
<td>35</td>
<td>44</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Learner Designed</td>
<td>29</td>
<td>19</td>
<td>37</td>
<td>19</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Individual Program-I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learner Initiated</td>
<td>53</td>
<td>33</td>
<td>16</td>
<td>6</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Program-J</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Teaching-K</td>
<td>69</td>
<td>26</td>
<td>9</td>
<td>6</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

*Table 1: The total breakdown of teachers (n=110) reported usage of teaching styles.*

The table (Table 2) presented below allows a comparison of reported teaching styles from Cothran et al. (2005) and the data collected from this research. Five of the teaching styles show little (less than 5%) difference in their reported usage by teachers when the data of these two studies are compared. The largest difference between these two studies involves the reported usage of The Inclusion Style-Style E.
<table>
<thead>
<tr>
<th>Teaching Styles</th>
<th>SueSee 2006 Percentage of Teachers Reported Using This Style ‘Here &amp; There to Most of the Time’</th>
<th>Cothran et al. 2005 Percent of Teachers Indicating Use of ‘Sometimes to Always’ for Each Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command - A</td>
<td>77%</td>
<td>93.1%</td>
</tr>
<tr>
<td>Practice - B</td>
<td>94.5%</td>
<td>92.1%</td>
</tr>
<tr>
<td>Reciprocal - C</td>
<td>66.3%</td>
<td>85%</td>
</tr>
<tr>
<td>Self Check - D</td>
<td>52.7%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Inclusion - E</td>
<td>47.2%</td>
<td>78.6%</td>
</tr>
<tr>
<td>Guided Discovery - F</td>
<td>57.2%</td>
<td>70.6%</td>
</tr>
<tr>
<td>Convergent Discovery - G</td>
<td>70%</td>
<td>73.6%</td>
</tr>
<tr>
<td>Divergent Discovery - H</td>
<td>73.6%</td>
<td>73.7%</td>
</tr>
<tr>
<td>Learner Designed Individual Program - I</td>
<td>56.3%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Learner Initiated Program - J</td>
<td>21.8%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Self Teaching - K</td>
<td>13.6%</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

*Table 3: A comparison with Cothran et al. (2005) and the percentage of teachers who reported using the eleven teaching styles ‘Here & There’ to ‘Most of the Time’ from this research.*

**Part B – Class Observations:**

The teaching styles used by the nine participants observed when teaching Senior Physical Education is listed in *Table 3* below. The far right column displays the reported usage of the entire sample of respondents (n=110) to allow comparison. While most of the nine participants reported usage of teaching styles was similar to the overall number of questionnaire respondents differences of greater than 10% can be seen for styles C-F. Given the small size of groups there is no significance in this observation.
<table>
<thead>
<tr>
<th>Teaching Style</th>
<th>Not at All</th>
<th>Minimally</th>
<th>Here &amp; There</th>
<th>Often</th>
<th>Most of the Time</th>
<th>% Here &amp; There- Most of the Time-9 Videotaped Participants</th>
<th>% Here &amp; There- Most of the Time- All Participants Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command-A</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>77.7</td>
<td>77%</td>
</tr>
<tr>
<td>Practice-B</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>88.8</td>
<td>94.5%</td>
</tr>
<tr>
<td>Reciprocal-C</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>55.5</td>
<td>66.3%</td>
</tr>
<tr>
<td>Self Check-D</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>66.6</td>
<td>52.7%</td>
</tr>
<tr>
<td>Inclusion-E</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>66.6</td>
<td>47.2%</td>
</tr>
<tr>
<td>Guided Discovery-F</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>33.3</td>
<td>57.2%</td>
</tr>
<tr>
<td>Convergent Discovery-G</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>66.6</td>
<td>70%</td>
</tr>
<tr>
<td>Divergent Discovery-H</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>77.7</td>
<td>73.6%</td>
</tr>
<tr>
<td>Learner Designed Individual Program-I</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>55.5</td>
<td>56.3%</td>
</tr>
<tr>
<td>Learner Initiated Program-J</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>22.2</td>
<td>21.8%</td>
</tr>
<tr>
<td>Self Teaching-K</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>22.2</td>
<td>13.6%</td>
</tr>
</tbody>
</table>

**Table 3:** The reported usage of the nine participants compared against the total number of questionnaire respondents (n=110).

Based on the reported usage of teaching styles by the nine participants the observations and coding revealed some discrepancies between what teaching styles the participants believed they were utilising and the styles that were observed using. These results can be seen below in Table 4.
Table 4: Participant breakdown of the range of styles observed being used during each teacher’s three by one hour lessons (total lessons = 27).

<table>
<thead>
<tr>
<th>Participant</th>
<th>Styles Used</th>
<th>Number of Styles Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>Participant 2</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>Participant 3</td>
<td>B, C</td>
<td>2</td>
</tr>
<tr>
<td>Participant 4</td>
<td>B, D</td>
<td>2</td>
</tr>
<tr>
<td>Participant 5</td>
<td>B, C</td>
<td>2</td>
</tr>
<tr>
<td>Participant 6</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>Participant 7</td>
<td>A, B &amp; G</td>
<td>3</td>
</tr>
<tr>
<td>Participant 8</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>Participant 9</td>
<td>B</td>
<td>1</td>
</tr>
</tbody>
</table>

When the time spent using different teaching styles is converted to a percentage of the total amount of time of teaching that was observed then a more accurate picture is obtained of the variety of teaching styles used by the participants in the study. This information is displayed below in Table 5.
Table 5: The percentage of time (%) participants were observed using styles and reported usage.

<table>
<thead>
<tr>
<th>Teaching Style</th>
<th>% of Time Teaching Styles Were Observed From Total Lessons</th>
<th>%Reported Using This Style “Here &amp; There-Most of the Time” 9 Videotaped participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command- Style A</td>
<td>3.65%</td>
<td>77.77</td>
</tr>
<tr>
<td>Practice-Style B</td>
<td>69.87%</td>
<td>88.88</td>
</tr>
<tr>
<td>Reciprocal-Style C</td>
<td>2.55%</td>
<td>55.55</td>
</tr>
<tr>
<td>Self Check-Style D</td>
<td>0.55%</td>
<td>66.66</td>
</tr>
<tr>
<td>Inclusion-Style E</td>
<td>0%</td>
<td>66.66</td>
</tr>
<tr>
<td>Guided Discovery-Style F</td>
<td>0%</td>
<td>33.33</td>
</tr>
<tr>
<td>Convergent Discovery-Style G</td>
<td>0.78%</td>
<td>66.66</td>
</tr>
<tr>
<td>Divergent Discovery-Style H</td>
<td>0%</td>
<td>77.77</td>
</tr>
<tr>
<td>Learner Designed Individual Program-Style I</td>
<td>0%</td>
<td>55.55</td>
</tr>
<tr>
<td>Learner Initiated Program-Style J</td>
<td>0%</td>
<td>22.22</td>
</tr>
<tr>
<td>Self Teaching-Style K</td>
<td>0%</td>
<td>22.22</td>
</tr>
<tr>
<td>Management (such as placing markers)</td>
<td>22.57%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Discussion

The results indicate that teachers of Senior Physical Education in Queensland do not use a wide variety of styles. These results reflect those from similar studies in other countries (Hasty, 1997). When considering research on teaching, Mosston & Ashworth, also in support of the findings of this study, indicate that “research on classroom teaching-learning behaviours indicates that, although teachers believe they use a wide variety of alternative behaviours in the classroom, they are, in fact, significantly uniform in their teaching behaviour” (2002, p. 293).
The styles that the nine participants employed were Command Style-Style A, Practice Style-Style B, Reciprocal Style-Style C, Self-Check Style-Style D and Convergent Discovery Style-Style G. At first glance this may appear like a range of styles, but it is when the total time using these styles is presented as a percentage of total observed time (Table 5) that a more precise claim can be made about the range of teaching styles observed. As a percentage of total time observed, only 7.5% was observed using a teaching style other than the Practice Style-Style B. If Participant 7 was removed from the sample, only around 3% of the time can be classified as using teaching styles other than the Practice Style-Style B. Therefore, in answer to the final research question, ‘What is the dominant teaching style for teacher’s of Senior Physical Education in Queensland?’ – the answer is Practice Style-Style B.

However, the use of Practice Style-Style B as the predominant style is not necessarily compatible with the expectations and approaches outlined in the Senior Physical Education Syllabus. This study suggests the need for further investigation of a range of issues related to syllabus intent, design and implementation as well as the type and level of information on teaching styles that teachers have and/or gain during teacher preparation, practice and in-service opportunities. There could be some concern in the fact that the syllabus is not being taught using a variety of styles as prescribed/indicated by the syllabus – nor indeed being taught according to the pedagogical underpinnings of the syllabus. Any disconnect between a school program and a student work review system which expects to see work produced as a result of certain teaching styles and what and how it is produced was not considered in this study.

Conclusion
This paper has outlined the research findings of a study on teaching styles (teaching styles as identified by Mosston & Ashworth, 2002). The study was in two parts. The first part was a questionnaire completed by 110 teachers of Queensland Senior Physical Education (QSPES) in which they indicated what teaching styles they believed they used. Teachers indicated in the questionnaire that they used a range of teaching styles. In the second part of the study a group of nine volunteer participants were observed teaching across three one hour lessons of Senior Physical Education and the videotapes which were made were coded using a reliable recording instrument. The results of the observed group indicate that the dominant teaching style used by teachers of Senior Physical Education in Queensland was the Practice Style-Style B and that a range of teaching styles was not employed.

There are ramifications from the results of the study for teachers in that they are not doing what they believe they are doing. The pedagogical underpinnings of the QSPES do not seem to be
honoured. If a variety of teaching styles are not being used then it would seem reasonable to state that the learning experiences described by the QSPES are unlikely to occur. A logical assumption would be that the General Objectives of the syllabus (of which there are four) are not being effectively taught or assessed as outlined by the QSPES. While explaining this concept in greater detail (along with offering explanations for why this has occurred) is not the focus of this paper, it is being examined in a partially completed doctoral study. Despite the implications of the study it is hoped that some of the information outlined here will highlight the need for teachers to have greater knowledge of, and expertise in, a range of teaching styles and be able to implement the intent of the syllabus by using these.

Notes
1 Other countries such as England have also mandated teaching styles to be used in the teaching of physical education with limited success (Hasty, 1997).

2 Panels consist of teachers who provide feedback and moderation to schools in the district about the quality of work programs, assessment pieces and grades/marks awarded to students. Teachers on Panels volunteer for the job.

3 The Senior Physical Education Syllabus (2004) identifies four distinct categories of Physical Activities (Direct Interceptive, Indirect Interceptive, Aesthetic and Performance). Associated with the teaching of the physical activities was a degree of integration of various aspects related to Focus Areas (Focus Area A: Learning physical skills, Focus Area B: Process and effects of training and exercise and Focus Area C: Sport, physical activity and exercise in the context of Australian Society) – subject discipline knowledge.

References


Moving, Learning and Achieving in Football (Soccer)

*John Murphy* - Flinders University, Australia; FFA Accredited Coach

*Shane Pill* - Flinders University, Australia; AFL Accredited Coach

**Introduction**

In my role as Junior Club Development Coordinator (author 1) I often get the opportunity to watch junior football training sessions. This summer I was aghast observing the number of club junior pre-season coaching sessions where junior players were forced to run lap after lap – sometimes as punishment for poor technique performances. This is despite clear advice to the contrary by the Football Federation Australia (FFA, 2009) which indicates that when it comes to junior player development, a game-related approach emphasizing skill development for successful participation in small sided games is a guiding principle (FFA, 2009). Small-sided modified games and a game-centered instructional approach for sport skill learning is typical of the Game Sense approach (den Dyn, 1996, 1997). This paper will explore the development of the game sense approach for junior football as the precursor for the development of football intelligence (Wein, 2004, 2007).

In 2009 Football Federation Australia (FFA) released the FFA National Curriculum (FFA, 2009). This document aimed to provide coaching guidance through an integrated and consistent approach to the development of both youth players and their coaches throughout the country. One of the key goals was to achieve children playing the nationally consistent formats of Optus Small Sided Football for positive and enjoyable football experiences. Despite this, it has been suggested that for many young players the training and playing experience is too often far from positive (Foster, 2010). Regrettably, often the physicality and full pitch game that adults play is still experienced by junior players. A focus on physicality and results (the score) is often emphasized over the development of technique, good decision-making and skill at the junior level (FFA, 2009). According to Carr (2011) players are still picked for size, strength and speed rather than skill and technique. Likewise in Australia, the FFA (2009) states that representative squads at junior level are weighted with players born early in the year who are physically more mature. This has implications on a national level where Australia’s top players have been seen as very competitive and physically effective footballers rather than praised for their technical excellence in FIFA reports (FFA, 2009, p8).

Yet, many coaches remain under the erroneous opinion that game skill can be acquired over time through game day match play (Williams & Hodges, 2005). According to Martin (2008)
“traditionally soccer coaches tend to focus on players’ physical (skill and fitness) development without careful consideration of their holistic needs. The coaching session focus tends to involve a series of ‘drills’ and exercises [...] Consequently, players’ participation experiences can vary enormously in degrees of enjoyment and learning, and motivation for further involvement“ (online, p. 1).

Similar observations of football coaching have also been made by Fenoglio (2007) and Gerdsen (2008). The role of the soccer coach, however, should be to set up practice tasks to assist player game development (Nakayama, 2007). We argue that right from the beginning of junior player game development, training is required that retains a close association to the competitive demands of the game as well as a consideration of the physiological and game understanding constraints of the players. These considerations have prompted recent initiatives in the training of junior football players. One such initiative has been the increasing use internationally of small-sided games in player development as they combine technical, tactical and physiological training stimuli (Jones & Drust, 2007).

**Teaching Sport for Understanding: Game Sense**

Small-sided games manipulating task constraints to achieve specific game understanding, appreciation and motor skill learning are hallmarks of the Australian Game Sense coaching model (den Duyn, 1997; Pill, 2007). Game Sense is a sport specific version of the Teaching Games for Understanding (TGfU) learning model (Bunker & Thorpe, 1982, 1983). It is central to the Australian Sport Commission ‘Play for Life’ approach for junior sport. The Australian Sports Commission (2010) stated that:

*Playing for Life is an approach to coaching that uses games as the focus of development. By concentrating on game-based activities children are able to*

- develop skills within a realistic and enjoyable context, rather than practising them in isolation and from a technical perspective
- engage in dynamic game-based activities that use a fun approach to developing a range of skills.

This paper will not explain the particulars of game sense pedagogy, except where it relates to the illustration or elaboration of specific coaching concepts, as it has been well described elsewhere (see for example: den Duyn, 1997; Pill, 2007; Schembri, 2005). However, in promoting training that retains close association to the competitive demands of the game, so that game-sense or ‘game intelligence’ can be developed, it is appropriate that we look at the research support for this training emphasis.
Williams and Hodges (2005) investigated common misconceptions stemming from a traditional technical coaching paradigm that remain evident in football coaching. They commented that while football coaching practice was frequently still based on tradition, intuition and emulation, players who participate in a learning model have been shown to produce better eventual performance than a matched group of learners who observe a corrected or skilled model. They also highlighted the importance of encouraging players to take responsibility for their learning by developing effective problem solving skills.

The role of the coach in designing practice sessions for learning is central to youth player development (Jones, 2006). Harvey (2003) investigated TGfU coaching outcomes with 16 participants, aged 16 – 18, who were part of a football development squad. He suggested that the TGfU approach had the potential to improve game involvement and performance in team sports through increased decision-making capacities of the players. A TGfU coaching approach encouraged players to execute more effective skills and less ineffective ones. Harvey (2006) also investigated Year 6 football players’ participation in a TGfU football program. The majority of participants (10 out of 12) improved at least one aspect of their game performance by the end of the season. Turner (2005) reported that TGfU was advantageous in developing off the ball player movements in football.

Manipulating the learning environment through game modifications is an integral element of the Australian TGfU iteration, Game Sense (den Duyn, 1997; Schembri, 2005). Manipulating constraints has also been indicated as an integral aspect of developing emergent learners’ movement capabilities (Renshaw, Chow, Davids, Keith & Hammond, 2010). Martin (2008) undertook a case study of junior football players’ (aged 13-16) game development. He concluded that session planning that involved placing emphasis on understanding tactical aspects of the game, rather than focusing on technique, catered more effectively for all ability levels. Nakayama (2007) investigated 20 Year 6 (age11&12) football players from 3 clubs participation in TGfU style training. He concluded that the size of the practice area impacts on the coaching intention (eg. opportunity to experience one touch plays of the ball) and the practice outcome (number of times players can actually practice the game skill). Other authors have encouraged problem-based learning through the use of instructional strategies that promote critical thinking, cooperative learning and player goal setting to enhance team and player development in junior football (Hubball & Robertson, 2004; Wein, 2007).

Moving, learning and achieving game sense: Developing intelligent players
Horst Wein (2000) developed the concept of ‘football intelligence’ as a pathway for junior football player development. It is conceptually similar to the Game Sense theory for the development of ‘thinking players’ (den Duyn, 1997). Coaches are encouraged to develop players exposure during
training to modified game-like situations. Small-sided games are created with tactical problems which the players have to solve through the application of game understanding and movement responses. The role of the coach is to guide player development using guided questioning to facilitate learning. Wein’s ‘football development model’ contained 5 levels of game formation leading to full game participation:

- Games for developing basic skills and capacities.
- Simplified games of eg. 2 against 2, and 3 against 3 where players can experiment and improve on the basic skills and tactical behaviours.
- Simplified ‘mini-soccer’ games made up by of minimal players.
- Games for participation in 7-a-side football.
- Games for participation in 8-a-side football.

From here, every two years the difficulty and complexity of the game competition are increased (Wein, 2004). The ‘football development model’ advocates 3 instructional strategies through which game intelligence is enhanced. Freezing the play to discuss what is happening guides player development of game understanding. Using questions as pedagogy; exposing players to progressive simplified games and progressively developed exercises highlights and progresses technical-tactical attack and defense game responses (Wein, 2000). The ideas in the ‘football development model’ can be traced to Wein’s earlier work describing an optimal learning and coaching model in hockey (Wein, 1981). This type of transferability of game knowledge can be understood within a Game Sense model as both football and hockey are examples of invasion sports (den Duyn, 1997). Game Sense theory suggested that different games (eg. football and hockey) in the same game category (eg. invasion) present similar tactical scenarios to players.

The traditional football coaching approach emphasizes technique development practised in isolation through skill-drills. Game Sense ‘football intelligence’, however, is measured by game performance where skill is defined as technique placed under pressure (den Duyn, 1997; Wein, 2007). Players’ cognitive understanding and kinaesthetic awareness of body position and movement in space are considered crucial to learning and performing. Questioning of the players about the consequences of game action is encouraged in order that players examine their understanding of underlying game principles (for example, creating space) as well as their ability to achieve a desired game behaviour (for example, off the ball movement into space that creates a passing lane) (Martin, 2008) In order to create the training environment where coaches can encourage player questioning of their game sense, Wein (2004) suggests that “coaches need to stimulate more and instruct less [...] They should become consultants, guides, or organizers of information” (p. xii). He suggests that the constant commands
and instructions issued by most coaches are frequently counter productive to the development of playing intelligence (Wein, 2000). The emerging theory of constraints-based learning supports the instructional emphasis of a more “hands off approach to coaching” so that there can be more ‘discovery learning’ of football skills by players during training (Davids, 1998, p. 1).

**Moving, learning and achieving game intelligence**

The following are examples of the type of activities we suggest are central to junior football training.

*Games for developing basic skills and capacities*

Eg. Dribble Ball

Game Emphasis: Maintain Ball Possession

Objective: Defender tries to dispose attacker of the ball

Football Intelligence: How do you ‘legally’ protect the ball from a defender?

Groups of 4 players in a 15mx15m grid.
3 players are given a ball and are nominated ‘attackers’
1 player (without the ball) is nominated the defender
Defender tries to push as many balls as possible out of the square within playing time of 60 seconds.

*Simplified games*

Eg. Tackle 6

Game Emphasis: Maintain Ball Possession

Objective: Defender tries to lay 6 successful tackles

Football Intelligence: How do you get into a side position to tackle both correctly and quickly?

Groups of 4 players in a 10mx15m grid.
3 players are given a ball and are nominated ‘attackers’
1 player (without the ball) is nominated the defender
Defender tries to achieve 6 legal tackles within playing time of 60 seconds.

*Simplified ‘mini-soccer’ games*

Eg. Mini –football

Game Emphasis: Building an attack

Objective: Create a 3v2 to beat the defender

Football Intelligence: Why should one of the 3 players ‘hang back’ behind the ball?

Groups of 6 players in a 15mx10m grid, divided into 2 zones.
1 player from each team must stay in their teams defensive zone at all times
A point we must stress here is that a Game Sense model does not ignore direct teaching of sport specific technique. The ‘art of coaching’ is finding the teaching moment when direct teaching and skill-drills will be the best instructional strategy to improve a technical aspect of game performance (den Duyn, 1997; Pill, 2007; Wein, 2004).

Carr (2011) suggested that “soccer is essentially a simple game of intelligent inter-passing […] possession of the ball is the number one priority in the game. Teach your players never to give the ball away, to value possession” (online). In his Adelaide seminar, Wein (2007) emphasized this point and demonstrated how the on-the-ball timing of the release of a pass is a central element of maintaining possession. He suggested the 2v1 situation as a microcosm of the game in defense and attack. We have therefore chosen ‘maintaining possession’ as the principle of play (Hopper, 2002) to demonstrate planning for moving, learning and achieving through playing with purpose (Pill, 2007) during a junior football training session.

Table 1. Contrast between Game Sense training and traditional sport-as-technique (Kirk, 2010) training

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Game Sense (with variations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm- Up</td>
<td>Warm-Up</td>
</tr>
<tr>
<td>Static Stretching</td>
<td>Juggling (one ball per player)</td>
</tr>
<tr>
<td>Running laps around the pitch</td>
<td>Dynamic Stretching</td>
</tr>
<tr>
<td><strong>Drill 1</strong></td>
<td><strong>Game Sense 1</strong></td>
</tr>
<tr>
<td>Lane passing</td>
<td>3v3 ‘keeping off’</td>
</tr>
<tr>
<td></td>
<td>Attempt to maintain possession.</td>
</tr>
<tr>
<td><strong>Drill 2</strong></td>
<td><strong>Game Sense 2</strong></td>
</tr>
<tr>
<td>1v1 Receive pass from coach, attempt return to coach under pressure from defender</td>
<td>Multiple games of 3v3.</td>
</tr>
<tr>
<td></td>
<td>Stop the ball anywhere on the opposing end line.</td>
</tr>
<tr>
<td><strong>Drill 3</strong></td>
<td>Freeze Play - Play Analysis (e.g. timing of release of the pass, using space)</td>
</tr>
</tbody>
</table>
Shots on goal
Coach pass – player control,
Sight, shoot

(Variations 3v2, 2v1)

Game Sense 3
3v3 ‘go for goal’

*player who scores must run through both
goals & re-enter game from their defensive end
of the pitch. This creates a 3v2 at the re-start
after the goal.

Freeze Play Play Analysis
Return to Game Sense Game

Drill 4
Fitness work
Sprints

Warm Down
Jogging around the pitch
Static Stretching

Game Sense 4
3v3 one attacking player must be their own
defensive half for a goal to count when scored.

Freeze Play Play Analysis

End Game 3v3 football

Conclusion Game Sense discussion

Bhaskaran (2003) suggested that “many players are required to undertake lengthy training
sessions where they practice techniques associated with a particular skill like shooting at the goal.
However, practising this in isolation does not include a large number of the variables associated with
implementing this skill in a constantly changing game situation” (online). This is a key concept in the
promotion of a conceptual shift to Game Sense training which we have attempted to demonstrate in
Table 1. Embedded throughout the training is the pedagogy of questioning to guide the development
of football intelligence. The judicious use of questioning is central to the instructional emphasis of

Conclusion
In the Introduction to this paper evidence was provided to suggest that junior Australian football
coaching remains characterised by traditional training methods foregrounding technical motor
competencies or team selection and game performance based on player physicality. We have argued
that this is to the detriment of the outcome of players demonstrating Game Sense from the progressive
development of their football intelligence. Further, we have suggested that training plans that
emphasize understanding of tactical aspects of the game with motor skill performance, rather than
focusing on isolated technique development, cater for the progressive development of game intelligence. Rather than simply presenting a series of drills, junior soccer coaches must utilise modified small-sided games to enhance the players understanding of specific aspects of game play. These aspects are both tactical and skill-as-technique.

As the “vast majority of development occurs in training/practice – not in competition” (FFA, 2009, p. 8) the quality of the training/practice environment created by the coach is integral to encouraging game intelligence. We have argued that the ‘end goal’ of junior football coaching should be ‘Game Sense’. This paper has also included ideas to provide guidance as to how coaches employ the ‘art of coaching’ to design practice as learning for emergent ‘Game Sense’ behaviour (Williams, n.d.).

References


Hubball, H. & Robertson, S. (2004). Using problem-based learning to enhance team and player development in youth soccer: by using strategies such as critical thinking, goal setting, and peer coaching, problem-based learning addresses a variety of learning styles. The Journal of Physical Education, Recreation & Dance, 75,


Cross-curricular learning and social learning in physical education: Addressing pupil diversity

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Cross-curricular learning aims to prepare young people for the future, including developing essential qualities and skills for learning, life and employment; with the ultimate aim of securing success in the competitive global economy. Personal, Learning and Thinking Skills are one aspect of cross-curricular learning. Pupils developing these skills are described as Independent Enquirers, Creative Thinkers, Reflective Learners, Team Workers, Self-managers and Effective Participators. The projects reported in this paper investigated the potential to address cross-curricular learning through Sport Education. Built into the Sport Education model is the opportunity for pupils to reflect on their cooperation, teamwork, decision-making and the ways they take on responsibility. The focus of case study one was to provide an opportunity for pupils to reflect more formally through written worksheets (Bolton, 2010). The importance of this reflection was built into the scoring system of the Sport Education model. The aim of the project was to investigate the potential for developing pupils as “Reflective Learners” as a parallel process through their reflection upon their teamwork. The pupils completed reflection worksheets during 7 lessons throughout the unit. The pupil responses were converted to electronic format and managed using a qualitative data analysis package NVivo. The pupil response data were analysed using techniques appropriate to the qualitative research paradigm - an inductive approach using constant comparison and theme analysis. Our action research highlighted the need for better strategies for pupils who speak English as an Additional Language (EAL). In case study two the focus was on collecting the opinions of 110 culturally diverse pupils on Sport Education, including questions about participation during Ramadan, the Muslim month of fasting. Muslim pupils found the options of different roles in Sport Education to be helpful during periods of religious fasting such as Ramadan. In an increasingly diverse world, it is time for a constructive and productive discussion about young people, ethnicity and pedagogy in physical education.

Introduction

This paper presents case studies of teachers in two local schools in teacher education partnerships with Loughborough University in England. The action research projects focused on the implementation of Sport Education within physical education. Sport Education was found to be an
effective vehicle for cross-curricular learning and issues of diversity were also relevant in the two case studies. At Rushey Mead School our action research highlighted the need for better strategies for pupils who speak English as an Additional Language (EAL). At Djanogly City Academy, Muslim pupils found the options of different roles in Sport Education to be helpful during periods of religious fasting such as Ramadan.

**Action Research**

Action research is an effective methodology for working with teachers in schools on a range of issues. It takes an enquiring, problem-solving approach towards aspects of teachers’ practices, for example, pedagogical approaches. There is a focus on change and improving practice through ongoing cycles of reflection and action. Participation in this process can be a form of professional development for teachers. Action research is often enhanced by collaboration with other teachers and/or university staff. In the two case studies presented in this paper, university teacher educator Louisa collaborated with local teachers in the two schools. An important philosophical underpinning to this work is that the teacher researchers and university researchers are working as equal partners. Our implementation of action research was guided by a range of relevant literature (Day & Hadfield, 2004; Elliot, 1978; Kemmis & McTaggart, 1988; Kirk, 1995; Leitch & Day, 2000; Lewin, 1946; Somekh, 2010; Tinning, Macdonald, Tregenza & Bousted, 1996).

Through collaborative discussion we set about to define the action research steps to guide our work. We agreed on the following process:

- Reflect on practice and identify problem or area for investigation
- Generate solutions and plan implementation (informed by literature)
- Action – experimentation
- Observe, reflect, analyse and evaluate
- Clarify problem and redesign plan of action
- (cycle continues)

Engaging in action research is a significant time commitment for teacher researchers (Casey, Dyson & Campbell, 2009; Tinning, et al., 1996). Following the advice of Lodico, Spaulding and Voegtle (2006) we decided that methods of data collection from pupils would fit into class time. The pupils completed worksheets or questionnaires during the last 10 minutes of the lesson. The two main sources of data for the collaboration between Louisa and the teachers were emails and audio-recordings of our collaborative discussions. Data were collected from pupils through worksheets and questionnaires. Ethical clearance for the action research projects were obtained from the Loughborough University Ethical Advisory Committee.
Open-ended pupil responses were converted to electronic format at the university and managed using a qualitative data analysis package NVivo (QSR, 2008). Numerical questionnaire responses were managed with Microsoft Excel and were analysed with descriptive statistics. The qualitative pupil response data were analysed using techniques appropriate to the qualitative research paradigm - an inductive approach using constant comparison and theme analysis. Pupil responses that demonstrated the Personal, Learning and Thinking Skills were categorised into the six categories of Independent Enquirers, Creative Thinkers, Reflective Learners, Team Workers, Self-managers and Effective Participators skills.

The learning theory guiding the research was social constructivism (Illeris, 2009). This influenced our choice of authentic learning experiences through the ‘real world’ context of Sport Education. The pupils were actively engaged in planning and/or analysing their own learning.

The following sections of the paper will outline two case studies of action research projects in two local schools. Both case studies investigated the implementation of the pedagogical model of Sport Education (Alexander, Taggart & Thorpe, 1996; Bennet & Hastie, 1997; Hastie & Buchanan; 2000; Hastie & Trost, 2002; MacPhail, Kirk and Kinchin, 2004; Oslin, 2002; Penney, Clarke, Quill & Kinchin, 2005; Siedentop, Hastie & Van der Mars, 2004; Tinning, 1995).

Cultural and linguistic diversity are topics of investigation that have not been previously developed in Sport Education research. Cultural and linguistic diversity were issues that did arise throughout the action research in the two case study schools. It is hoped that this paper will contribute to addressing this gap in the Sport Education literature.

Case Study One – Rushey Mead School

In 2008 when Tami and Louisa started discussing ideas for improving practice, the new secondary National Curriculum for England and Wales had just been developed after the review of the secondary curriculum in 2007. Tami had just started working at a local school in teacher education partnership with Loughborough University. Rushey Mead Secondary School is state school for 1400 boys and girls, ages 11-16. The school is a Specialist Science and Sports College described as an outstanding school (OFSTED, 2007). The school serves a multicultural, multi-faith area in the town of Leicester in the East Midlands of England with 93.2% of pupils from ethnic minority backgrounds and has a group of dedicated staff that reflects this diversity.

A concern of the new curriculum was to prepare young people for the future, including developing essential qualities and skills for learning, life and employment; with the ultimate aim of securing national success in the competitive global economy (Gravells, 2010). Personal, Learning and Thinking Skills (PLTS) were subsequently included in the new curriculum (Beere & Boyle, 2009;
Qualifications and Curriculum Development Agency (QCDA), 2008). Pupils developing these skills are described as Independent Enquirers, Creative Thinkers, Reflective Learners, Team Workers, Self-managers and Effective Participators (see Table 1).
Table 1: The six Personal, Learning and Thinking Skills (QCDA, 2008).

<table>
<thead>
<tr>
<th>Independent enquirers</th>
<th>Creative thinkers</th>
<th>Reflective learners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus:</strong></td>
<td><strong>Focus:</strong></td>
<td><strong>Focus:</strong></td>
</tr>
<tr>
<td>Young people process and evaluate information in their investigations, planning what to do and how to go about it. They take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.</td>
<td>Young people think creatively by generating and exploring ideas, making original connections. They try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value.</td>
<td>Young people evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They monitor their own performance and progress, inviting feedback from others and making changes to further their learning.</td>
</tr>
<tr>
<td><strong>Young people:</strong></td>
<td><strong>Young people:</strong></td>
<td><strong>Young people:</strong></td>
</tr>
<tr>
<td>• identify questions to answer and problems to resolve</td>
<td>• generate ideas and explore possibilities</td>
<td>• assess themselves and others, identifying opportunities and achievements</td>
</tr>
<tr>
<td>• plan and carry out research, appreciating the consequences of decisions</td>
<td>• ask questions to extend their thinking</td>
<td>• set goals with success criteria for their development and work</td>
</tr>
<tr>
<td>• explore issues, events or problems from different perspectives</td>
<td>• connect their own and others’ ideas and experiences in inventive ways</td>
<td>• review progress, acting on the outcomes</td>
</tr>
<tr>
<td>• analyse and evaluate information, judging its relevance and value</td>
<td>• question their own and others’ assumptions</td>
<td>• invite feedback and deal positively with praise, setbacks and criticism</td>
</tr>
<tr>
<td>• consider the influence of circumstances, beliefs and feelings on decisions and events</td>
<td>• try out alternatives or new solutions and follow ideas through</td>
<td>• evaluate experiences and learning to inform future progress</td>
</tr>
<tr>
<td>• support conclusions, using reasoned arguments and evidence.</td>
<td>• adapt ideas as circumstances change.</td>
<td>• communicate their learning in relevant ways for different audiences.</td>
</tr>
<tr>
<td>Team workers</td>
<td>Self-managers</td>
<td>Effective participators</td>
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<td>--------------</td>
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<td>------------------------</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td><strong>Focus</strong></td>
<td><strong>Focus</strong></td>
</tr>
<tr>
<td>Young people work confidently with others, adapting to different contexts and taking responsibility for their own part. They listen to and take account of different views. They form collaborative relationships, resolving issues to reach agreed outcomes.</td>
<td>Young people organise themselves, showing personal responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.</td>
<td>Young people actively engage with issues that affect them and those around them. They play a full part in the life of their school, college, workplace or wider community by taking responsible action to bring improvements for others as well as themselves.</td>
</tr>
<tr>
<td><strong>Young people:</strong></td>
<td><strong>Young people:</strong></td>
<td><strong>Young people:</strong></td>
</tr>
<tr>
<td>• collaborate with others to work towards common goals</td>
<td>• seek out challenges or new responsibilities and show flexibility when priorities change</td>
<td>• discuss issues of concern, seeking resolution where needed</td>
</tr>
<tr>
<td>• reach agreements, managing discussions to achieve results</td>
<td>• work towards goals, showing initiative, commitment and perseverance</td>
<td>• present a persuasive case for action</td>
</tr>
<tr>
<td>• adapt behaviour to suit different roles and situations, including leadership roles</td>
<td>• organise time and resources, prioritising actions</td>
<td>• propose practical ways forward, breaking these down into manageable steps</td>
</tr>
<tr>
<td>• show fairness and consideration to others</td>
<td>• anticipate, take and manage risks</td>
<td>• identify improvements that would benefit others as well as themselves</td>
</tr>
<tr>
<td>• take responsibility, showing confidence in themselves and their contribution</td>
<td>• deal with competing pressures, including personal and work-related demands</td>
<td>• try to influence others, negotiating and balancing diverse views to reach workable solutions</td>
</tr>
<tr>
<td>• provide constructive support and feedback to others</td>
<td>• respond positively to change, seeking advice and support when needed</td>
<td>• act as an advocate for views and beliefs that may differ from their own.</td>
</tr>
</tbody>
</table>
The ethos of Tami’s school, as outlined by the head teacher on the school website, reflects the wider governmental directives for the development of employability skills.

“We recognise that exam passes alone are not enough for young people who will work in a globalised economy and who will need confidence, adaptability, creativity and resilience to live useful and fulfilling lives and we strive to ensure that every student will have his or her individual needs met through the highest standards of teaching and learning.” (http://www.rusheymead-see.leicester.sch.uk/, 2009)

We therefore discussed ideas for developing PLTS through physical education and specifically through the pedagogical model of Sport Education. Built into the Sport Education model is the opportunity for pupils to reflect on their cooperation, teamwork, decision-making and the ways they take on responsibility. We therefore chose to focus on developing skills as Reflective Learners (see Table 1).

We made a plan to provide an opportunity for pupils to reflect more formally in Sport Education through written worksheets (Bolton, 2010). The importance of this reflection was built into the scoring system of the Sport Education model. The aim was to investigate the potential for developing pupils as Reflective Learners as a parallel process through their reflection upon their teamwork.

The action research was implemented with a Year Nine physical education class of twenty girls. The focus of the unit was netball and this was taught across seven lessons of one hour in length using the Sport Education pedagogical model. At the end of each lesson, the pupils completed a worksheet in the changeroom for 10 minutes. The worksheets served the dual purpose of facilitating the reflective learning experiences planned as part of the lesson and also forming data for the action research. The reflection questions were as follows:

What did I do today to encourage teamwork and cooperation in my team? What could I have done better to encourage teamwork and cooperation in my team today?

What decisions did I make today?

How did I take responsibility for my learning and/or my team’s learning today?

What changes will I make and/or suggest to my team for the next lesson?

The top of the worksheets contained a description of “Reflective Learners” based on the guidance from the QCDA (2008). In weeks one and two the skills were simplified as follows:
Reflective learners:

- give and discuss feedback
- review progress and set goals
- evaluate experiences and learning
- communicate about their learning

In weeks three and four a full description of the skills was used (see Table 1).

Pupils scored points for their teams based on the completion of reflections:

You will receive team points for the way in which you reflect on your Sport Education lesson.

- 10 lines of writing on this reflection page, demonstrating the Reflective Learner principles above = 5 points
- 6 lines of writing on this reflection page, demonstrating the Reflective Learner principles above = 1 point

Pupils were therefore expected to complete an answer to each question but further elaboration would score more points for the team. This was to encourage the pupils to address “Why?” questions.

Results

At the end of the netball unit we analysed the responses of the pupils. As expected when participating in Sport Education, many pupil comments demonstrated “Team Worker” skills (see Table 2\(^1\)). Pupils engaged in reflection and demonstrated “Reflective Learner” skills (see Table 3).

\(^1\) The tables are adapted from the Edexcel Personal, Learning and Thinking Skills Student Recording Document (2010).
<table>
<thead>
<tr>
<th>Team worker</th>
<th>Sport Education Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaborate with others</strong></td>
<td>We worked together as a team. Communicate with my team mates. I listened to my team mates and gave responses to my team. I listened and co-operated therefore the team worked well together. We helped each other on picking roles, worked together on training.</td>
</tr>
<tr>
<td><strong>Be able to discuss issues and make decisions as part of a team</strong></td>
<td>Worked as a team and listened to each other. Today to encourage team work, I suggested strategies and I got involved in discussion.</td>
</tr>
<tr>
<td><strong>Roles, leadership</strong></td>
<td>I will take lead in my role and coach. I suggested we play different roles so some of us played roles we had not played before. Change some players around so that other people that are good at other positions can have an opportunity to show what they can do.</td>
</tr>
<tr>
<td><strong>Think about my behaviour and adapt it depending on how things are going in the team</strong></td>
<td>I listened to others for their opinions and did what they said and I should do that always. To play fairly and help others. To help others when they got stuck on the court, e.g positioning. Took others into consideration. Give everyone a chance with the ball.</td>
</tr>
<tr>
<td><strong>Be fair and understand how others may feel</strong></td>
<td>I decided to help my team players and help them with the refereeing. I helped team mates with their roles and positions. Helping others with warm up plans, covering skills and game tactics. I respect other people, and decided to be a coach in the team.</td>
</tr>
<tr>
<td><strong>Be responsible and confident about what I have to say and show I can be a leader</strong></td>
<td>I encouraged my team to support every player no matter how many mistakes they made. This helped the team because it helped us co-operate with each other more, which made us a better team. I have helped team members to organise their roles and make decisions. I shouted motivating things to encourage players and told them how they could improve.</td>
</tr>
</tbody>
</table>
### Table 2: Reflective Learner Examples

<table>
<thead>
<tr>
<th>Reflective learner</th>
<th>Sport Education Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Notice when I or others do things well</td>
<td>I wrote a detailed report on the game. This will help our team to get more points.</td>
</tr>
<tr>
<td>• Identify opportunities</td>
<td>I could work with the statistics to write a better match report.</td>
</tr>
<tr>
<td></td>
<td>I wrote a good match report and I decided what to write so my team could get more points.</td>
</tr>
<tr>
<td></td>
<td>We also decided to discuss how we as a team could improve and tell everyone our notes we wrote down.</td>
</tr>
<tr>
<td>• Set goals with steps to help me achieve them</td>
<td>I observed the teams who were playing. This will help us because then we can improve on the skill we need, for example, shooting, footwork and passing.</td>
</tr>
<tr>
<td></td>
<td>We were observing the teams who were playing. We then talked how this can influence our group and how we can improve.</td>
</tr>
<tr>
<td>• Check how things are going and act on anything I need to do to be successful</td>
<td>I will change some games for the training part.</td>
</tr>
<tr>
<td></td>
<td>We spoke about tactics we could use next week by evaluating the team we would be playing next week. And also how we could use everything that we learnt and put it into action.</td>
</tr>
<tr>
<td></td>
<td>I observed the teams who were playing. This will help our team because we can improve on the skills we need. We needed to come up with solutions to improve our performance.</td>
</tr>
<tr>
<td>• Ask for feedback on how I am doing and respond positively</td>
<td>Looking at other players I think we could work on our passing and team work skills.</td>
</tr>
<tr>
<td></td>
<td>I listened to my team mates and gave responses to my team.</td>
</tr>
<tr>
<td></td>
<td>I asked my team what I need to improve on, for example defending and attacking the opponents.</td>
</tr>
<tr>
<td>• Use what I have done and learned to help me understand what I need to do next to make the outcome more successful</td>
<td>We could have marked our players better.</td>
</tr>
<tr>
<td></td>
<td>I spoke with my team mates about the game and evaluated the teams that were playing.</td>
</tr>
<tr>
<td></td>
<td>I decided to swap roles with anyone to see what I am better at so I could help my team get more points.</td>
</tr>
<tr>
<td></td>
<td>Also we all evaluated the opposing team therefore we saw what techniques they used.</td>
</tr>
</tbody>
</table>
In addition, the Sport Education unit also developed skills as Independent Enquirers, Creative Thinkers, Self-managers and Effective Participators.

After analysing these links between the Sport Education pupil reflections and the wider Personal, Learning and Thinking Skills we saw the potential to identify these connections more explicitly in future action research cycles. A key strategy is to help learners develop a language for the new skills they are learning. The terminology of the PLTS, if used explicitly, can help the pupils to identify their skills and develop the necessary language to describe them (Fiehn & Fettes, 2008; Learning and Skills Improvement Service, 2009; Webb, Kay & Makopoulou, 2010; Wright & Webb, 2011).

**Equity and diversity issues in case study one**

Through our action research cycle we asked ourselves what we could do to help the pupils learn how to develop their reflection and writing skills. This was partly stimulated by comments from the pupils. When we asked them “Was there anything that you didn’t like about writing reflections at the end of class” some pupils responded with answers such as:

- I couldn’t always answer.
- It was difficult to answer some questions.
- Sometimes I didn’t know what to write.

How could we start with a more guided process and gradually develop their ability to reflect and write more independently? We particularly felt that we wanted to develop more strategies to help pupils with English as an Additional Language (EAL). Tami had the following ideas:

Maybe making for the first few weeks, a tick sheet in terms of “I have done this”, “I can do this”, “I can’t do this” and really breaking that down. Then develop a mixture of both or a choice of ticksheet or written response

If the sentences are put in the right way, whether it’s just that they tick which ones apply to them ... I got this idea from a GCSE class that I observed - they put a tick for if they fully understand or fully can do it, question mark if they are not so sure and a cross if they can’t or don’t know it ... we could use something like that or general statements of the skills that they do tick or perhaps a mixture

I really like the idea of the ticksheet because it involves them in a reflective process but it doesn’t rely on them being able to express themselves through writing at first.
We could use some of the statements from the pupils this year to try to bring some of the PLTS to life in the pupils’ language

The insights generated by Tami reinforced that teachers have unique insights into practice that are less accessible to visiting researchers (Somekh, 2010).

Case Study Two – The Djanogly City Academy
The Djanogly City Academy Nottingham serves a multicultural area of the inner city with high levels of social and economic disadvantage. The Academy opened in August 2003 as one of the first of a new type of specialist, state-funded independent schools. Two thirds of the pupils are from a wide variety of minority ethnic heritages and include a significant number of pupils from families of asylum seekers or refugees (OFSTED, 2009).

In 2009 one of the Physical Education teachers at Djanogly, Patrick, collaborated in an action research project to incorporate Sport Education into the Physical Education curriculum. During the year, discussions took place to plan the implementation of Sport Education in the 2009-10 academic year. As part of the planning we discussed the timing of Ramadan in September 2009.

Catering for diverse religious beliefs in physical education
In all world religions there are certain times of the year that are held sacred. Some examples are Ramadan, Navratri and Easter. These sacred times are usually connected with certain types of behaviour such as special worship, pilgrimage or fasting. Another common feature is that the completion of fasting is often celebrated by religious festivals. For example, Ramadan is the 9th month of the Islamic calendar and is the month of fasting2. The end of Ramadan is celebrated with the festival of Eid ul-Fitr (festival of breaking the fast). The festival of Eid is a time of prayer and celebration. It is a time to celebrate with friends and family as well as to be thankful and generous to those less fortunate (Muslim Council of Britain, 2007). An ethos of celebrating different cultures and religions is recognised as good practice (Dagkas, Benn & Jawad, 2010).

During periods of fasting such as Ramadan, young people may become dehydrated, have headaches or may lack energy later in the day. They also will have woken up before dawn to eat and may be affected by disturbed sleep patterns. Teachers planning physical activities need to be mindful of these issues during the month of Ramadan. Modified activities could be available but with the same learning outcomes achieved. It can also be helpful, where feasible, to schedule physical education or

2 “Fasting during the month of Ramadan is the fourth ‘pillar’ of Islam, an act of worship of great spiritual, moral and social significance for Muslims” (Muslim Council of Britain, 2007, p. 28).
physical activity early in the day (Dagkas & Benn, 2006). The important point to be made is that teachers should prioritise the learning needs of all pupils. Lack of food will, inevitably, impact on learning so, as learning professionals, that is our concern whether it is the result of religious observance or, for example, poverty.

One strategy for catering for fasting pupils in physical education is through the incorporation of Sport Education. As described above, in Sport Education pupils can participate in a lesson taking one of a range of roles such as captain, coach, referee, scorekeeper or publicity officer. In Sport Education these options are not just tokenistic tasks for non-participants but are developed as legitimate and important roles as part of an authentic learning process (Kirk & Kinchin, 2003).

In our action research project discussions it was felt that the various roles that are part of the authentic learning experience in Sport Education could provide a range of choices that might be helpful for pupils who were fasting. In talking with the pupils about Sport Education during Ramadan, they made comments such as

- Sport Education is a good idea because a person who is fasting might not have a lot of energy and they can do other roles like referee or coach
- The choice of roles in Sport Education is good because when people are fasting they might get tired in PE
- It’s a good idea because if they can’t run because they’re tired, then they could choose something else (another role)

The Physical Education Department at Djanogly Academy found Sport Education to be an effective pedagogical tool during Ramadan and other times of the year. It provided opportunities for all pupils to participate in physical education in a variety of ways. Therefore if pupils were feeling tired as a result of fasting, they could still participate in a meaningful way.

Another good practice strategy employed by the Physical Education Department is fostering good relationships with local community and Imams who are leaders in the Islamic community. It is common in the Islamic community to seek the advice of the mosque Imam if there is a question about Islamic faith and practice. The physical education teachers have sought the advice of the local Imam about participation in physical education and Sport Education during Ramadan and they implement this guidance in their work with pupils.

**Pupil views of Sport Education**

In case study two we were also interested to ask the pupils their opinions about Sport Education in general. We administered a questionnaire to a culturally diverse group of 110 pupils from four classes
of year seven pupils (approximately 12 years of age). The cultural diversity of the group is outlined in Table 4.

**Table 4: Ethnicity of questionnaire participants.**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>White British</td>
<td>30</td>
</tr>
<tr>
<td>White Other</td>
<td>7</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>4</td>
</tr>
<tr>
<td>Black African</td>
<td>7</td>
</tr>
<tr>
<td>Indian</td>
<td>6</td>
</tr>
<tr>
<td>Pakistani</td>
<td>30</td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>2</td>
</tr>
<tr>
<td>Chinese</td>
<td>1</td>
</tr>
<tr>
<td>Asian Other</td>
<td>8</td>
</tr>
<tr>
<td>Mixed White/Black Caribbean</td>
<td>4</td>
</tr>
<tr>
<td>Mixed White/Black African</td>
<td>5</td>
</tr>
<tr>
<td>Mixed White/Asian</td>
<td>2</td>
</tr>
<tr>
<td>Mixed Other</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
</tbody>
</table>

The questionnaire asked pupils to respond to 14 statements on a 6-point scale – strongly disagree, disagree, disagree somewhat, agree somewhat, agree and strongly agree. With the range of pupil opinions expressed, 11 of the statements were rated on average by the 110 pupils as “Agree” with just three statements rated as “Agree somewhat”.

*“Agree” statements*

I enjoyed working together in a team.
I like to make decisions in physical education.
I now understand this activity better than before.
I like this approach to PE called Sport Education.
During Sport Education I had an opportunity to be creative.
I enjoyed taking more responsibility in PE.
If invited to join a team near my home I would do so.
I am better now at listening to the ideas of other people in my team than I was before Sport Education.
I can collaborate with others to work towards common goals.
I can reach agreements, managing discussions to achieve results.
I can take responsibility, showing confidence in myself and my contribution.

“Agree somewhat” statements
   I had the opportunity to make decisions.
   I helped other pupils to improve and get better.
   I like to help other pupils to improve and get better.

The Djanogly City Academy physical education department and I were pleased with the overall positive response of the pupils towards the statements describing the skills and opportunities that Sport Education can provide. Upon reflection of the three statements scoring “agree somewhat”, it is noted that pupils would like even more opportunities to make decisions in physical education. More opportunities could also be provided to help pupils improve and get better although this might be more appropriate for an older group of pupils. The year seven pupils who we surveyed were new to the school and may have been somewhat uncomfortable with giving feedback to peers.

Conclusion
Globalisation is leading to an increasingly diverse society. In the United Kingdom, for example, the population is more culturally diverse than ever before with 16.4% describing themselves as one of the following: Asian or Asian British, Indian, Pakistani, Bangladeshi, Black or Black British, Black Caribbean, Black African, South-East Asian, Chinese or with parents who are from diverse ethnic groups (Office for National Statistics, 2009).

   It might seem obvious to suggest that adults who teach and coach young people will be more effective in their jobs if they are fully equipped to work with a diverse population. Unfortunately, concerns have been raised that teachers and coaches are not prepared adequately (Dagkas, Benn & Jawad, 2010; Ennis, 1998; Flintoff et al, 2008) and so this paper seeks to go some way towards filling this gap. In an increasingly diverse world, it is time for a constructive and productive discussion about young people, ethnicity and pedagogy in physical education and youth sport (Harrison & Belcher, 2006). Through the case studies presented in this paper we can increase understanding of the diversity of young people in physical education, and of strategies that can help teachers to work with diverse learners effectively and safely. The focus of this paper has specifically been Sport Education as a strategy for catering for diverse pupils and for developing literacy skills.

3 In some regions the percentage is over 40%
References


The development of a questionnaire to measure the confidence of teachers to teach primary school physical education

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Dr Michael Spittle - Deakin University, Australia

Introduction
The curriculum area of Physical Education (PE) has been charged with many important roles, including the physical, social, and emotional development of a child. Primary school has been identified as the ideal setting for the development of fundamental motor skills, which are imperative for continued participation in physical activity (Morgan, 2005). The development of fundamental motor skills allows for success and enjoyment to be achieved in physical education, which creates positive early learning experiences that can influence adult health behaviors and promote continued participation in physical activity. For fundamental motor skills to be developed and enjoyment to be achieved quality PE programs need to be delivered. Within the majority of Australian primary schools PE is taught by a generalist classroom teacher. Previous research has found that these teachers often experience feelings of low confidence and motivation toward the subject (Callea, Spittle, O’Meara & Casey, 2008; Morgan & Bourke, 2005, 2008). These feelings have been attributed to personal experiences with the subject, a limited amount of training, and ongoing support available.

The importance of Physical Education in early years
Quality PE programs that focus on physically educating young people in an enthusiastic, supportive, and encouraging environment have the opportunity to foster positive health behaviours and enjoyment in physical activity at the present time and into the future. It is during the primary school years that positive attitudes towards physical activity should be encouraged. For some students, PE at school may be the only opportunity they have to engage in any type of physical activity (Morgan, 2005). The need for quality PE programs in primary schools is strongly supported by the proposition that sport and PE are influential factors in motor skill development and refinement during childhood and adolescence (Gabbard, 2008). As children have the potential to reach a mature stage in a majority of fundamental motor skills by the age of six or seven (Gabbard, 2008), primary school PE is the ideal setting for the learning, development and mastering of these skills. Late childhood (7 - 10 years of age) is distinguished by the emergence of sport skill behaviours (Gabbard, 2008). These skills are the advanced version of the basic skills developed in earlier childhood. If these basic skills are not mastered, then individuals are unable to begin to develop more sport - oriented skill behaviours.
Proponents of the importance of establishing acceptable levels of fundamental motor skills have suggested that the attainment of these skills allow children to successfully participate in sport and physical activity throughout their lives (Gallahue & Donelly, 2003; Gallahue & Ozmum, 2001).

Without the successful development of fundamental motor skills, and the consequential maturation of sport specific behaviours, many children find it extremely difficult to experience success and enjoyment in physical activity. An individual’s ability to competently perform motor skills appears to be a major reason for children engaging in physical activity and sport (Morgan, 2005). As previously stated, those who have positive experiences as a child and are engaged in physical activity are more likely to continue to lead an active lifestyle beyond their schooling years. A study by Bouffard, Watkinson, Thompson, Causgrove, and Romanow (1996) found that children with limited motor skill ability were less physically active and spent less time in social settings with their peers. This once again highlights the importance of quality physical education programs and how much influence they can have on children and the implications for health related behaviour later in life.

Current Practices in Primary School Physical Education

The process of defining physical education has been something of a preoccupation of educators for many years (Kirk, 2010). While physical educators seem to agree on what PE isn’t, the core aims of the subject are a lot less clear (Penny & Chandler, 2000). The multiple and diverse claims about the contributions the subject makes to a child’s development and later life has been criticised, with the degree to which PE can continue to make varied claims and pursue multiple agendas brought into question (Penny & Chandler, 2000). Along with the unclear definition of what physical education is, and the outcomes it should be achieving, further complication is added to the subject when trying to establish who is responsible for deciding on the content and activities being delivered (lisahunter, 2006). In many countries, such as Australia, the decisions regarding the delivery of physical education curriculum in primary schools is left up to the classroom teacher, who has often had limited training in the subject area (Green, 2008). This limited amount of training within the specialty area often leaves teachers feeling uncomfortable and unqualified to teach PE (Cundiff, 1990; Hickey, 1992). Xiang, Lowy and McBride (2002) found that low levels of confidence exhibited by generalist teachers towards teaching PE could be attributed to recognising that they are not equipped to teach PE after observing the complex nature of teaching PE. Morgan and Bourke (2005) found that generalist teachers possessed only moderate levels of confidence towards teaching certain content areas within PE. Games and Sports were reported to have the highest mean confidence rating, with gymnastics and aquatics the lowest. A later study conducted by the researchers (Morgan & Bourke, 2008), which explored the non-specialists teachers’ confidence to teach PE with reference to the nature and
influence of personal school experiences, also found participants exhibited only moderate levels of confidence in their PE teaching abilities. When asked to indicate specific PE content areas they would prefer not to teach, gymnastics and aquatics were at the top of the list once again.

Inadequate training, low levels of confidence, a lack of time, interest, limited resources and support are some of the major barriers to effective PE teaching (Morgan, 2005). These barriers can often lead to teachers avoiding teaching the subject, or specific content areas which they feel most challenged by, such as gymnastics and aquatics. Evans (1990), as cited in Morgan and Bourke (2005), proposed that teachers can feel quite intimidated in teaching a subject such as PE when student knowledge of sports and various games outweighs their own. When applying Bandura’s (1977) theory of social learning in this context, individuals with low levels of confidence may feel uncomfortable with the content, environment and teaching strategies associated with the subject. Ineffective teaching, avoidance behaviors, and a negative attitude towards PE, which can influence student attitudes, may result from a teacher’s doubt about their ability to impact on student outcomes (Morgan & Bourke, 2005).

Method
Participants
Data were collected from 133 4th year pre service primary teachers (26 male, 107 female) ranging in age from 21 to 45 year ($M_{age} = 24.36, SD = 4.34$). The sample comprised 104 generalist primary educators and 29 primary physical education specialists. Both groups had completed one compulsory unit in physical education curriculum, with the specialists also having completed six units pertaining to knowledge and instruction in the sport sciences.

Testing Procedures
The study involved each participant completing a questionnaire containing 29 items which assessed their confidence to teach primary school physical education. On completion of their compulsory Physical Education curriculum unit and their last practicum experience, participants completed a hard copy version of the questionnaire during lecture time. Those who indicated that they would be willing to take part in the re-test phase of the study completed an online version of the questionnaire two weeks later.

Instrumentation
The questionnaire assessed the self-perceived levels of confidence towards primary school physical education. The measure was developed using the current teaching standards and guidelines put in place by government; the Victorian Institute of Teaching (VIT) and nationally recognised
organisations (e.g., The Australian Council for Health, Physical Education and Recreation). Recent documents which outline the performance and knowledge expectations of teachers were examined and integrated within the measure before the initial version was reviewed for content validity by a panel of experts within the field. The questionnaire contained 29 items and required participants to respond to the statement ‘I am confident in my ability to’ on a 6 point likert scale incorporating the anchors of strongly disagree to strongly agree.

**Data Analysis**

Data analysis involved the exploratory factor analysis of the underlying structure of the items designed to assess confidence to teach primary school physical education. Principal axis factoring with direct oblimin rotation was used to reduce the number of items and identify the factor structure. Test-retest stability and internal consistency of the subscales of the measure were also analysed.

**Results**

Using the principal axis factoring method, two factors with eigenvalues greater than one were extracted accounting for 54% of the total variance. Direct oblimin rotation converged in ten iterations. Variables with loadings greater than .10 were used to interpret the factors. After examining the loadings the following labels were given to the factors: Factor 1, Management and Planning and Factor 2, Implementation. Descriptive statistics for each of the factors are presented in Table 1.

Internal consistency reliability values (Cronbach’s alpha) presented in Table 1 show very good internal consistency for the questionnaire. Test retest correlation between measure completion over a two-week interval for a small sample of 17 participants was satisfactory ($r = .71$).

**Table 1: Descriptive Statistics for the Teacher Confidence in Physical Education Scale**

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<thead>
<tr>
<th></th>
<th>Total</th>
<th>Generalists</th>
<th>Specialists</th>
<th>Alpha</th>
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<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
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<tr>
<td>Total</td>
<td>96.23</td>
<td>18.65</td>
<td>91.92</td>
<td>17.96</td>
</tr>
<tr>
<td>Factor 1</td>
<td>61.63</td>
<td>10.42</td>
<td>59.39</td>
<td>10.31</td>
</tr>
<tr>
<td>(Management &amp; Planning)</td>
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<td></td>
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<tr>
<td>Factor 2</td>
<td>34.59</td>
<td>9.16</td>
<td>32.53</td>
<td>8.80</td>
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<tr>
<td>(Implementation)</td>
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</table>
Discussion and Conclusion

The findings of the study indicated that the development of the measure was generally successful. After exploratory factor analysis was performed a two factor structure was revealed and the number of items was reduced based on logical reasoning for exclusion and the internal consistency reliability values. The two factors contained slightly uneven number of items but appeared to have good discrimination between themselves and the generalists and specialists. Previous studies that have used questionnaires to gain information have often failed to provide evidence of the reliability and validity of the instrument so it is difficult to determine whether the measure developed here was more or less reliable. The positive trends demonstrated in the exploratory phase of the development of the Teacher Confidence in Physical Education Scale provide substantial impetus to move forward with a larger scale data collection.

Results from this study further support research, which has found that generalist primary teachers lack confidence towards teaching physical education. Results indicated that generalist teachers possessed moderate levels of confidence ($M = 91.92$ out of a possible range of 24 to 144) towards physical education. When comparing the results obtained by the generalists to the overall totals, they reported lower scores across all areas. These findings are consistent with previous research, which has examined the confidence of pre-service teachers (Morgan & Bourke, 2005). Specialists scored higher when compared to the overall total and to generalists. This finding was to be expected, considering the completion of specific training within the area. The scores achieved for the specialists, however, are not as high as we would have expected, given their specific training, with specialists only achieving scores marginally higher than those of the generalists (Byo, 1999). This result poses a number of questions to be considered concerning pre-service teacher preparation in the area of physical education. Morgan and Bourke (2005) found that teachers had greater confidence in the content areas of physical education if they believed they had received adequate teacher training. We found that both generalists and specialists achieved the highest score within the factor of ‘Implementation’. This factor contained questions that focused on the teaching of the specific content areas such as dance, gymnastics, fitness etc from the ACHPER professional standards for graduate teachers. Results achieved in the Management and Planning factor were not as high, which would indicate that the pre-service teachers felt more confident to implement the practical side of physical education but not as confident in activities such as maintaining records and understanding the place of physical education in the curriculum.

Successful and enjoyable PE experiences in the early years can have a significant positive impact on health behaviours for both the present and future (Kirk, 2005; Morgan, 2005; Morgan &
Bourke, 2008). Primary school is the ideal setting to foster efficacious physical activity oriented health behaviours via the delivery of quality PE programs. Within Australia the majority of primary school PE is taught by classroom generalist teachers. These teachers appear to have basic training within the specialty curriculum area and may feel uncomfortable and under qualified to teach the subject (Morgan & Bourke, 2005; Xiang, Lowy, & McBride, 2002). It could be beneficial to direct more time within pre-service education programs to the finer points of physical education such as planning, the role of physical education as a subject within the curriculum, and assessment methods and techniques so that they can be integrated with the practical content of teaching physical education.

References


But sport is good for you: Exploring the complexities of keeping children in sport and shaping a curriculum of possibilities

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This discursive paper considers the decline in participation in organised sport in New Zealand during the teenage years. Children’s sporting participation generally peaks between the ages of 10-13 years and then continually declines to the age of 18. Around 70% of New Zealand children drop out between the ages of 13-17. (Sport and Recreation New Zealand (SPARC), 2009) There are complex reasons for this, but there are also solutions for keeping them involved, not all of them always palatable for sporting organisations, coaches and parents. This is seen by many, especially those with a vested interest in children’s sport, as an alarming trend.

One of the reasons is that there is a mismatch between the reasons children play sport and the expectations and provision of sport that adults provide (Collins & Jackson, 2007). There are also other sporting and recreational interests that children have, often informal, often not valued by parents or sports administrators, but equally valued and valid for children (Coakley, Hallinan, Jackson & Mewett, 2009) that compete with sport for the recreation time of youths. Adults often overrate the contribution of participation in organised sport and underrate participation in these informal sports (Schultz, 1999).

In order to suggest strategies to retain youth participation in organised sport this paper will examine the sporting participation of children through the lens of sports psychology, functional, conflict and critical theory. Strategies to enhance children’s retention in organised sport are outlined and new possibilities suggested. The paper will, however, also advocate that non-participation in sport is not a negative issue, especially if alternative engagements in physical activity for health benefits are being pursued. To this end, the author also advocates that informal and 'alternative sports’ have an equally valid, educative and engaging orientation.

Introduction

Teachers and parents are often vocal in support for sport as part of the curriculum and part of children’s lives. Yet, how important is sport for children and their lives? Adults generally see the benefits of children’s sport. It is well documented that sport potentially provides many benefits for
children (Malina, 1996; Tremblay & Willms, 2003; US Surgeon General, 1996). As well as the obvious advantage of learning sports skills for further participation when adults, it is claimed that sport contributes to children’s perceptions of competence (Broh, 2002) their moral development (Bredemeier & Shields, 1995; Arnold, 2001), and improves their making healthy choices in life, and that there is a positive relationship between physical activity and children’s physical health (Malina, Bouchard & Bar-Or, 2004; Australian Sports Commission (ASC), 2004). In addition, it has been suggested that adolescent females involved in sport are more likely to delay their first sexual experience and have fewer pregnancies (Sabo, Miller, Farrell, Barnes and Melnick, 1998). Sport success can also, in certain circumstances lead to economic success where “embodied cultural capital is acquired through the physical practices of rugby and is later exchanged for social, cultural and economic resources” (Light & Kirk, 2001, p.95).

However children in New Zealand, especially teenagers, are dropping out of organised sport in significant numbers. The SPARC study (2009) found that children’s sporting participation generally peaks between the ages of 10-13 years and then continually declines to the age of 18. Around 70% of New Zealand children drop out between the ages of 13-17 years. Those with a vested interest in children’s sport, namely adults in the form of parents, coaches, sports organisations, and those with particular political agendas often view this as an alarming trend and one that needs to be reversed. In New Zealand in particular the Government is working with SPARC to facilitate this reversal with varied programmes and funding to retain children in sport and physical activity (SPARC, 2006),

**Is sport important for children?**

This section of the paper considers the importance of sport for children and youth/adolescents from both functional and conflict theories perspectives. This examination will seek to establish if and what importance sport is for children and youth/adolescents.

Adults viewing sport through the lense of functionalist theory would see this trend as a concern. Examination of the decline in sport participation evident in the SPARC study (2009) from a functionalist theoretical perspective, would lead to the consideration that sport is important because it both maintains and contributes towards the production of the values that preserve social order, and for this reason, it is popular in Australian and New Zealand society. These values include socialisation, learning teamwork, communication, Fair Play, developing a work ethic, and in doing so shaping a character that we admire and desire. A child that learns to master sporting tasks with competitive aspects, that becomes a good team member, and demonstrates resilience, is developing the qualities required for productive contribution to society. Functional theorists would argue that in this way sport
contributes to the smooth running of organisations and our society, as it can be a source of inspiration for individuals and society that serves to bind a nation through identification to the individual or team serving as that source of inspiration. Success in sport at the elite level may, therefore, perpetuate a country’s sense of shared identity and in the case of Australia, an image as a fit and sporting nation (ASC, 2004). Sport becomes an important tool for an ‘imagined identity’ of a nation, connected to feelings of the nation’s history and its place in the world, especially at times of international sports events on a global scale (Coakley et al., 2009). Therefore the decline in sporting participation by New Zealand youth is suggested here as a trend that needs urgent attention.

A view of this trend (SPARC, 2009) through the lense of conflict theory sees it differently. Considered through the lense of conflict theory sport is shaped by economic forces and used by the people and organisation in positions of power to control and exploit sport, participants and audiences for economic gain. This theory takes the view that there needs to be change with the way sport is structured and the power relationships inherent in these sports. Examined from a conflict theory perspective, the trend for children to drop out of sport could be seen to be the fault of those with all the power in sport, namely adults with economic power. The conditioning of children to see sport as a participation pathway for the sports ‘elite’, or conditioned to see sport packaged in only ‘adult’ and elite versions, implicitly situates children without the biological/physiological potential to achieve this participation version as consumer spectators. At another level, specific to junior sport, conflict theory could lead one to suggest that children need more control over the conditions of their own sports participation. Support for the idea of more play in sport for children and less of a leaning towards sport as a spectacle is evident in the literature (Coakley et al., 2009; Collins & Jackson, 2007).

Both theories give us a ‘top-down view’ of society and how sport fits with this. According to Coakley et al. (2009)

_However, they do not help us explain or understand the ways that people integrate sport into their lives and actively participate in the processes through which sport and society are organized and changed. They ignore a bottom-up view of society-that is, from the perspectives of people who ‘do’ sport and give meaning to them in their everyday lives._ (p.38)

Sport and society are social constructions and a key ingredient in viewing sport is looking through the eyes of the participants, in this case children. It is, therefore, relevant to this papers later discussion that consideration is given to literature considering what children want from participation in sport.

**What do children want?**
At times there is a mismatch between the reasons children play sport and the expectations and provision of sport that adults provide (Coakley et al., 2009). There are various reasons for this, and parents/coaches/clubs/teachers are part of the problem and part of the solution. When coaches and parent consider the question, ‘Why do we want children to play sport, and what are the benefits?’ it appears timely to reflect on the reasons adults put forward, before comparing them with what children want.

An American study of over 8000 adolescent participants in sport (Weinburg & Gould, 1998), the ASC (2004) research report, the MacDougall, Schiller and Darbyshire (2004) study of Australian children, and the more recent SPARC (2009) study of New Zealand found similar reasons for children playing sport, for wanting to play sport, and also similar reasons for them withdrawing from sport. The American study showed that children played sport to have fun, to learn new skills, for affiliation with their peers, for exercise and excitement, and for the competitive challenge (Weinburg, et al., 1998). The New Zealand study also identified similar findings, with 25% of their respondents identifying that their primary motivation to participate in sport was fun, with 12% saying it was for social interaction (SPARC, 2009). A major part of this social interaction and affiliation that children identify with is the notion of sport having ‘social currency’ (Coakley et al., 2009; SPARC, 2009). The ASC (2004) reported ecological factors as important for sports participation and motivation, with a rural setting ‘embedding’ sports participation, by making it a significant social factor in their lives. The MacDougall, Schiller and Darbyshire (2004) study found that children played organised sport because adults want them to, and that they preferred to have more of a voice in sporting choices. Overall children involved in sport saw it having meaning in their lives and having social currency, if it was ‘cool’ to play and their friends were playing. It also gave them opportunities for social interaction and enriched their social relationships.

From the SPARC (2009) study and the ASC (2004) report it can be seen that many youth are positively disposed towards physical activities and sport, but that there is a trend away from organised participation as they get older, partly due to a wider leisure ‘menu’ that is on offer. This includes the high-tech entertainment choices which are taking both boys and girls away from organised activity (Robertson, 2000). Another compelling reason for our youth to move away from organised activity is their reaction to the more highly structured nature of adult-controlled, organised sport. Children may see the more formal adult controlled sport as rule centred, whereas informal player controlled sport such as skate boarding as action centred, and therefore far more attractive. Skate boarding legend Tony Hawke resonates with many youth when he says;

‘I liked having my own pace and my own rules....and making up my own challenges’ 
(Finger, 2004, p.84).

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From this it could be considered that treating children and youth as a homogenous collective, and sport as intrinsically valued to this collective, is not a meaningful lens through which to address the level of participation in organised sport. Addressing constraints as individual barriers may be a more productive approach to identifying strategies through which to promote sport participation from childhood into and through adolescence.

**Barriers to children’s sporting participation**

Adults erect misguided barriers for children to overcome to play sport, barriers based on gendered stereotypes and entrenched views of children as subservient to adults, to the sport and the administration of the sport. To illustrate this, in 2008 nine year old Niamh Wills of Christchurch, New Zealand, contacted a television advocacy programme, ‘Fair Go,’ because the local Netball Centre wouldn't let young players wear track pants or tights under their netball skirts. Niamh argued that in the winter cold, with temperatures as low as minus 3 degrees, the children did not enjoy the game because they were freezing! The Netball Centre responded by suggesting they'd be okay if they warmed up properly, and that ‘they needed to toughen up’. Viewers emailed to support Niamh and Netball New Zealand sent letters out to all netball centres suggesting – ‘keep the clothing rules nice and relaxed - it's all about the junior players being warm and happy, so they'll keep playing sport’. Eventually after surveys of Christchurch clubs, and on-going adverse publicity, (along with continued cold weather), the Christchurch Netball Centre relented. Niamh and her team were allowed to wear tights under their skirts for the last two games of the season.

Critical theorists would argue that these barriers are the result of socially constructed cultural, political, economic, historical, media and gendered bodily practices (Wellard, 2006). Gordon (2008) also takes the sport of netball to task through the lense of critical theory when he argued that the sports rules still demonstrate that “it was developed for a different age, and that it is a sport that has ‘struggled to keep pace with 100 years of feminism and the changed expectations of what female athletes can achieve” (p.27).Netball, by not retaining currency with cultural changes and social diversification,, has inadvertently erected barriers for participation. These include the rules of the game that do not accommodate ‘the highly trained, aggressive athletes who play the game today’ (Gordon, 2008).

The more informal, child controlled activities such as skateboarding are seen as a threat to organised sports, because adults feel that their sport is ‘better for them’, as it keeps children occupied, out of trouble and under control of adults, in turn shaping better children (Coakley et al., 2009). The converse of this is are the barriers that adults erect in the name of sport, barriers such as poor
programmes, abusive coaches and parents, injury rates, financial costs and sports no longer retaining relevance in their lives. A recent New Zealand Secondary School (NZSS) annual census (2009) of participation data shows that students are jumping these barriers in increasing numbers to now compete in such sports as cycling, Waka Ama (traditional canoe racing), multisport and adventure racing, along with beach volleyball and motocross. While some sports such as rugby league rode a surge of popularity, reflecting their national team’s success, to boost their numbers, the survey largely found that students leaving more traditional season based team sports. Instead their choices revolved around individual sports or event based sports where they could train in their own time, were not committed to a lengthy season, and could train, compete and move on to something else.

Children’s views of barriers:
The SPARC (2009), and the ASC (2004) report found that children identified multiple reasons for their dropping out of sport.

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<th>Significant reasons cited:</th>
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<tr>
<td>Friends have dropped out, which breaks up their social circles</td>
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<td>Too scared to play through fear of injury.</td>
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<tr>
<td>It’s intimidating. Being laughed at for lack of ability, failure.</td>
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<tr>
<td>It’s too competitive!</td>
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<td>Unfair play and unsporting behaviour, bullying</td>
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<td>Other interests</td>
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<th>Other barriers identified:</th>
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<tr>
<td>Sports fees, socio-economic status</td>
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<td>Equipment costs</td>
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<td>Travel costs</td>
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<td>Fundraising demands</td>
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<tr>
<td>Time demands</td>
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<tr>
<td>Strains on family demands/relationships</td>
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<tr>
<td>Uniform costs</td>
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<td>High performance training</td>
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<td>Sports academies</td>
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Strategies to enhance children’s retention in sport into the teenage years
Many authors provide strategies for enhancing children’s retention in sport (Coakley, et al., 2009; Siedentop, Hastie & Mars, 2004; Torbet, 2004; Smoll & Smith, 2002). The key is for adults to look at sport through a more holistic lens and one that puts children at the centre of this view with child based strategies. It is useful to look at strategies through three factors that Coakley et al. (2009) identified as influencing sporting participation. The three were; ‘(1) a person’s abilities, characteristics and resources, (2) the influence of significant others-parents, siblings, teachers, peers, role models, and (3) the availability of opportunities to play sports in ways that are personally satisfying.’ p. 97.

Relating these three areas to the headings of competency, social currency and resourcing, the following strategies to enhance children’s retention in sport could be considered:

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<th>Competency</th>
<th>Social Currency</th>
<th>Resourcing</th>
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<tr>
<td>Find out from each of the children in your team what they want from the sport and from you as the coach/parent. No one size fits all.</td>
<td>Have social events outside practice time.</td>
<td>Have non-competitive leagues of the sport</td>
</tr>
<tr>
<td>Set individual performance goals.</td>
<td>Keep mates together. Foster interpersonal opportunities.</td>
<td>Establish data bases of players and share these with schools, codes and</td>
</tr>
<tr>
<td>Develop realistic expectations of children.</td>
<td>Keep parents involved, they can be a key influencer. If the parent is keen on the sport as a participant or fan, then children tend to stay involved.</td>
<td>Increase the action by manipulating the rules, scores and</td>
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<td>Become more technically competent and personable as a coach</td>
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Sport has the potential to contribute to our culture in a positive way (Siedentop, Hastie & Mars, 2004). By addressing the issues of competency, social currency and resourcing, adults can make sport a better experience for children. Sports coaching is now changing from a sports science and theory approach to one that this more holistic view of the athlete. Through athlete centred practices it is believed that children will enjoy their sport more, become more intrinsically motivated and more independent participants (Kidman, 2005). Coaches also need to more critically examine the sports programmes and the organizational contexts in which they work with children (Coakley et al., 2009). The NZSS (2009) census offers a path that schools and sports codes could follow to accommodate the changing sporting choices of our youth. Individual sports with shorter seasons, event based sports, often alternative to our more traditional seasonal sports, appear to be the new preferences. On the other hand, presenting existing sports differently with shorter seasons or adapted versions of the game may also have more appeal. Today’s children seek out risk and new challenges, and sports that are adaptable can still be a valid means for them to do this. Alternatively, we must accept that there are other interests, often informal and ‘alternative’, not always valued by parents or mainstream sports administrators, can provide an equally valid, educative, healthy and engaging orientation.

**Conclusion: Considering the alternative view**

Adults often overrate the contribution of participation in their organised sport and underrate children’s participation in informal sports. Non-participation in sport need not be a negative thing, especially if active and pleasurable alternatives are found. While not all adults may accept these alternatives as desirable, Coakley (1998) suggested that these alternatives to organised sport are valid as they are ‘often based on the desire for social interaction while engaging in playful and enjoyable physical activities.’ Coakley’s notion of the ‘pleasure and participation model,’ rather than the ‘power and performance’ model of organised sport rings true with many young people disillusioned with adult controlled organised sport. The alternatives allow them to engage in physical activities on their own terms. Rhinehart (2000) outlined the hugely diverse and constantly evolving jumble of sports regarded
as alternative, and not necessarily ‘extreme,’ versions. Not all are emerging, with Ki-o-Rahi, a traditional Maori game of over 1000 years of history acclaimed as ‘the most dynamic traditional game in schools - one which possibly has the potential to transform the physical education curriculum’ (Palmer, Graham, & Mako, 2009).

While a number of alternative sports have been captured to an increasing extent by the media and consumer corporations (such as the X-Games) (Rhinehart, 2000), children still enjoy the pleasure of participating in their sport for the excitement, camaraderie and uniqueness of what they are doing. Adults can enhance these alternatives by working with children in providing opportunities, venues and validating what children do. They can also ensure children’s safety, while perhaps struggling to come to terms with the lifestyles often attached to these sports that may run contrary to our dominant culture.

This paper does not propose solutions for providing alternative sports for children; rather suggestions of strategies that may be possible. It is often challenging for adults to step back and let children play and explore without wanting to control. It may be more educative for parents, coaches and other adults to take time to look and reflect on the nuances of these alternative sports through the eyes of the children involved.

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SECTION 6:
Moving, Learning, & Achieving Increased Personal Responsibility and Quality Social Interactions
A sense of belonging: sport, masculinity and the team environment

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One of the fundamental characteristics of hegemonic masculinity is self-reliance therefore, men are less likely than women to form close relationships in which they discuss sensitive issues. However, for men involved in a team sport such as Australian Rules football, an opportunity exists to develop close bonds with their team mates. The team bonding, camaraderie and friendships that are formed through team sport are some of the more significant aspects that are missed when retirement from sport occurs.

This research is an investigation into the constructions of masculinity following a career in elite Australian Rules football. It was a qualitative study involving 20 retired footballers. This study utilised a life history and social constructionist perspective. An important part of this research was how the experiences as a footballer have influenced their construction of masculinity. One of the more significant themes throughout this research was a sense of belonging to a team. In retirement this was the most common aspect of being an elite sportsman the men missed. Therefore, this presentation will outline the importance of being involved in team to men and how participation in team sports such as Australian Rules football leads to a sense of belonging. This has significant connotations for the development of masculine identity, given that the social construction of masculinity encourages self-reliance in men and the formation of friendships that avoid discussing sensitive issues.

Introduction

The link between sport and the construction of masculinity is complex (Pringle & Markula 2005; Fitz Clarence & Hickey 2001). Masculinities are produced and reproduced within a social, cultural and historical context (Kimmel & Messner 2004; Connell 2000). A culturally exalted form of masculinity, hegemonic masculinity is characterised by aggression, dominating behaviour, interest in sport and self-reliance (Connell 1995; Williams & Best 1990). Historically sport has been a crucial arena for the construction of gender and is an important masculinising process by which young boys are taught early to accept the values associated within sport, such as competition, toughness and winning at all costs (Theberge 2000; Messner 1989). Allen (2003) stated that involvement in sport for social reasons such as wanting to be a part of a team provides significant motivation for sport participation. Dubé et al. (2007) reiterates this and outlines the sense of a strong bond between team mates due to a shared reality though sport. In addition, given that much of an athlete’s time is spent with team mates both sporting and non-sporting
contexts, friendships are perceived as being easy to form. Contemporary Western ideologies suggest that men are incapable of expressing emotions and intimacy as culturally men are encouraged to be self-reliant (Williams & Best 1990; Walker 2004; Rubin 2004). The difficulties men have in allowing others to see their vulnerabilities may lead them to close themselves off in order to protect himself (Rubin 2004). However, the close friendships formed through shared experiences and challenges in a formalised social group such as a sporting team can lead to an important level of support for team mates. This was particularly evident in Dubé et al.’s research (2007) as these friendship and close bonds were established as a result of the time spent together in terms of travel, time on the bus, time spent away from non-sport friends and families. Walker (1994) argues men’s friendships focus on shared activities. Participation in sport therefore, provides an opportunity for men to do and achieve together. This can lead to the formation of close relationships with team mates and as such a sense of belonging within the team. The time spent away from non-sport friends can mean that the majority of an athlete’s close friendships are formed with team mates. Therefore, feelings of loss can be exacerbated when the athlete retires and no longer spends as much time with former team mates.

This paper presents some of the results of a larger doctoral study on the construction of masculinity following a career in elite Australian Rules football. The larger study aimed to understand how men construct masculinity following a career in elite sport as well as investigate the ways in which involvement in Australian Rules football influences how masculinity is socially and culturally enacted by this group of men. This paper therefore, focuses on involvement in sport, the sense of belonging to a sporting team and the influence of the team environment in masculine scripts. The findings of this research can provide and understanding into the importance of belonging to a sporting team for men and the way in which masculinity is socially produced and reproduced within such masculinised institutions. In addition, an insight into the construction of masculinities and men in general can be gained.

Method
This was a qualitative research study utilising a social constructionist and life history perspective. Qualitative research aims to understand the meanings people bring to their everyday experiences through an interpretive, naturalistic method (Denzin & Lincoln 2000). Qualitative research is particularly valuable when studying groups, as their experiences can be observed in their natural settings (Denzin & Lincoln 2000).

Participants
Twenty retired footballers took part in this study. The national Australian Football League competition began in 1990, therefore, participants had retired after 1990, were male and over the age of 18. Purposeful and snowballing sampling methods were used to recruit footballers from the extensive pool of retired AFL footballers living in South Australia, Victoria and Western Australia. Some of the men had short AFL careers, playing 5 games, while others played over 300 games, thus having lengthy careers.
Procedure
The men took part in a one-on-one semi-structured interview which lasted between 35-90 minutes. An interview guide was utilised for this study with topics covering the AFL draft, the fans and crowd participation, the media, the football subculture, the male body, pain, identity and retirement. Interviews were audio recorded and transcribed verbatim.

The interviews were analysed using the thematic approach outlined by Braun and Clarke (2006). Rather than bringing pre-conceived ideas to the analysis, an inductive approach allows for the themes and meanings to naturally emerge. The meanings people give to their experiences are socially produced and reproduced therefore, a thematic analysis through a social constructionist approach aims to interpret meanings in a socio-cultural context (Braun & Clarke 2006).

Results and discussion
One of the fundamental characteristics of hegemonic masculinity is self-reliance (Williams & Best 1990). Men are less likely than women to form close relationships in which they discuss sensitive issues (Walker 2004). This was reiterated by some of the men this research who contended that men form many superficial friendships rather than close bonds with other men. However, for men involved in a team sport such as football, an opportunity exists to develop close bonds with their team mates. The men in this research described being part of a team as being ‘brilliant’ and ‘a very special part of their lives’. It was suggested that a major part of what drives elite footballers is the sense of belonging to a team and the closeness that comes from working hard together towards success. The team bonding, camaraderie and friendships that are formed through sport are some of the most significant aspects the men in this research miss in retirement. Therefore, while culturally in Western society’s men are encouraged to be self-reliant, belonging to a sporting team allows team mates to be mutually dependant on each other, thus challenging the need to be completely self-reliant. A common response with regard to belonging to a team was:

*It’s probably the thing that you miss the most when you finish up actually is the camaraderie in the locker room and the half an hour after you have a win just the bonding and the sharing of an achievement or an accomplishment as a group ... it’s probably one of the top two or three things about playing footy is just the bonding and the camaraderie that you get with your mates and it can be pretty special.*

The close bonds team mates form and a sense of achieving something together is one way the group performs masculinity. Pioneering research by Messner (1987) and Drummond (1996) stated that public masculine identities are concerned more with doing and achieving and as such the constant striving for success through sport becomes a way to connect athletes together. If the team succeeds together this can reinforce individual masculinity, in which success is an important aspect. Therefore, winning becomes crucial to teams achieving masculinity together. Winning encourages confidence and is critical to team morale and motivation. When teams are not winning, the men argued that team mates ‘carry’ each other though thus reinforcing the unique friendships formed
though belonging to a team. The bonds team mates form were argued to be at times closer than the relationships the men had with their girlfriends because of the commonality of working together towards achieving a AFL premiership. While the men recognised that a sense of belonging to a team can be experienced in other forms of employment, belonging to a sporting team was perceived as being a unique way to build relationships with other men. The fundamental characteristics of the culturally exalted form of masculinity, hegemonic masculinity includes aggression, dominating behaviour, interest in sport and heterosexual sexual conquest (Connell 1995). These are reinforced through participation in sport and contribute to the sense of doing and achieving together. Participants argued that sport teaches men to communicate, trust team mates, and be willing to accept physical contact force in order to protect each other, which lead to camaraderie and closeness not experienced in business, therefore reinforcing participation in sport as an important masculinising process. One of the men argued:

"It’s completely different to being part of an economic team … not only do you have a pre-season where you’re working together day in day out in becoming the fittest, mentally toughest football team that you can possibly become but then you have a commitment to each other in winning a game every week of the year to a degree and then finals so build up a greater degree of camaraderie, a great amount of trust, you’ve got intuitive understanding of you team mates who understand your personality probably better than you girlfriends do because you’re training in high pressure environments day in day out so what’s it mean being in a team? Well a sense of … achieving something together is the most satisfying thing."

Sacrifices made for team mates and protecting each other point to a common link between sport and war; being involved in a team was also compared to being part of the army and making sacrifices for your team mates as soldiers in battle. Stempel (2006) argued that sports are the most explicit examples of power, domination and competition, which combined with the physicality required, particularly in contact sports highlights the commonality with war (Whannel 1999). The sacrifices team mates are prepared to make for each other furthers the commitment to the team and its members, thus reinforcing the development of close bond and therefore the men’s sense of belonging to the group. Participants stated:

"Individual sport is good, it’s not really for me, I like the sacrifices that are involved in football for a mate, you can reward a mate very often, whether it be a shepherd, tackle or just giving him the ball and there’s a certain level of courage and I guess bravado and soldier type thing when you go out to battle and your mates are alongside you."

In a team sport where positions in the side are limited, an inevitable hierarchy evolves between teammates. This extends from senior players on the team to inexperienced players. The competition for positions was described as being a health aspect of being involved in sport, particularly as having a competitive spirit is perceived as a trait men ‘naturally’ possess. Further, competing for positions provides extra motivation to train harder and push oneself to achieve, thus reinforcing their status as footballers. One participant commented:
I think it’s a bit of an ego thing as well, everyone wants to be the tall poppy and everyone wants to be on the big pay packet, that’s as simple as it is. The teams like Geelong now probably iron out some of those areas but they’d still have their clicky little groups … the successful teams are the ones that join together and are good mates but the ones that don’t have success you’ll find that they’ve got clicky groups.

One of the most significant aspects of being involved in a team for the footballers in this research was the acceptability of showing emotions with each other. Founding researchers on masculinity David and Brannon (1976) argue that femininity permits females to display emotions such as being anxious, depressed, frightened, happy or loving as well as being open and vulnerable. These characteristics, while acceptable for women to display, they are not for men. In a team sport when success or failure changes every week, emotions can vary greatly from week to week. In a team environment footballers experience these emotions together and so where in general suppressing emotions is culturally encouraged, a team environment, as in the case of particular games or circumstances mentioned above, provides an opportunity for a situational acceptance of displaying emotions. One participant argued:

It’s good you can show your emotions with them, the ups and downs, your success and when you’re not so successful you experience a lot of different emotions together so you have those bonds there … an ultimate is the premiership so that’s something that you can share, it’s about sharing I think, playing in a footy team and if you can get to the pinnacle and win a grand final, that’s what it’s all about, that’s something you never forget and you share it with them.

However, the behaviours that footballers are permitted to display together as a team are largely related to football issues, such as winning or losing games, protecting team mates both on and off the field and getting through hard pre-season training together. Some of the men recognised that it is not appropriate for footballers to display emotions that are perceived as being feminine such as being upset over a relationship break up. Therefore, individual issues are suppressed, and team related issues are prioritised. As one of the men stated, if each individual displayed all of their emotions, the team would not function well together and would therefore not be successful:

You don’t necessarily do it at the club but there are avenues to release that emotion to be yourself which is in some ways fair because if everyone is emotional and moody and negative and happy all the time the club wouldn’t function. 44 people going through their own stuff, the amount of break ups and this and that that happen you’re not going to do well so you have to put your club face on and be resilient providing you are aware and you know what the avenues are that you need to explore to deal with whatever’s going on.

It was contended that individuals who wanted to stand out from their team mates or who were unwilling to work as a team would not have a long career in football. Similarly, teams who did not work well together were argued to be unsuccessful in the pursuit of premiership glory. Common responses included:
I can’t describe that, it’s something that you need to experience – some guys get it and some guys don’t and the ones that don’t get it don’t last long. It is being part of a team, it is having as much empathy for the bloke who’s number 26 on the list as it is for the bloke who’s the best player … being part of a team was what it was all about for me. … that’s what I still enjoy, that’s why we stay in it I think because you’re part of a club, part of a greater oneness if that makes sense you know you’re all striving for one goal and that’s for the team to do well and whether that be the guy who mixes the drinks to the coach to the captain on the field it’s everyone trying to do the same thing and that’s what’s great about sport.

The men stated that they “win together and we lose by ourselves,” thus reinforcing the notion of being committed to the team and not aspiring to individual honours. Without the team working together, the pursuit of premiership success was argued to be unattainable. In addition, being able to work well as a team can increase the camaraderie between team mates and reinforces the importance of being able to communicate with each other, which becomes a transferrable skill the men can utilise in their careers following retirement from sport.

Conclusion
The acceptance and sense of belonging that men gain from being part of a sporting team has important connotations in the way they perceive themselves as men. Indeed, involvement in a team, as highlighted by this research, has had a significant influence on the development of masculine identity for this group of men. It can therefore be argued that sport becomes a significant way through which men can ‘do’ masculinity together. The culturally exalted expectations of the hegemonic form of masculinity encourage self-reliance in men and the formation of friendships that avoid discussing sensitive issues. However, participation in team sports allows the formation of close friendships in which displaying certain types of emotion, such as crying when losing an important finals game, are permitted. Upon retiring from elite sport, it is these close bonds with team mates that are among the most significant elements of sport for which the men yearn most. As evident by the importance the men in this research place on the bonds with team mates, participation in sport leads to a sense of belonging and can positively impact upon young men’s self esteem and their masculine identity.

Given that men are often defined by what they ‘do,’ (Keen 1991) further research into masculinities, sport and men could investigate whether a sense of belonging gained through involvement in a sporting team provide similarities and differences to male-oriented workplaces. As contended by the men in this research involvement in a sporting team is somewhat different to traditional places of employment. However, given that the football environment provides a microcosm of society in which we can study groups of men, the possibility of analysing aspects of socialisation, camaraderie, team work and transition phases such as retirement could be beneficial for understanding men in retirement from work. Additionally, as this paper is part of a larger study on retirement from elite sport, further research will investigate the changes that occur to athletes’ sense of belonging to a team when they retire from sport.
References


Female physical educators in all boys’ schools – Opportunities for enhancing social interactions?
The significance of physical education (PE) and sport in a boys’ school has long been highlighted as a device for the privileging of hyper-masculine identities (tough, stoic & assertive) at the expense of marginalised masculinities and femininities. The propensity for some “members of male sporting clique’s to engage in practices of bullying, shaming, violating and excluding” (Hickey, 2008, p. 148) raises important questions about how the practice of boys’ PE and sport can sometimes lead to unhealthy and damaging social interactions between different types of boys. In response to this rhetoric, some boys’ schools have acted to employ female PE teachers to disrupt “concern about the codes of unity, entitlement and privilege that can be forged among groups of boys whose identities are strongly aligned with sporting forms of hyper-masculinity” (Hickey, 2008, p. 148). Given this potential, we suggest that there is something unique or different about working in spaces or contexts around boys’ physicality. More specifically this paper raises questions about the particular implications for a PE teacher’s professional work, particularly as a female PE teacher.

In current educational climates the performance of boys in social and educational contexts attracts considerable concern. Better understanding the contributions and capacities of female PE teachers in all boys’ schools, (as localised social and political environments in which gendered identities are formed) is warranted. Professional identities and “the meaning of gender is negotiated in everyday interactions” (Priola, 2007, p. 23) implicating the culture of all boys’ schools as significant in the development of ideas around effective, gender inclusive, pedagogical practices. Drawing on case study data, this paper seeks to explore how notions of effectiveness about boys’ PE are formed, with intent to make visible the extent to which female PE teachers influence dominant gendered practices of social interaction in all boys’ PE settings.

Introduction

Over the past few decades, much attention has been focussed on the social interactions that occur in boys’ schools, with a view to revealing strategies to address boys’ supposed underachievement (Keddie & Mills, 2007; Kenway, 1997; Lingard, Martino, & Mills, 2009). In fact, much of the rhetoric around the purported underachievement of boys in educational settings has been fuelled by claims grounded in social interactions. For example, a lack of male role models, an increase in the number of females in the educational setting and a lack of boy-friendly pedagogies are frequently
drawn on as factors influencing boys’ performance (Bly, 1991; Hoff Sommers, 2000; House of Representatives Standing Committee on Education and Training, 2002). Acknowledging critique levelled against these arguments (Connell, 2004; Mills, Martino, & Lingard, 2007), we suggest that such issues may be addressed “through classroom practices that encourage boys to appreciate a diversity of masculinities, whilst challenging the more ‘toxic’ forms that limit their and other’s educational experiences” (Keddie & Mills, 2007, p. 18).

Although sport has long been recognised as a central site in the social production of masculinity, this does not mean that sport typically facilitates the development of coherent and fulfilling narratives (Pringle & Hickey, 2010). Indeed, Sport and physical education (PE) settings have been implicated as potential spaces where the cultivation of ‘toxic’ forms of masculinities, or those displaying hyper-masculine identities (tough, stoic & assertive), are potentially privileged at the expense of marginalised others (Hickey, 2008, 2010; Miller, 2009). There is a propensity for some “members of male sporting clique’s to engage in practices of bullying, shaming, violating and excluding” (Hickey, 2008, p. 148). This raises important questions about the ways in which boys’ PE and sport can sometimes contribute to unhealthy and damaging social interactions between different types of boys, and between boys and their teachers. Despite a move by some boys’ schools to employ female PE teachers to disrupt the dominant gendered practices of hyper-masculine identities, relatively little is known about how they negotiate the gendered socio-political landscape of their professional work. Perhaps more importantly, this also raises questions about the potential impacts on their work. This paper works to make visible the extent to which female PE teachers influence dominant gendered practices of social interaction in all boys’ schools. Further this paper acknowledges the political nature of teaching (Keddie & Mills, 2007) and explores the social interactions of one Year 8 boys’ PE classroom and their teacher, Rachel Moore*, to reveal this “space of schooling as a site of contestation, resistance and possibility” (Giroux, 2003, p. 6).

A Methodological Signpost
This paper draws on case study data collected to interrogate PE pedagogy in two Catholic boys’ schools. Specifically, data obtained via field observations of one Year 8 lesson and then reflective semi-structured interviews with the teacher and six of her students are considered here. Analyses adopt the principles of feminist poststructuralism, and in particular draw from the works of Michel Foucault, as a theoretical lens to facilitate a reading of meanings that are invariably layered and that possess the potential for contradiction (Hickey, 2010). There is something slippery about researching social interactions (Law, 2004) and given the mutable nature of sport, PE and identity formation, we find warrant in drawing on research tools that trouble the taken-for-granted ways of being. Much of the existing work on gendered identities and sport has linked how we act and how we see ourselves to the localised, social and political environments in which we live, so as socially constructed. To be

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able to consider the impact the culture of an all boys’ school has on shaping social interactions of various masculine identities a consideration of femininities is also required. As Aitchison (2007) explains, “…masculinity cannot be discussed other than in relation to femininity as each is a relational, if not dualistic, concept defined by its other” (p. 2). Foucault’s thinking around discourse and power relations has also proven helpful in a discussion of how particular masculine identities become normalised in these settings. As Garrett (2004) explains “while identities are constructed through a process of ‘positioning’ within available discourses and negotiation with others, they are embodied through the internalisation and ‘living out’ of these discourses” (Garrett, 2004, p. 225). Discourses, according to Foucault (1972) are “practices that systematically form the objects of which they speak...Discourses are not about objects; they do not identify objects, they constitute them and in the process of doing so conceal their own invention” (p. 49). Foucault’s notion of discourse-power relations (Foucault, 1977), operating multi-directionally, highlights the forms of power that “work to control social relations and shape individuals” (Markula & Pringle, 2006, p. 16). A final warrant for this perspective is that this particular lens asks questions about how some practices and notions around effective PE teaching become dominant and accepted uncritically as the ‘right way to teach boys’ PE’, whilst others are dismissed.

Analysing the Social and Pedagogical Interactions of Boys’ PE:
Sebastian’s story
As a heuristic device, the following narrative is used to analyse the dominant discourses evident in a Year 8 boys’ PE class. Additionally, it is also offered to demonstrate how individual lived experiences shape social interactions between boys and their female teacher as they engage in a pedagogical encounter of cricket.

The lesson commenced with Miss Moore (Rachel) explaining that after students had completed their warm up relay drills and practiced their bowling and batting skills in the nets they would spend the second half of the lesson playing ‘diamond cricket’. At the start of the lesson she suggested that this would most likely be a new game for most students, so she would require them to look at the whiteboard and listen to instructions about how the game was to work. There were quite a few groans from some students in the class, and comments such as “can’t we just play the real game”; “Boring...”; “Can we sledge in this game?”; “Do we still use a real cricket ball”? Sebastian sat with his head in his hands and reluctantly looked up so that he could see what this game required of him. At the back of the group heading out to the oval, Sebastian carried the equipment bag for Miss Moore and grumbled under his breath “I don’t really like cricket”. After overrunning the last cone when trying to pick up the tennis ball from the cone, Sebastian jogged slowly back to his team. He seemed aware that yet again, his relay team has finished last and that there were already students moaning...
“can’t we just play the real game, this is crap”. Whilst we do not have the scope here to give an intimate account of the whole lesson the concluding game of ‘diamond cricket’ did nothing to boost Sebastian’s spirits when he stood in his crease at one of the four wickets. Aware that the bowler from the fielding team could bowl to any of the four batsmen, Sebastian did not appear overly surprised that the ball flew past his bat at lightening pace to collide violently with his middle stump. Of the six balls of the over, each were bowled to Sebastian with similar outcomes. With six runs deducted from the batting teams score for each ‘wicket’, at the end of the first over Sebastian’s team score stood at -36. At this point, Miss Moore modified the rules that you couldn’t bowl consecutive balls to the same batsman.

During conversations following this lesson, it is not surprising to learn that Sebastian does not particular like PE. He explains:

“I like to be involved in everything, even though I may not be good at that particular sport, I still will be involved and try my best…I do acting, dancing and singing outside of school but that doesn’t really help here because it doesn’t really qualify as a sport…you know it is more cultural…I did try out for the school netball team but I didn’t get picked…I mean I like playing the games in PE, not really the skills cos they’re kind of boring, but I like warms ups and team games more than individual games…I’m not the best at PE in my class and I just find that I can be better with people than by myself, I’m more of a group person…I prefer cricket than football, just the roughness of football…I just don’t think it was fun…diamond cricket was sort of boring” (Sebastian)

Implicit in his account, Sebastian laments he is not a particularly skilled sportsman and it appears that he positions sport as the antithesis to cultural activities such as acting, dancing and singing. Interestingly his inter-school sport of choice was ‘netball’ which has a strongly linked with feminine identities (Russell, 2007). These activities, characterised by aesthetics, creativity and self-discipline are vastly different from the attributes of stoicism, athleticism, competitiveness and aggressiveness that permeate sports such as football (in its various codes) (Messner & Sabo, 1990).

In the context of an all boys’ PE class, where traditionally masculine team sports such as cricket and football dominate the curriculum, the powerful effects of dominant gendered discourses act to position hyper-masculine identities as privileged. In the case of students like Sebastian, who appear to characterise what Connell (1995) terms ‘marginalised’ or ‘subordinated’ masculinities, pedagogical practices in PE that exacerbate ability levels can have some drastic outcomes with respect to social interactions. Exploring how Sebastian felt students in his class responded to him if he classified himself as not so good at PE, he explains:
“Oh well, they like encourage me to just try a bit harder and all that kind of thing...sometimes they’re like “Come on Sebastian” or “You’re not a girl” or something like that. Maybe those are the days where I’m just tired and I can’t be bothered doing PE cos I’ve had a late night or I’ve had a bad day...I think some students are afraid to say “I don’t like PE” because all other boys say “PE is just the best, it’s way better”, but you know there are boys who might prefer art or something like that...Miss Moore is good because she encourages me more and she is more responsible, she really tries to help me improve” (Sebastian).

Perhaps more blatantly, Nigel and Matt provide additional insights into the “encouragement” that Sebastian receives from his peers.

“Sebastian...yeah he says he enjoys sport but he is no good at it...no-one wants to be in his team basically because he’s so bad...like no matter what he plays he messes it all up so he would be at the bottom of the spectrum because although he may be able to pass it around to other people and give everyone a go, well he cannot even do that because he would be intercepted in every way before he even gets able to...he get’s bagged every PE lesson...the lads really put him down publicly...everyone thinks he is just a nerd” (Nigel)

“It’s more just joking around but if a good person is joking around with someone who is not as good, like Sebastian, it almost seems like they’re bullying to a point, and they’re probably not, but it comes across that way sort of...Cricket a good one though because of sledging...in cricket you sledge, it’s just what you do when you’re behind the stumps and stuff like that...I was giving it to him” (Matt).

Inherent above, it appears that despite school rules and regulations that prohibit bullying and promote positive social interactions amongst students, the PE classroom can potentially become a breeding ground for the normalisation of such interactions. In a video-stimulated reflection session with Rachel, this incident is replayed and when prompted to explain how she went about planning this lesson, Rachel indicates:

“Well, I wanted to get away from just a traditional normal game of cricket, I mean the kids that play on the weekend absolutely annihilate those that don’t so I had two choices, we could all do something different, like diamond cricket, or I would have to run two games and divide kids by ability levels...but I mean there are a lot of safety issues with that, firstly we would have to use a tennis ball and they wouldn’t really get much of a chance to practice their skills if they only bat and bowl once...I mean at least with diamond cricket you get a good go at it” (Rachel)
Considering the above comment, the prevalence of performance discourses where the main consideration is “how can performance be improved or enhanced” (Tinning, 2010, p. 69) appears to underpin much of Rachel’s pedagogical intentions. Further, particular tensions are revealed as she describes factors that underpinned her decision to opt for a ‘new’ game. Perhaps most significantly, she alludes to being aware that a ‘traditional normal game of cricket’ privileges those able, dominant masculine identities and her choice of words such as “annihilate” conjures images of negative interactions. Interestingly, we see a concern with ‘safety’ mentioned. Although this is qualified by a statement relating to the use of a ‘tennis ball’ first and foremost, it could also be indicative of her subscription to a dominant model of teaching, where teacher control, management and order and foregrounded (Tinning, 2010). When questioned on this, she explains:

“Well most of the male PE teachers, you know most of them have played cricket, so I think they have automatic respect from the kids…I think if I can just be good at the management stuff and know my content then it will be Ok…I mean I try to introduce new games, but the kids just hate it, and I say “well we’re going to keep playing it until you do it properly” because if we just played the main game, like they do in other PE classes, then they won’t learn anything” (Rachel).

A female physical educator’s contribution: concluding remarks
When considering the contributions that female PE teacher’s can make to the pedagogical practice of boys’ PE it appears that there is much about the discursive functioning of an all boys’ school context that acts to constrain their professional work. In the comments above, we see Rachel grapple with a desire to foster more inclusive pedagogical approaches yet weighs this against what occurs in other classes. In her work analysing professional teaching identities, Bloomfield (2010) acknowledges the significant impact that colleagues and mentors can have on the way a teacher constructs pedagogical practices. Given that Rachel appears to acknowledge how existing practices act to privilege the skilled participants, questions are raised about her adherence to a dominant teaching model characterised here by a warm up, skills and then a game with a focus on management, control and order. Acknowledging the significant body of sociological literature that exists to explain this culture of (re) production in terms of PE pedagogy (Curtner-Smith, Hastie, & Kinchin, 2008; Kirk, 2010; Tinning, 2010), it appears that a greater degree of critical analysis of how the school context (complete with its discourse-power relations) acts to impact on pedagogical practice could be addressed through undergraduate degrees. Whilst we are conscious that ‘awareness’ does not always translate into ‘action’, an understanding of how existing practices may inadvertently support and escalate the privilege afforded to some hyper-masculine identities is required by teachers. A greater acknowledgement of this may act to promote more inclusive social interactions amongst groups of boys in sporting and PE settings.
References


Navigating healthy relationships:
A skills-based empowerment approach to relationship education
The ‘Navigating Relating’ program introduced in this paper adopts a skills-based empowerment approach to minimising harmful relationship outcomes. Specifically, the program aims to reduce the risk of abusive dynamics forming in adolescents’ current and/or future couple relationships by promoting personal responsibility and positive self-agency. Few programs in this area are based on clearly articulated, empirically supported theory (Murray & Graybeal, 2007; Whitaker et al., 2006), and programs notable for their strong theoretical framework and promising evaluation results (see Hickman, Jaycox, & Aronoff, 2004) are typically very demanding in terms of the class-time, community involvement, and co-ordination effort they require. ‘Navigating Relating’ is unique in that it is both research-driven and designed to facilitate widespread and sustained implementation in schools. This paper summarises the theoretical and empirical foundations upon which ‘Navigating Relating’ was developed, outlines the key features and components of the program and, finally, heralds plans for the program’s future development.

The Problem of Abuse in Relationships
Harm-causing behaviour within romantic/intimate relationships is typically referred to as partner or relationship abuse, suggesting an unshifting power differential between the ‘perpetrator’ and the ‘victim’. This connotation, while accurate in some cases, can be misleading. In developed western nations (see Archer, 2006), abusive relationships tend to evolve dynamically with the target of the abuse shifting between partners (Dutton & Nichols, 2005; Hamel, 2007). In addition, harm-causing behaviour in relationships is not always enacted with malicious intent. For example, an emotionally needy partner can cause social harm without deliberately trying to cause harm. While abuse resulting in serious harm is easy to identify, identifying the precise point at which a relationship becomes “abusive” is often difficult.

Despite these problems, the terms “abuse” and “abusive” are used in this paper to refer to behaviours by one or both partners that have the potential to cause harm. Physical abuse (or violence) is defined as aggression by a partner that could result in physical pain, injury, or fear. A number of physical and psychological problems are associated with young men’s and women’s experience of physical partner abuse (Fletcher, 2009). On the other hand, psychological partner abuse is an equally worthy target for prevention, typically affecting physical and mental health in males and females more profoundly than physical abuse (Coker et al., 2002). Psychological abuse is defined as behaviour by a partner likely to result in social or emotional harm. Social harm, in this context, is a negated sense of connectedness.
with others outside of the relationship or a restricted sense of social autonomy. Emotional harm is defined as a compromised sense of self-esteem or self-confidence.

**The Extent of the Problem**

Abusive relationships are so common in Australia that it is surprising that the issue has not attracted more concerted attention in schools as a health education topic. A nation-wide study conducted by the Crime Research Centre (2001) is the most comprehensive prevalence study on this topic published in Australia to date. This study found that almost one-in-three young Australians have witnessed violence between their parents/step-parents, and one-in-ten young Australians have been exposed to such violence on three or more occasions. More young Australians reported witnessing violence by both parents (14.4%) than by only the male partner (9%) or by only the female partner (7.8%). Over half of young Australians reported observing psychological abuse between their parents/step-parents, with over 25% reporting being exposed to such abuse on three or more occasions.

Relationship abuse is not confined to adult couples. In most samples, 30-40% of young people with relationship experience report being directly affected by abuse in one or more of their relationships (e.g., Halpern, Spriggs, Martin, & Kupper, 2009; O'Leary, Smith Slep, Avery-Leaf, & Cascardi, 2008). The Australian study cited above found that over half of all boys and girls aged 12-14 years have had relationship experience, and over 20% of these adolescents reported that they had experienced violence by a partner. Of the 80% of 18 year olds who reported relationship experience, over 40% reported experiencing violence. About half of relationship-experienced boys and girls reported being psychologically abused by a partner: 12% reported being repeatedly yelled at, and 9-13% reported being repeatedly put-down or humiliated. Preventative education efforts with young people are clearly warranted.

Studies on this topic, including the Australian study just mentioned, tend to find that the prevalence of perpetration and victimisation in relationships is similar for young men and young women (e.g., Harned, 2001; Kaura & Allen, 2004; O'Leary & Smith Slep, 2003; Straus, 2008; Temple et al., 2005; Whitaker, Haileyesus, Swahn, & Saltzman, 2007). Indeed, studies focusing on partner violence tend to find that more girls are aggressive in their relationships than are boys (e.g., Chapple, 2003; Hird, 2000; McCloskey & Lichter, 2003; O'Leary & Smith Slep, 2003; Ozer, Tschann, Pasch, & Flores, 2004; Windle & Mrug, 2009). However, while some males are severely victimised by female partners (Fontes, 2007; Frieze, 2005), girls are more likely than boys to report being hurt or frightened by a partner’s aggression (55% versus 22%; Crime Research Centre, 2001).

**How Relationships Become Abusive**
Given that abusive patterns can become established early in young people’s relationships and can carry through into their later relationships (Feiring & Furman, 2000; Smith, White, & Holland, 2003; Wekerle & Wolfe, 1999), preventing the development of unhealthy dynamics in adolescent relationships is an imperative challenge for health educators. Adolescence is a “sensitive period” for learning about relationships and, therefore, provides an important window of opportunity for prevention education (Fraley, Brumbaugh, & Marks, 2005). Effective relationship education for young people is not just important for optimising young people’s present and future wellbeing, but also for protecting the wellbeing of children they go on to raise (Davies & Sturge-Apple, 2007; O’Leary & Jouriles, 1993; Osofski, 1999). While statistics are plentiful on the prevalence of abusive acts in adolescent relationships, only recently has research attention begun to shift towards the processes that lead to chronic partner abuse (e.g., Bell & Nagle, 2008; Winstok, 2007). Of importance is what these processes mean for how health educators can best help young people to avoid harmful outcomes.

A range of factors render individuals more at-risk than others of perpetrating or experiencing chronic partner abuse (e.g., Kane, Staiger, & Ricciardelli, 2000; Lewis & Fremouw, 2001; Vezina & Hebert, 2007); however, no one factor is a reliable predictor. Indeed, it is misguided to believe that partner abuse is a phenomenon predicted by variables relating only to victims or perpetrators. The extent of harm caused depends on the characteristics of the dyad (i.e., both partners). For example, in cases of social abuse, at least one partner needs to behave in a manipulative manner, but not all partners are equally likely to succumb to a partner’s control tactics (e.g., Few & Rosen, 2006). In cases of physical abuse, bi-directional aggression is associated with more frequent and severe violence than uni-directional aggression (Crime Research Centre, 2001; Gray & Foshee, 1997; Temple et al., 2005; Whitaker, Haileyesus, Swahn, & Saltzman, 2007). Far from suggesting that both partners are always equally “to blame” (see Hamel, 2007), chronic abuse of any type is the result of a problematic combination of both partners’ tendencies and vulnerabilities.

The dyadic slippery-slope model (Murphy & Smith, 2010a) captures this complexity, highlighting the role of each partner’s actions (referred to as “warning-sign behaviours”) but also each partner’s reactions in contributing to abusive dynamics. According to this model, relationship dynamics that lead to harm—characterised by secrecy, overdependence, hostility, and/or power imbalance—develop when one or more warning-sign behaviours by either or both partners are accommodated or responded to aggressively by the other partner. Warning-sign behaviours include dominance-seeking, possessive, denigrating, conflict-controlling, and retaliatory behaviours; and are engaged in by both young men and young women (e.g., Crime Research Centre, 2001; Foshee, Bauman, Linder, Rice, & Wilcher, 2007; Harned, 2001; Miller & White, 2003; Murphy, 2009a) in heterosexual and same-sex relationships (Bunker Rohrbaugh, 2006).
Warning-sign behaviours are often not viewed by young people as forms of abuse per se (Crime Research Centre, 2001; Murphy, 2009a). However, they can exacerbate a partner’s existing vulnerabilities such that assertive responses to future warning-sign behaviours become less likely over time. Assertive responses, here, are defined as clear, non-aggressive expressions of one’s needs, rights, or wishes; that is, responses that are neither accommodative nor aggressive. Thus, warning-sign behaviours can increase in intensity or frequency as the recipient partner’s responses become more accommodative or aggressive. As abusive dynamics develop, and behaviours evolve which are clearly abusive, assertive responses may become ineffective even if they are tried. To complicate matters further, warning-sign behaviours in unhealthy relationships are often initiated by both partners at different times, not just by one partner. Clearly, “keeping a grip” on the relationship slippery slope is much easier for partners at the top of the slope than once the downward slide has begun.

The Need for Skills-Based Empowerment

Disturbingly, significant minorities of young women view domineering, possessive, denigrating, conflict-controlling, and retaliatory behaviours by a partner to be acceptable (Murphy, 2009a). Even when such behaviours are perceived to be problematic, many girls report a propensity to respond accommodatively or aggressively (Murphy & Smith, 2010b). Such interactions can prove pivotal in setting the trajectory of girls’ relationship careers and future wellbeing. Despite this, most girls embark on their couple-relationship careers with little formal preparation in terms of strategies for steering clear of the metaphorical slippery-slope; that is, for “keeping a grip” should they encounter warning-sign behaviours by a partner.

The instrumentality of girls’ responses in setting the course of their relationship pathways is typically overlooked or downplayed in existing relationship abuse prevention programs, especially those guided by structural feminist theories of partner abuse (for examples, see Flood, Fergus, & Heenan, 2009; Weisz & Black, 2009). Rather than building relationship skills, these programs attempt to change gender-related attitudes and norms (see Murphy & Smith, 2010a). Gender-focused programs teach girls that any abuse they suffer is unacceptable and that they should seek help if they are being abused. While this constitutes sound and important advice, girls might be better served by education programs which also equip them with the insights and skills required to consciously resist the relationship abuse slippery-slope when warning-sign behaviours first begin to occur. Without opportunities to learn and practice assertive scripts for responding to warning-sign behaviours, it is difficult to see how general “expect respect” messages might empower girls to have greater control over the course of their relationships. That is, such messages are unlikely to help girls to become more conscious and active participants in their own relationships.
Likewise, relationship abuse prevention programs which presume males are more powerful and abusive in relationships than females (see Pease, 2008) are unlikely to be perceived by boys as empowering. Messages delivered in gender-focused programs may be dismissed by some boys as unrealistic and unfair. This may explain why boys have been found to respond disappointingly to gender-focused programs (e.g., Jaffe, Sudermann, Reitzel, & Killip, 1992; Jones, 1998; Weisz & Black, 2009). Such messages may unwittingly reinforce problematic gender-norms or spur undesirable backlashes (increased aggressiveness) among some young women. Because warning-sign behaviours are displayed by both boys and girls, young people may respond more positively to relationship education programs which, instead of focussing on gender-stereotypes, help them to acquire skills for “keeping a grip” when faced with potential slippery-slope situations, irrespective of their gender.

A Girls-Only Pilot Study

The ‘Navigating Relating’ program is based on the content of the ‘Safe at Heart’ program recently piloted with 133 self-nominated girls in Years 8 to 11 with a mean age of 14.7 years (Murphy, 2009b). This pilot program was delivered to 13 groups, each comprising 8 to 15 girls, across ten Victorian secondary schools. This pilot version of the program consisted of five modules delivered over one school day: Choosing, Noticing, Responding, Ending, and Bouncing Back. The Noticing and Responding modules were longest, each running for approximately 90 minutes.

Unlike the wait-list control group, participants in the intervention group demonstrated significant increases in assertive tendency from just prior to the program to three months after its completion (Murphy, 2010c). Assertive tendency was measured by a condition-blind assessor who, guided by detailed rating criteria, rated on a 5-point scale the assertiveness of participants’ hypothetical responses to 23 specific warning-sign behaviours. Mean Tendency to Resist or End Abusive Dynamics (TREAD) scores were calculated to allow for pre- to post-program comparisons. Prior to the program, participants’ TREAD scores were negatively associated with their recent exposure to warning-sign behaviour. Pleasingly, though, pre- to post-program increases in TREAD were associated with decreases in participants’ recent exposure to warning-sign behaviour. The waitlist control group reported no reduction in exposure.

Participants in the ‘Safe at Heart’ pilot responded amenably to the program’s empowerment-oriented approach, and reported finding their participation in the program to be worthwhile and enjoyable. It is hoped a similar approach with girls and boys in universal classroom settings, in the form of the ‘Navigating Relating’ program, might prove similarly well received and effective.
The ‘Navigating Relating’ Program

Boosted by the heartening results of the above pilot study, ‘Navigating Relating’ takes a similar skills-based empowerment approach. It is designed for universal delivery as part of Year 8 to 10 students’ compulsory health education program, but requires evaluation in this context to determine its efficacy as a universal/non-elective program.

Like the initial pilot program, ‘Navigating Relating’ incorporates characteristics associated with effective health education programming in other areas (Tobler, 2000), including student-centred and interactive teaching techniques. Students complete a few short individual tasks, but primarily participate in guided small-group activities. A number of worksheets are included because many teachers and students appreciate the structure they provide; however, these serve mainly as prompts for discussion and hands-on activity, and require minimal reading and writing.

Programs need to be actually implemented, and done so faithfully, in order to achieve their demonstrated potential (Tobler, 2000). The ‘Navigating Relating’ program has been developed with an acute awareness of the qualities likely to promote widespread and sustained uptake of the program in schools: teacher-friendliness in terms of planning and preparation requirements; budget-friendliness in terms of teacher leave/training requirements; student-friendliness in terms of the accessibility of the program’s ideas and activities; and curriculum-friendliness in terms of time-effectiveness. While investment in, and evaluation of, preventative relationship education in schools is well warranted, efficiency of implementation is important given the multitude of competing and equally worthy curricular agendas vying for attention in schools.

The following outlines the content covered in each 50- to 70-minute session of the ‘Navigating Relating’ program. Further information, including a complete facilitator manual and details regarding optional training opportunities, is available by contacting the author.

Session 1: Good Relationships

In this session, students describe how partners might feel, think and act in a ‘good relationship’. They are introduced to three important needs for happiness: feeling confident, having choice, and feeling connected to others. Students then generate and share mini-stories which illustrate how an outsider might be able to tell that both partners in a relationship have their needs for confidence, choice, and connectedness met.

Session 2: Bad Relationships
In this session, students are introduced to the three types of harm that can occur when a partner’s needs are not met in a relationship: social, emotional and physical harms. Students identify types of harm in ‘bad relationship’ case-study snippets. Students then try to judge which of the three types of harm (if any) is worst, and what factors might affect how serious each type of harm is. Students then generate reasons why a relationship might turn ‘bad’, under the following four banners: wrong reasons for starting the relationship, personality factors, past experiences, and outside stressors. Finally, students try to judge whether any of these reasons render the harms less serious: Do any of these reasons make a good excuse for the harms that are caused? Does having a reason for causing harm make it less harmful?

**Session 3: Relationship Slippery Slopes**

Students are introduced to the notion of relationship “slippery-slopes”; that is, the idea that relationships generally do not start out harmful but can gradually become harmful, starting with small “warning-sign behaviours” (the focus of the subsequent session). The focus in this session is on the four ways that relationships can slide downhill and result in serious harms: Secrecy, Overdependence, Anger, and Power Imbalance (S, O, A, & P). Students try to explain why each of these four slippery-slope dynamics is hard to reverse once it becomes established in a relationship.

**Session 4: Slippery Slope Warning Signs**

In this session, students are introduced to five types of warning-sign behaviour—Bossiness, Ownership, Meanness, Unfair Arguing, and Revenge behaviours—including 23 specific examples. Students (a) classify each of the 23 behaviours into the five categories, (b) identify which, if any, slippery-slope dynamic(s) each warning-sign behaviour could contribute to, and (c) identify what types of harm could result from each behaviour if the slippery-slope is not avoided or stopped early enough.

**Session 5: Keeping a Grip**

To help students make more conscious choices about how they respond to early warning-sign situations, it is necessary (a) to help them understand the potential effects of their responses on the long-term outcomes of their relationships and (b) to provide opportunities to plan and rehearse well-considered ways of responding. This session aims to do both, providing time for students (a) to consider the potential consequences of accepting versus aggression versus asserting themselves in warning-sign situations and (b) to actively experiment with different ways of being assertive in response to a range of realistic warning-sign situations.

**Optional: Good Relationships Advocate & Support Person (GRASP) Training**
Based on the content of the Ending and Bouncing-Back modules of the ‘Safe at Heart’ pilot program, this optional two-hour adjunct is delivered to smaller groups of interested students as a special out-of-class training program. Following this training, students receive a certificate acknowledging their commitment to being a Good Relationships Advocate & Support Person. The training covers ways to encourage healthy, respectful relationships in their peer group; ways to positively challenge unhealthy beliefs and behaviours; and ways to support a friend in a slippery-slope relationship. Topics include how to help a friend safely end an unsafe relationship, and how to help a friend bounce-back after experiencing a harmful relationship. It is envisaged that specially trained welfare and/or teaching staff will deliver this training to interested groups of students, including higher-risk students.

**Program Dissemination and Evaluation Planning**

At the time of writing, the ‘Navigating Relating’ program manual is still in preparation. Suggestions by experienced health educators and student wellbeing staff for maximising the effectiveness of the program are encouraged and will be especially welcomed during April 2011. Later in 2011, pending relevant funding and ethics approvals, schools will be invited to participate in a wide-scale trial and evaluation of the program during 2012.

In order to determine what difference the program makes beyond the effects of normal adolescent maturation and life experience, schools will be asked to run the program with approximately half of the students/classes at the selected Year Level, and then deliver the program to the remaining students at least six months later. All students will be asked to complete an anonymous online survey (or a paper-and-pencil version, if preferred) before and then, again, six months after the first cohort of students participate in the program. Process-focused feedback will also be sought from teachers involved in the trial. A detailed plain language statement will be available to schools interested in contributing to the program’s evaluation. In the meantime, interested schools are encouraged to contact the author at safe-relationships@rmit.edu.au to register their interest.

**References**


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The Study of Relationship between Personality Traits and Amount of Aggression among Soccer Players of Khuzestan Clubs – Iran

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The incidence of aggressive behaviour can largely be dependent on individual’s personality traits. The object of the present study is to examine the relationship between personality traits and the amount of aggression among Khuzestan soccer players. This correlation study was performed on soccer players of Khuzestan clubs which were present at Premier League, League One and League Two, season 2010-2011. All members of the community were selected as our sample. Subjects were asked to complete a short form of the NEO personality questionnaire (Costa and Mac Carey, 1982) and Buss and Perry aggression questionnaire (1992). Data were analysed by descriptive statistics, Pearson correlation and stepwise regression. Personality traits of extraversion, agreeableness, openness to experience and conscientiousness had significant negative correlation with aggression while neuroticism correlated significant positive (α=0.05). Neuroticism component was able to predict aggression in three levels of soccer leagues. Some personality traits are contributive on the incidence of aggressive behaviour. The final results of this study are consistent with previous studies in this field.

Introduction

The study of aggression in sport is important because of many reasons. Social science researchers believe that sport reflects the society realities and sport is society in smaller dimensions (Barthelme, 2009). Unfortunately, aggressive behaviours are seen more and more among players (Abdoli, 1994), making the study of aggression an important subject in sports. Personality traits and characteristics are important factors which can cause aggressive behaviours and emotions. According to Store (1991) and Sian (1985), there is a close relationship between aggression and personality traits (Hormozineja, 2001). In fact, personality is one of the main subjects in the field of psychology and it is the final goal of human efforts because to know the man and the way to train him has been a big challenge for all courses of humanities (Ebrahimi, 2007).

Then, studying psychological and environmental factors affecting soccer players’ behaviour is highly important (Daeemi, 2001). Knowing the relationship between soccer players’ traits and their aggressive behaviour can help sport trainers and coaches in selecting appropriate players and in assigning right responsibilities. Also, it is essential to care about ethics in society, especially Islamic societies (Fras, 1987). Accordingly, many studies have been carried out. In the following, some of them are mentioned. Shabani (2006) compared and investigated the relationship between personality traits and the amount of aggression among some of male athletes in Hamedan province in 2006. Findings showed that there was a meaningful and positive relationship between extraversion and
aggression among volleyball and taekwondo players. Also, there was a meaningful and positive relationship between stability-instability and aggression among taekwondo, table tennis and soccer players (Shabani, 2006). Nasri and Damavandi (2006) investigated the relationship between personality traits and aggression among soccer spectators. Some of their findings are as follow: A. the bias spectators showed more aggressive behaviours. B. spectators with low self-respect showed more aggressive behaviours and sentiments. C. there was a positive relationship between searching for excitement and being extraversion with showing aggressive behaviours (6). Hoseini (2008) studied the relationship between excitement, extraversion and anger among criminal and normal teenage boys of Tehran. Findings showed that there is no meaningful relationship between extraversion and anger. Zirak Moradlou (2007) investigated the simple and multidimensional relations of personality traits and mind health with blood group system among students of Shahid Beheshti University. Findings showed that there was a straight (positive) relationship between having mind problems and the extent of these problems. Also, there was a negative relationship between being conscientiousness and having mind problems (Zirak, 2007).

Barthelme (2009) investigated the relationship between aggression and five dimensions of personality traits of successful organisations staffs. Findings showed that there is a meaningful relationship between five dimensions of personality traits and aggression. Personality traits of conscientiousness, openness, extraversion and agreeableness had a meaningful and negative relationship with aggression. Also, there was a meaningful and positive relationship between neuroticism and aggression (Barthelme, 2009).

Jensen (2006) searched the relationship between personality traits and aggression among athletes of some selected sports. He concluded that there was a meaningful negative relationship between conscientiousness and openness with aggression. Also, at the time of low consciousness, agreeableness and conscientious had a positive relationship with aggression (10). Beckmand (2006) studied some athletes and non-athletes and concluded that there was no meaningful relationship between extraversion and hostility variables.

Sachiko (2002) investigated personality traits and the amount of aggression among teenagers. Findings showed that there was a meaningful and positive correlation between personality traits of neuroticism and extraversion with the amount of aggression. However, there was a meaningful and negative correlation between conscientiousness, agreeableness, and openness to experience with aggression among teenagers (Sachiko, 2002).
Considering the contradicting results of researches on the relationship between personality dimensions of “big five factors” with aggression, and the difference between sporting environments (like sport clubs) with other organizations, this study is carried out to answer the following questions:

1- What are the personality traits and aggressive behaviour of soccer players of Khuzestan clubs (big five factors)?
2- Is there any relationship between big five personality traits of soccer players of Khuzestan clubs with their showing aggressive behaviour?

Materials and Methods
Regarding the nature of topic, our research method is “descriptive-correlation”. Our statistic population includes all soccer players of Khuzestan clubs whom are present at country leagues (Premier league, league one and league two, season 2009-2010). Because our population was limited, census method was applied. Then, all members were asked to take part in research. 154 questionnaires were distributed among subjects. 128 questionnaires were completed, so 83.11 percent were completed.

Instruments of collecting data include:

1- Personal information questionnaire. This questionnaire is made by researcher to fulfil some goals of research like finding out about age, sporting records, number of achieved championship medals and marital status.
2- Short form of NEO questionnaire of personality traits. This questionnaire has 60 questions and was used to investigate personality traits of players. It was first translated from English into Persian by Kiamehr (1381). In this test five personality traits are investigated: Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) and Conscientiousness (C). The validity of different dimensions of questionnaire was determined by Alpha Cronbach to be between 0/64 and 0/83.
3- Buss and Perry aggression questionnaire. This questionnaire was created by Buss and Perry in 1992 and has 29 questions. Its aim is to evaluate the amount of subjects’ aggression. The validity of this questionnaire is estimated by Alpha Cronbach to be 0/89.

In the present study, we use descriptive statistics to describe and classify raw numbers by calculating the mean and standard deviation for drawing tables. Appropriate statistic methods like Pearson correlation, stepwise regression and Alpha Cronbach were used to estimate the validity of questionnaires. Also, statistic software SPSS version 16 was applied for operations and a meaningful level of α=0/05 was considered for all assumptions.
**Correlation** is a statistical test that measures the relation between two variables.

**Findings**

In the part of subjects’ personality traits, findings show that from among 128 subjects, the least age frequency is for 15-18 years old ones, which are 3 persons or 2/3 percent of all subjects. Moreover, the most age frequency belongs to 23-26 years old subjects which are 51 or 39/9 percent of subjects. The most sporting background is for 8-10 years old subjects with 49 persons or 38/3 percent, and the least sporting background is for 2-4 years old subjects with 5 persons or 3/9 percent.

**Table 1.** Descriptive indices (Mean and Standard Deviation) of variables.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Openness</th>
<th>Agreeableness</th>
<th>Extraversion</th>
<th>Neuroticism</th>
<th>Aggression</th>
<th>Conscientiousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean*</td>
<td>31/1</td>
<td>25/45</td>
<td>28/57</td>
<td>28/4</td>
<td>16/75</td>
<td>68/65</td>
</tr>
<tr>
<td>mean**</td>
<td>8/58</td>
<td>9/29</td>
<td>8/91</td>
<td>4/33</td>
<td>23/14</td>
<td>87/46</td>
</tr>
<tr>
<td>mean***</td>
<td>27/7</td>
<td>26/35</td>
<td>26/20</td>
<td>27/27</td>
<td>23/65</td>
<td>90/55</td>
</tr>
<tr>
<td>s.d*</td>
<td>5/16</td>
<td>7/6</td>
<td>4/33</td>
<td>4/74</td>
<td>5/89</td>
<td>2/22</td>
</tr>
<tr>
<td>s.d**</td>
<td>1/58</td>
<td>2/24</td>
<td>1/20</td>
<td>2/56</td>
<td>7/16</td>
<td>19/45</td>
</tr>
<tr>
<td>s.d***</td>
<td>9</td>
<td>9/13</td>
<td>5/97</td>
<td>6/72</td>
<td>7/40</td>
<td>18/82</td>
</tr>
</tbody>
</table>

***League2***  **League1**  **League premier**

As can be seen in table 1, the mean of players’ aggression scores can show the aggressive behaviour. The mean of all scores from the questionnaires equals 72. However, the mean shows that the players from leagues one and two were more aggressive than players from premier league.

**Table 2.** Correlation between personality traits and aggression.

<table>
<thead>
<tr>
<th>Agreeableness</th>
<th>Extraversion</th>
<th>Neuroticism</th>
<th>Conscientiousness</th>
<th>Openness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Variables correlation shows that there is a meaningful and positive relationship between neuroticism and aggression. It means that neurotic players are more probable to show aggressive behaviour. Moreover, there is a meaningful and negative relationship between three traits of openness, agreeableness and conscientiousness with aggression. This states that a player who is more open to experience, more agreeable and more conscientious will show less aggressive behaviour. In addition, there is a meaningful relationship between extraversion and aggression, but the direction of this relationship is different for three levels.

**Table 3. Regression test predicting aggression by personality traits**

<table>
<thead>
<tr>
<th>Level of aggression</th>
<th>meaning variables predicting</th>
<th>tβ</th>
<th>index</th>
<th>Criterion index</th>
<th>fullness</th>
</tr>
</thead>
<tbody>
<tr>
<td>League premier aggression Neuroticism</td>
<td>28/06</td>
<td>0/002</td>
<td>5/90</td>
<td>0/565</td>
<td></td>
</tr>
<tr>
<td>1/94</td>
<td>Extraversion</td>
<td>26/10</td>
<td>0/001</td>
<td>3/61</td>
<td>0/395</td>
</tr>
<tr>
<td>1/52</td>
<td>League 1 aggression Neuroticism</td>
<td>68/81</td>
<td>0/001</td>
<td>8/</td>
<td>0/070</td>
</tr>
<tr>
<td>1/90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
According to table 3, neuroticism can predict the aggression for three league levels. Also, openness can predict aggression in leagues one and two while extraversion has this prediction capability in premier league.

Discussion

Based on players’ personal information, only 2/3 percent of subjects are 15-18 years old. This is a weak point for the contributing teams, because they can train and apply very young players in their near future, as do many famous and successful teams around the world. This helps national soccer to progress and get higher levels.

According to the findings of this study, the level of aggression among the subjects was high. It can have many reasons such as outside factors (like environment: Khuzestan special climate may be a crucial factor) or inside factors. Personality traits, which were studied in the present study, are among inside factors. Also, natural preparedness of players to show aggressive behaviour and the natural rivalry in sport may be effective. Sport psychologist should identify all of these factors and try to control the incidence of aggressive behaviour in sport fields. Moreover, findings indicate that there is a meaningful and positive relationship between neuroticism and aggression among premier league soccer players of Khuzestan. Same relationship approved to be true among league one and two players. The findings of the present study are similar to those of Moradlou (2007), Shabani Bahar (2007), Barthelme (2009) and Sachiko (2002).

Subjects with high neuroticism score experience negative emotions like anxiety, hostility, depression, shyness and vulnerability (13). Neurotic players are very instable, irrational and quite unpredictable at the condition of match. They do very well at one time and ruin everything at the rest. Their behaviour ranged from calm and rational to instable and aggressive. They may have experienced long term anxiety and low self-confidence. The results suggested that they get angry many times, were stressful and afraid of losing the game (14). Then, we can conclude that players with high neuroticism score are more probable to show aggressive behaviour.
Research on the relationship between extraversion and aggression indicated a meaningful relationship between them, but this relation is both positive and negative. This may mean that the incidence of aggression among extravert players depends on existing factors and conditions. Final results are consistent with the findings of researches done by Shabani Bahar (2006), Nasri and Damavandi (2006) and Sachiko (2002). But results are against the findings of research carried out by Hosseini (2009), Beckmand et al. (2006) and Barthelme (2009). This inconsistency may be due to different characteristics of society and statistical sample. Hosseini, Sachiko and Beckmand et al. studied nonathletic societies. In addition, results showed that there is a meaningful and negative relationship between these two variables at two levels of leagues one and two.

Findings showed that for all three leagues, there was a meaningful and negative relationship between three traits of agreeableness, openness and conscientiousness with aggression. This result was consistent with the results gained by Jensen (2006), Sachiko (2002) and Barthelme (2009). Subjects with high score of agreeableness are generous, reliable, altruist, kind and trustful. On the other hand, subjects with low score of agreeableness are selfish, egotistic, unreliable and pitiless. The probability of aggression incidence among these subjects is high. Agreeable subjects tried to have good and polite behaviour, they cared about others. On the contrary, subjects with less agreeableness were rude and indifferent. They did not like cooperation with others. Incidence of aggression and neuroticism was common among these subjects (Costa, 1992).

**Conclusion**

Based on the findings of the present study and those of the previous ones cited earlier, it can be concluded that players with high agreeableness showed less aggressive behaviour. Also, open-minded subjects were very friendly and accepting of others’ opinions. They owned a ‘cosmopolitan view and ethics is very important for them. Psychologists believe that these people are healthier and more sophisticated. Comparing to subjects with lower openness scores, they have a more stable behaviour (Filiho, 2005). It is possible that being open to experience is a crucial factor in reducing the aggressive behaviour or instable manner.

Many personality theories, especially neuroticism theory, focus controlling stresses and behaviour. While growing and experiencing different situations, most of people learn how to behave. Inability to control the temptations and aggressive behaviour is one symptom of neuroticism. Interestingly, the difference between people in managing their bad behaviour is the basis of conscientiousness. Conscientious people are decisive, regular and energetic. They are more successful in controlling their behaviour (Barrick, 1991). It can be claimed that controlling behaviour leads conscientious subjects to show less aggressive behaviour. Then, the meaningful and negative
relationship between conscientiousness and aggression among soccer players of the present study was quite justifiable.

The findings of this study were that certain personality traits affected the incidence of aggressive behaviour of soccer players. Based on findings, the following suggestions are offered:

1- Since many players in the present study showed aggressive behaviour and it was concluded that some personality traits are effective in incidence of aggression, we suggest sport authorities and coaches to care about outside factors which stimulate and instigate players and referees. This will help preventing the incidence of aggressive behaviour.

2- It seems that there was a close relationship between personality and the incidence of aggression in sporting fields. Hence, identifying the real nature of this relationship was highly recommended for being successful.

3- According to findings, neurotic players showed more aggressive behaviours. Then, coaches and authorities are recommended not to apply instable players in sensitive conditions.

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A great beginning with 355 ends: Sustainable outcomes of a Healthy Lifestyles Project

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Seaview High School introduced a two year Healthy Lifestyles Project [the Project] built on the intent that exercise, healthy food options and the potential for positive wellbeing are in everybody’s

faculty.


personal reach. Informal qualitative data collected from lower secondary students and staff from the broader school community indicated a comprehensive knowledge of techniques and strategies to enhance their own and other’s lifestyles – though the application of this knowledge was repeatedly threatened by individual priorities, timetable, pedagogy, education reporting requirements, behavioural, seasonal and social experiences. To assist in embedding the initiative, internal support from the Project’s Co-ordinator was provided for staff to ensure the Project became a feasible adjunct to required curriculum and pending assessment changes imposed by the umbrella employer. Both staff and students gave feedback indicating their health, wellbeing and academic/professional satisfaction were linked to a combination of internal and external influences, including the social dynamic of interpersonal relationships. Throughout the Project students were open to trialling a variety of physical activities on and off campus and, with assistance, were willing to contribute to the organisation of some of those activities. In the second year of the Project 355 students voluntarily engaged in a number of the Project activities. This paper will comment on the impact of the introduction of a single Project to increase and embed healthy lifestyle practices and opportunities within an established school community.

Background
Seaview High School was one of thirteen South Australian schools and school clusters to receive a grant from the Australian Government through the Department of Health and Ageing to conduct initiatives in 2009 to 2010 “to assist at-risk target groups to increase physical activity and healthy eating and to promote healthy living at the ‘grassroots’ level” (Australian Government, 2007). Seaview High School is a medium-sized secondary school with an enrolment of approximately 800 students. Enrolments include international students, vision impaired students, indigenous students, an elite tennis program and an off-site program for students identified as at-risk of early school leaving. Approximately 25% of families living in the area have a relative socio-economic disadvantage - annual household income below $26,000pa (ABS, 2005). The concept for creating a community, in this case a school community, to pursue increased individual and collective health and wellbeing was not unique with several examples being trialled in Australia and overseas. (Agron, Berends, Ellis, & Gonzalez, 2010; Brink, 2010; Johnson, 2008; Wiseman & Brasher, 2008).

Globally however, school-based health interventions have, and continue to have, limited success (Farias, Farias, & Fairfield, 2010; Power, Bindler, Goetz, & Daratha, 2010). Arguments in research for this limited success include: insufficient funding and competing priorities (Agron, et al., 2010); the need for and difficulty of engaging multiple partners and stakeholders including non-teaching staff, parents, community groups and policy makers (Power, et al., 2010; Redmond, 2010; Smith & Bryan, 2005), and a desire by students for activities to be ‘fun’ and include enjoyable social
interaction – not necessarily seen as schools’ core business (Bevans, Bradshaw, Miech, & Leaf, 2007; Brink, 2010). The challenge therefore for the school and the Project’s leadership team was to capture the imagination of both staff and students to ensure health, activity and lifestyle initiatives were simultaneously embraced voluntarily and considered valuable (Hosking & Woodburn, 2010).

**Raising the priority of health and wellbeing issues for staff and students**

A premise based on the local understanding of staff skills, interests and immediate past school priorities acknowledged many staff would be more cognisant of the Project objectives if supported with an internally coordinated cohort of Training and Development and resources. Related work in England to increase teacher awareness of Emotional Health and Wellbeing [EHWB] also identified it is not always a priority for teachers to provide recognition of student wellbeing in everyday pedagogy and curricula (Kidger, Gunnell, Biddle, Campbell, & Donovan, 2010). Staff themselves voiced the difficulty of placing overt priority on students’ general wellbeing with comments such as, “Just give us a chance. We are overloaded with work unrelated to student outcomes” (SeaviewHighSchool, 2009).

Teachers are judged on their students meeting learning outcomes (Jimmieson, Hannam, & Yeo, 2010) but there is a constant emotional and time pressure for many to carry the concurrent load of teaching and administrative responsibilities (Chang, 2009). Furthermore, in attempting to introduce a health and wellbeing initiative for all school members, the Project’s leadership team observed an initial reluctance by some students to voluntarily engage in physical activity (Hosking & Woodburn, 2010). This reluctance has also been reflected in research which has a focus on the increasing sedentary lifestyle choices of adolescents and communities in the western world (Agron, et al., 2010; Power, et al., 2010).

**Practical steps to engage staff and students in the Healthy Lifestyles Project**

To overcome the challenge of reluctance by some students to engage voluntarily in regular activity it was negotiated, in the first year of the Project, for all students in the early secondary years to have timetabled access to a variety of physical and wellbeing activities over-and-above those offered in the Physical Education program and Sports programs. A core component was titled the Physical Activity (PA) program and was conducted as part of extended home group time. A percentage of the Project grant was also used to purchase equipment that could be accessed both in and out of class time. Health and wellbeing initiatives, particularly those providing a focus on increasing good nutrition, were incorporated in multiple curriculum areas. At this point, the Project was parallel to other prevention and intervention programs nationally and internationally that have a focus on wellness and activity.
and attempt to be inclusive of all young people - including those young people who are overweight or obese (Agron, et al., 2010; Gieck & Olsen, 2007; Power, et al., 2010).

Conversations with staff and students indicated the students were willing participants in most of the PA Program. The design of activities offered aimed to engage all students and exclude none. Skills, abilities and experience were not prerequisites to participating. Teachers gave animated examples of “students particularly enjoying the local walking activities”, of “kids who don’t normally do anything being really happy to be involved”, “kids coming up and spontaneously chatting with staff during the activities” (Hosking, 2009a). Furthermore, the equipment purchased from the Project grant proved to be very popular and has continued to be used spontaneously beyond the formal life of the Project.

The Project was challenged with several complications including multiple changes of school leadership and the introduction by the umbrella employer of a significant change in the assessment structure for senior students. The introduction of the latter absorbed internal school funds, staff development time and valuable staff focus. For these and other internal reasons, it was not possible for the school to continue to offer dedicated timetable allocation to a PA Program in the second year of the Project. Not to be deterred, it was decided by the Project Coordinator and her school-based support team to capitalise on the enthusiasm of the students to sustain components of the PA Program that had been offered in the previous year. An unexpected bonus of the Project was that it had begun to identify a variety of skills, interests and expertise amongst all teaching and non-teaching staff. To capitalise on this intrinsic capacity, some funding from the Project grant was allocated to provide opportunities for any staff to upgrade their Certificate qualifications to teach, run, conduct or supervise activities.

Following negotiation with school administration and general staff, the Project offered a number of activities (some subsidised) both on and off campus. Students of all abilities, from the school’s continuum of elite sports program students to those students in the visual impairment support program, voluntarily participated in on and off-campus personal challenges. Other students continued at break times to use the equipment purchased with the Project grant money. Links were nurtured with community-based groups and organisations to encourage students to be involved in activities that were not solely co-ordinated or organised by the school’s physical education staff. A major advantage of accessing resources and opportunities outside of the school was the sharing of costs and resources including administration. Also pleasing to staff and rewarding to students was the opportunity for students to help coordinate and conduct modified Sports Days – flexible events which included the capacity for each student to select a customised program of activities. Students were creative and provided spontaneous, informal feedback indicating their appreciation for the opportunity to ‘manage’
an annual significant event. Participation rates were significantly higher than they had been in the previous three years (SeaviewHighSchool, 2009). In total 355, more than 50%, of year 8-10 students in the second year of the Project voluntarily chose to participate in one or more of these activities (Hosking & Woodburn, 2010).

**Monitoring the impact of Project initiatives**
A Program Logic model was developed prior to the start of the Project to help guide and monitor aspects of the initiative (Figure 1).

![Figure 1 – Healthy Lifestyles Project Program Logic model (Hosking, 2009b)](image_url)

The Project was able to achieve the implementation of all proposed activities identified at Level 1. At Level 2 it could also be clearly identified that 2.4 “To increase school resources and recognition of wellbeing tools and strategies” within the “staff support” stream had been achieved through the implementation of staff Training and Development and the preparation and distribution of generic curriculum resources.
A concurrent study at Seaview High School by PhD Candidate, Kayla de la Haye was able to identify that a sample of students who were in Year 8 in the first year of the project and Year 9 of the second, “average BMI fell between 20 and 21 over the 2008-2009 school years, which is considered a healthy range.” (delaHAYE, 2010). The rates of overweight and obesity at Seaview High School were comparable to the wider Australian population where 18% of children in this age group were overweight and 6% were obese (2007 Australian National Children’s Nutrition and Physical Activity Survey) as quoted in (delaHAYE, 2010). While the figure was comparable to the min 80% healthy BMI projected in 2.1 “To achieve and sustain a healthy BMI for a minimum of 80% of students”, it could not be clearly linked to the introduction of the Healthy Lifestyles Project. Likewise it was not possible to identify a causal link between the Project and 2.2 “To increase retention and academic results” for students or 2.3 “To increase personal resources and recognition of wellbeing tools and strategies” for teachers and staff.

Dedicated Project funding, the impressive take-up and voluntary nature of engagement by students in Project initiated activities on and off-campus, and the offering of training and development were helpful in raising the profile of health and wellbeing within the school but not sufficient transformers in their own right to significantly change the overall health profile of the school community. As indicated above, school-based health intervention programs globally have limited success and teachers are judged, not on how healthy they and their students are but, on how long their students stay at school and how well they perform academically (GovernmentofSouthAustralia, 2007). Yazzie-Mintz describes this phenomena as a “sharp focus on accountability” (Yazzie-Mintz, 2007). Informally the Project was receiving positive feedback yet the contraindications of a crowded timetable, staff and students’ experiences/expectations, parent expectations, employer expectations and limited funding still remained. Staff and students openly discussed the importance of their health. Were there any other factors limiting the positive impacts of the Project?

**Staff and Student Views on Health and Wellbeing**

Staff, Year 8 and Year 9 students were asked a number of open-ended questions related to their perceptions of how they could positively influence their own, their peers, their teachers or students and their family’s health and school/work balance (SeaviewHighSchool, 2009). The written feedback from both staff and students was generous in volume and personal opinion. There was a willingness to share thoughts and ideas about improving or maintaining their own and others’ health and wellbeing as well as providing a ‘voice’ for individual concerns about system and school expectations and time management issues. Feedback also produced an unexpected bias in responses towards classroom behaviour (their own and others); the focus on learning outcomes for all groups; and significantly the value of relationships. While the Project had its origins in increasing physical activity levels of staff
and students, the qualitative feedback identified students and teachers alike were very cognisant of a link between healthy lifestyles and human interactions. Feedback also highlighted the impact of both perceived and real teacher stress on the wellbeing of all parties. Chang refers to this stress as “burnout” which “happens when exhaustion replaces feeling energised, cynicism replaces being hopeful, and ineffectiveness replaces feeling efficacious” (p.215). She includes reference to Tschanner-Moran et al (2000) quoting, “teachers sensing emotional exhaustion might put distance between themselves and students” (Chang, 2009). The students were mindful of the tone of classrooms with comments such as “You should listen to them (the teachers) and behave yourself so you don’t stress them out so you can learn in a happy environment (SeaviewHighSchool, 2009).

**Underestimating teacher influence on student lifestyle choices and wellbeing**

The interest by both students and staff in their qualitative written questionnaires to address teacher stress levels and its possible negative effects on the wellbeing of all parties was not projected by the Project team as the Grant Brief had specifically focussed on increasing physical activity levels within the school community and, as stated above, this had been achieved but without a significant change in the health profile of the school community. It was not practicably possible to separate the influence of emotional wellbeing, particularly that of teaching staff, on the commitment to and involvement in physical wellbeing initiatives (Hosking & Woodburn, 2010).

A local, longitudinal study by Johnson and colleagues identified the importance of “little things” that teachers do and say with their students. His early work in Resilience “highlights the importance of positive and supportive relationships between children and their teachers as a key protective factor in children’s lives”. His later work identifies “that the relationship between what happens at the local micro-level and the broader structural level is much closer than is usually thought. The implications of this closer relationship are quite profound.” (p.385) (Johnson, 2008).

Rubie-Davies research further demonstrates the impact teacher behaviour and expectations have on student learning outcomes and classroom behaviour (Rubie-Davies, 2010). Mason in a presentation to South Australian teachers and school leaders articulated the links between teacher wellbeing and student wellbeing (Mason, 2006). The students repeatedly indicated they wanted their teachers “to be happy” (SeaviewHighSchool, 2009).

There appears to be a modesty and underestimation by teachers as a profession to openly vocalise their value and importance to individual students particularly in the nebulous ‘feel good’ arena of wellbeing. Zyngier in his work to increase engagement of both teachers and students described “this profound human transaction called teaching and learning—is not just about getting information … [but] about empowerment, liberation, transcendence, about renewing the vitality of
Research, particularly wellbeing research in education settings, over the past decade articulates the unconscious modelling and emotional growth opportunities that are created by teachers. Students place a high value on their relationship with their teacher (Mitchell, Bradshaw, & Leaf, 2010). It is not that teachers don’t place a high value on their relationship with their students but in a classroom it is one teacher to multiple students while individual students with their self-focus create a one-to-one relationship with their teacher.

**Relationships, stress and subjective impacts on health and wellbeing**

In a complex web, youth health and wellbeing is influenced by multiple groups – self, teachers, friends, families, communities. In a school setting it is critical to also address the wellbeing of staff. While the Project was increasingly influenced by the intertwining threads of emotional, social and physical wellbeing the internal talk and conversation about barriers to regular exercise were frequently shifted to other parties (Hosking, 2009a). Teachers to students, students to teachers, teachers to their employer for introducing new assessment standards and criteria, staff to the multiple turnover in Principals (three in four years), students to families and students to students.

Interestingly, groups in another study when asked to identify what is the cause of unhealthy behaviours and who is responsible the various groups rarely blamed themselves. “Parents and teachers were most likely to mention the barriers of convenience (eg, fast foods) and child safety (eg, limits on outdoor activity). The early adolescent groups, in contrast, mentioned that some of their friends do not engage in physical activity because of embarrassment about their abilities or because physical activities are not "cool." (Power, et al., 2010)

There was feedback by both students and teachers throughout the Project indicating an acute awareness of student classroom behaviour on the positive or negative wellbeing of the teachers. Students repeatedly provided feedback they were sensitive to teacher emotions and it was important to them for their teachers to be in a “good mood”, “not stressed”, “happy” and able to “be a good teacher”. They wanted to be able to receive a variety of pedagogical styles and for their teachers to be “doing something fun in the classroom for a change” (SeaviewHighSchool, 2009).

The Project had begun with the intent that exercise, healthy food options and the potential for positive wellbeing are in everybody’s personal reach. It had embraced a number of on and off-campus initiatives with voluntary participation rates being comprehensive. On the other hand, the feedback was highly subjective, frequently referring to the impact of relationships and difficult to capture in any quantitative form. **Subjective wellbeing is recognised in other studies and described as “how children and young people feel about themselves and their health. It is an indication of their personal resources” (ARACY, 2008). Wellbeing and healthy lifestyles, while looking different to each individual, is a complex concept in the context of school communities, and cannot be addressed with a
simple linear focus. “... many sources of stress (and wellbeing) exist outside of the boundaries of educational institutions and are beyond the day-to-day interactions of teachers, administrators and students...... arguably all the more reason why programs focussing on emotional wellbeing and emotional literacy should be at the cornerstone of educational endeavour.” (Nagel, 2008).

**Barriers and enablers**

Influencing individual and collective wellbeing in a school environment is multi-dimensional. Teachers feel overwhelmed with their workloads without the added ‘pressure’ of putting student wellbeing on their daily radar. However, the fact remains, teachers have regular contact with students and do have potential to positively influence the wellbeing of the students in their care (Kidger, et al., 2010). Furthermore, school leaders can support both staff and students by modelling and guiding an environment and policies that are respectful of the health and wellbeing of the school community (Bevans, et al., 2007; Graczewski, Knudson, & Holtzman, 2009).

The Healthy Lifestyles Project had the benefit of grant support throughout its duration. Funding proved advantageous in supporting the purchase of pieces of equipment (including some specialist equipment for use by the students in the Visually Impaired Support Program), subsidising Professional Development for staff, supporting ongoing evaluation and partial support of the Project Co-ordinator’s time. However, the most successful components of the Project were not directly dependent on grant funding. Examples included increased student involvement in non-traditional physical activities both on and off-campus; increased opportunities for students to vocalise their thoughts and interests; increased student involvement in the planning of activities; increased student influence on their school environment; dedicated time within the extended Home Group to providing non-traditional activities; and putting staff and student health and wellbeing on the ‘agenda’ for staff debate and school leader consideration.

**Conclusion**

Seaview High School has no additional budget to focu on staff and student wellbeing and lifestyles, and shares a common challenge with other secondary schools to balance a crowded curriculum, desired learning outcomes and diverse interests of staff and students. While there was no discernable increase in the overall health profile of the school community as a direct outcome of the Project, there was increased activity participation by a wide section of school members. Importantly, the voluntary involvement of the 355 junior secondary students in the latter half of the Project can continue to provide an ongoing inspiration for staff to offer activities on and off campus. Links with community groups proved valuable and cost-effective throughout the Project and remain accessible. School administration retains a responsibility to nurture the health, wellbeing, workloads and good humour of
its staff and students. Finally, it is the ability for all groups to be able to communicate with faith they will be heard that will provide the impetus to retain increased voluntary activity levels of the Healthy Lifestyles Project for collective and individual benefit.

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Where have we been, where are we now and where are we going?

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We live in a paradoxical World, where we know more about the effects of exercise in enhancing well being yet we cannot control in developed nations to spiralling increase in adult and childhood obesity with attendant implications for acute and chronic health, such as muscular skeletal problems, cardiovascular disease, some cancers, sleep apnoea, type 2 diabetes, and hypertension (Australian Government Department of Health and Aging, 2010). In the 1960’s in Australia, childhood obesity was estimated to be 5%, whereas in 2004 2005 it is estimated to be 25%. These negative health outcomes are exacerbated by inactivity now identified as the fourth leading risk factor for global mortality (World Health Organization, 2010). Where we are today is paralleling this pandemic in obesity and inactivity. There are currently no Australian guidelines for physical activity and weight loss (Australians Government, Measure Up, 2010), however the World Health Organization (2010, p.78) does provide “global recommendations on physical activity for health.” The predictions for the future Australians are catastrophic. “Each Australian aged 20–74 years who dies from obesity between 2011 and 2050 will lose, on average, 12 years of life before the age of 75 years. If we just stabilise obesity at current levels, we can prevent the premature death of a half a million people between now and 2050 (National Preventative Health Strategy Overview, 2009). The future will have to mobilise all the highly trained specialists from exercise and sports science programs, whether VET or higher education to solve Australia’s overweight and inactivity epidemic and related unsustainable health burden. Developing effective strategies is the new horizon in exercise and sport science.

“…we are “constructed” for activity and that regular physical activity is essential for our optimal functioning and health,” (Astrand & Rodahl, 1970. P. 599).
“Your Prescription for Health: Exercise is Medicine” (Dr. Adrian Hutber, Vice President- Exercise is Medicine™ American College of Sports Medicine, 2011).

Introduction

We live in a paradoxical World, where we know more about the effects of exercise in enhancing well being yet we cannot control in developed nations the spiralling increase in adult and childhood obesity with attendant implications for acute and chronic health. For example musculo-skeletal problems, cardiovascular disease, some cancers, sleep apnoea, type 2 diabetes and hypertension (Australian Bureau of Statistics, 2008; Australian Government - Department of Health and Aging, 2010; American College of Sports Medicine, 2010a, 2010b). The preceding quotations and some salient facts set the scene and background of where we have been, where we are now and where are we going.

Physical inactivity is now identified as the fourth leading risk factor for global mortality. Physical inactivity levels are rising in many countries with major implications for the prevalence of noncommunicable diseases (NCDs) and the general health of the population worldwide according to the World Health Organisation (abbreviated as WHO, 2010). At this moment in time on planet Earth, overweight people represent a billion plus people, whereas underweight people only represent 800 million. We have reached and past the “tipping point”. The current World pandemic (WHO, 2010) in inactivity is leading to life style illness and morbidity and Australia is currently a member nation of this global problem, with epidemic proportions of men (66%), women (55%) and children (25%) being overweight and obese (Department of Health and Aging, 2010), which are outcomes of poor quality lifestyle decisions. Humans have evolved for movement, as well as acute and chronic responses to physical activity. “We are constructed for activity and that regular activity is essential for our optimal functioning and health. Therefore, a portion of our leisure time should be devoted to active recreation and training”, (Astrand & Rodahl, 1970, p. 599). Such profound wisdom is more than 40 years old, yet from 1970 to 2010 we have become more inactive, making poor decisions concerning nutrition and consequently more overweight.

Obesity related mortality should be addressed through preventative health approaches not expensive curative approaches (primary, secondary and tertiary health care), which address remediation of illness and/or lifestyle induced damage. Australian’s are aware of strategies to address the problem (Australian Government - Measure Up, 2010). The majority of Australians could explain very rationally what actions are required however there exist a vast gap between intention to change
lifestyle and actual positive change in lifestyle. In this context we have to develop strategies and interventions that actually encourage engagement and then adherence in physical activity to significantly address our epidemic of inactive and overweight Australians and this pandemic in developed nations.

1. Where Have We Been?

Physical activity and nutrition in developed nations, such as Australia, are thought to reflect personal responsibility in health and lifestyle decisions, although evidence indicates that percent body fat is thought to be 25% genetic, 30% culturally transmissible and 45% nontransmissible ((McArdle, Katch & Katch, 2009). The significant 45% nontransmissible factor is thought to reflect our personal responsibility and positive lifestyle decisions. Lifestyle behaviours, such as tobacco smoking, risky alcohol consumption, and obesity are three of the more prominent health risks in modern Australian society (National Health Survey: Summary of Results, 2007–08), hence people are encouraged to stop smoking, reduce drinking, lose weight and exercise. Social engineering programs within Australia, both nationally and at state and territory levels, have had some success with smoking, minimal success with drinking and very poor outcomes with obesity and inactivity (Australian Bureau of Statistics: Causes of death, 2008). A paradox is while the percentage mortality from cardiovascular disease has fallen, the prevalence of cardiovascular disease has increased significantly, with the proportion of people living with cardiovascular disease rising almost threefold from 8% to 21% between 1977 - 1978 and 1995 (Australian Social Trends, 2002).

Obesity

In the 1960's in Australia, childhood obesity was estimated to be 5%, whereas in 2004-2005 it is estimated to be 25%. Obesity that can result in negative health outcomes is exacerbated by inactivity and now identified as the fourth leading risk factor for global mortality (World Health Organization, 2010). While genetics and cultural factors (McArdle et al., 2009) are thought to influence a person's propensity to become overweight or obese, the fundamental cause is an imbalance between energy consumed and energy expended. Shifts towards energy-dense diets and decreasing physical activity are some of the factors that have contributed to increases in being overweight and obese (National Health Survey, 2007-2008). The prevalence of being overweight and obese in Australian children aged 7–15 years from 1985 to 2007 is of great concern as the statistics have more than doubled over this 22 year period. Specifically, the prevalence in overweight and obesity in boys has risen from 11% in 1985 to 20% in 1995 and almost 24% in 2007. For girls the prevalence of overweight and obesity has increased from 12% in 1985 to 21% in 1995 to almost 27% in 2007 (National Health Survey, 2007-2008).
Social engineering programs to promote physical activity and healthier choices in personal nutrition have not been successful over the past 35 years if we use Australian trends. For example, the 'Life. Be in it™' Program of the mid-1970’s was based on promoting healthy and active lifestyles and leisure and recreational activities (Life.Be in it, 2010). However, quoting from the current Life.Be in it website (2010). The main character of the campaign is 'Norm', a middle aged man with a prominent beer belly, meant to represent a "normal" Australian male. However, subsequent research lead to program withdrawal as it was found that 'Norm' was becoming a hero for those who were originally targeted to see him as the anti-hero that they should not be emulating. The end result was a social engineering program producing a role model that “went wrong”.

Active After-School Communities program (Department of Health and Aging, 2005) was introduced in May 2005. The government’s intention was to spend $90 million over four years to establish an after-school physical activity program. The social engineering intention was the program would provide Australian families with a convenient and practical opportunity to support the healthy development of their primary school aged children (five to 12 years). A purpose driven model to increase physical activity in Australian children, unfortunately the statistics for overweight Australian children just keep increasing.

**Participation in Sport, Exercise and Physical Recreation 2005 - 2006**

In terms of relative percentage participation data, some recent negative trends are a concern for Australia. Although the total number of people aged 15 years and over who participated in sport and exercise/physical recreation increased from 10.5 million in 2005 - 2006 to 11.1 million in 2009 - 2010, the total participation rate fell from 66% to 64% (ABS Participation in Sport and Physical Recreation, Australia, 2009-10). The decrease was largely driven by a fall in female participation, from 66% to 63%, as well a significant decrease in participation was also reported by persons aged 25-34 from 75% in 2005 - 2006 to 69% in 2009 - 2010. The reductions in exercise/physical activity were across many states and many occupations.

**2. Where Are We Now?**

So where are we now in terms of Australians taking personal responsibility in health and lifestyle decisions? Not surprisingly, physical inactivity is once again, identified as a leading risk factor for global mortality and preventable illness (American College of Sports Medicine, 2010a, 2010b; World Health Organisation, 2010). Physical inactivity levels continue to increase in many countries with significant implications for the prevalence of noncommunicable diseases (NCDs) and the health of the population worldwide (World Health Organization, 2010).
What is interesting to observe, and in parallel with this epidemic in obesity and inactivity has been the proliferation of exercise and sport science programs within Australia (Australian Qualification Framework, Register and Accreditation, 2010) and the continued application of Australian Government sponsored social engineering programs, currently the Measure Up campaign (Australian Government, 2010) to counteract these trends by promoting healthy eating and getting active. The significant increase in exercise and sport science courses and graduates delivered by university and vocational education and training programs does not seem to have a significant impact on redressing these negative social trends. As well, it is important to note there are currently no Australian guidelines for physical activity and weight loss and this is a paradoxical situation considering Australia is regarded as a world leader in exercise and sport science, as well as in international competitive sports. However, the good news is the World Health Organization (2010, p.7-8) does provide “global recommendations on physical activity for health,” as does the American College of Sports Medicine (2010a, 2010b).

The “How do you measure up” advertising and education campaign (Australian Government - Measure Up, 2010). contained over a 100 pages of supplementary materials within the government website addressing such issues as health risk, identifying risk factors, links between chronic disease and lifestyle, methods of self monitoring, BMI calculations, tips for getting active, some physical activity guidelines, some tips for getting started or exercise engagement, a 12 week planner to kick start healthy habits, nutrition for good health, meal planner and eating diary, shopping list planner and activity planner. Apparently every guideline required to get active, eat healthy, reduce health risks and enhance personal wellness. However, if you ask people who have actually read all the supplementary materials that go with the advertising campaign, the answer might be very few.

3. Where Are We Going?

Based on extrapolating past trends the predictions for the future would be increases in inactivity and consequently increases in overweight and obese Australians.

Each Australian aged 20–74 years who dies from obesity between 2011 and 2050 will lose, on average, 12 years of life before the age of 75 years. If we just stabilise obesity at current levels, we can prevent the premature death of a half a million people between now and 2050, (National Preventative Health Strategy - Overview, 2009).

Developing effective strategies is the new horizon for our health, exercise and sport science professionals.
Strategies for Change
The two predominant strategies required to promote individual change, personal responsibility and quality social interaction is, first promote engagement in physical activity and healthy nutrition and secondly, once engaged, promote and enhance behavioural adherence. The adherence is the most important as lifestyle changes have to be long term and two axioms apply in this context, which are “use it or lose it” and “you are what you eat.”

Exercise is Medicine
The American College of Sports Medicine (2010a, 2010b) regards exercise as medicine and has summarised the dose-response relationship between physical activity and health outcome analogous to dose-response relationships with medicines. Evidence has supported an inverse dose response relationship for exercise on all causes of mortality, cardiovascular disease; overweight, obesity and fat distribution; Type 2 diabetes mellitus, colon cancer; quality of life and independent living in older persons; decreased risk of falls and injuries in older people; decreased anxiety and depression; enhanced feelings of well being; effective therapy for many chronic diseases in older adults as well as prevention or mitigation of functional limitations in older adults. So the approach by government and health professionals has been to sell the education message, which is this will make you fitter and healthier. However, there is inconsistent support for predictions of physical activity with the health belief model, which is the belief that the likelihood of exercising depends on the person's perception of the severity of health risks and appraisal of the costs and benefits of taking action (Weinberg & Gould, 2011). So an alternative exercise and sport psychology approach is required to change the current trends.

Recommended Volume of Exercise by Age
Fortunately the World Health Organization (2010, p.7) does provides some simple “global recommendations on physical activity for health.” Essentially, they are built around the 60 minutes per day for 5-17 years, at least 150 minutes of moderate-intensity aerobic physical activity throughout the week for 18-64 years and 150 minutes of moderate-intensity aerobic physical activity throughout the week for 64 plus years. It is important to emphasise although WHO make global recommendations on physical activity for health guidance, WHO did not how to develop effective intervention strategies to promote physical activity in different population groups (WHO, 2010). The last statement represents the major stumbling block, as we know what to do but how do we get people to do it? The answer is within the discipline of exercise and sport psychology based on enhancing personal motivation, and exercise engagement and adherence.

Exercise Engagement
Engagement is initiated through the psychological construct of motivation and we can structure our lifestyle to promote engagement in exercise. Motivation is the direction and intensity of effort usually directed towards a behavioural goal. Direction of effort refers to whether an individual seeks out, approaches, or is attracted to situations. Intensity of effort refers to how much effort an individual puts forth in a situation (Weinberg & Gould, 2011). Articulating activity with interest is an important first step in addition to providing environments that enable participation. Another important step is to minimise barriers or perceptions of barriers to participation, such as people perceiving themselves as too old to exercise. In terms of physical activity engagement the most popular types for Australians are walking, followed by aerobics-fitness-gym, swimming-diving, cycling-BMX, jogging, golf and tennis (National Centre for Culture and Recreation Statistics, 2007). For adult Australians (National Centre for Culture and Recreation Statistics, 2007), the motivators for exercise are health-fitness and indicated as the main motive by those who participated more than twice a week as compared to less regular participants.

**Exercise Adherence**

This is the most difficult problem to solve as people who start an exercise program, 50% will drop out within 6 months (Weinberg & Gould, 2011). Why people have a problem with exercise adherence is exercise prescriptions are often based solely on fitness data and ignore a person’s psychological readiness to exercise. Most exercise prescriptions are overly restrictive and it is important to highlight exercise prescriptions based on principles of intensity, duration, and frequency are too challenging for many people, especially beginners. Traditional exercise prescription does not appear to promote self-responsibility or empower people to make long-term behavior change. So if we have successfully engaged people in physical activity how do we make people adhere to regular health related physical fitness and promote intrinsic motivation? Some recommendations that follow are embedded within pre-existing general and sport psychological theories of planned behaviour (Ajzen, 1991), social cognitive theory (Bandura, 1997), the transtheoretical model (Prochaska, DiClemente, & Norcross, 1994) and the ecological model (Dishman, 1994).

**Keeping People Active and Preventing Relapses**

The following recommendations are summarized from Weinberg and Gould (2011). At the level of the individual, expect and plan for lapses; develop coping strategies to deal with high-risk situations, such as time management and imagery; replace should statements with want statements to provide more balance in life; use positive self-talk and positive imagery to avoid self-dialogues focusing on relapse and focus on the positives; identify situations that put you at risk and attempt to avoid/plan for these settings; and do not view a temporary relapse as catastrophic, since this undermines confidence and willpower.
Factors Associated with Enhanced Participation in Supervised Exercise Programs

Guidelines from Weinberg and Gould (2011) indicate it is important to encourage self-efficacy and self-motivation, as these factors consistently predict physical activity and the higher these factors the better the outcomes. Integrate psychological skills training into existing routines and practice by reinforcing feelings of enjoyment gained from using mental training strategies such as increased intrinsic motivation. Reinforce the relationship between mental training and achievement of personal goals and set achievable short term and long term goals. Individualise mental training programs as much as possible just like individualising physical activity programs to meet individual needs.

Promote the value of mental training as much as possible before the individual starts to work on specific mental training exercises. In terms of behaviour focused studies behaviour modifications strategies that actually have success (Freedman, 2011) four strategies have been identified. These are initial assessment to identify rituals and routines that contribute to overeating; self-monitoring as recording body weight, counting kilojoules and objective assessment of behavioural change; behaviour shifts based on small changes that are easier to achieve; and finding support groups for exercise or nutrition modification.

Conclusion

The challenge will be in the doing, achieving personal responsibility and making positive health/wellness decisions to address a national epidemic and a World pandemic. It might be the case that personal changes in lifestyle will influence more significantly the health and wellness of Australians more so than climate change. If current trends are extrapolated into the future, the wellness and health of Australians is predicted to decline and human lifespans reduced.

References


Including Saman Dance into Physical Education to Enhance Socio-Emotional Skills

Eunike Raffy Rustiana – Universitas Negeri Semarang, Indonesia

Saman dance is a folk dance, originated from Aceh, the northwest side of Indonesia. It is a massive dance, which is done by many people together. The dancers set themselves in a row, and dance while sitting or standing on their knees. The movements of odd-number persons are different from those of the even-number persons, but they move harmoniously. This dance can be used, within physical education as a rhythmic activity. In this study, six fifth grade classes from six different public elementary schools were randomly assigned into control group (three classes) who received regular PE program, and intervention group (another three) who received PE Plus (dance) program. The time allocation for physical education was 70 minutes (2x35 minutes), and was done twice a week up to 16 meetings. Socio-emotional skill was assessed prior to and following the intervention using an Emotional Scale, which was modified from the Bar-On EQ-i for Youth. Three ways ANOVA analysis revealed that the PE Plus group gained a higher score in socio-emotional skill than the Regular PE group.

Introduction

Physical Education refers to those activities and experiences, that are concerned with physical movement, physical exploration, problem solving, and knowledge achievement. (Bucher & Thaxton, 1979). Physical Education and sport as the core of education plays an important role for the development of children to become persons who have knowledge, attitudes, and capability of being smart and competitive (Mutohir, 2009). In Kurikulum Tingkat Satuan Pendidikan (KTSP) 2006 or Education Unit Level Curriculum (Mahendra, 2006), Pendidikan Jasmani or Penjas (current term of Physical Education in Indonesia) is an integral part of education. It aimed to develop physical fitness, movement skills, critical thinking skills, reasoning, emotional stability, moral act, healthy life pattern, and clean environment introduction. The development is done through selected physical activity, sport, and health, to reach the national goal. Physical activity (in Physical Education), according to Bucher & Thaxton (1979) in the form of games, stunts, and other movement experiences is important to social development. A child needs to relate to other children, to develop respect for other persons, to experience the give and take in a play situation.
Physical Education itself, as Crum (2003) suggest, is not a wonder-oil. It cannot be simply used in an unplanned way, and then bring out the desired outcomes. The Belief that physical education can contribute to character building, logical thinking, socio-emotional skills development, etc, will be weak, and perhaps never be realized. If physical educators want to develop students’ socio-emotional skills, logical thinking ability, or other psychosocial skills beside physical skills and fitness, the subject material has to be prepared carefully. It should be in accordance with the desired outcomes.

*KTSP* or Subject Unit Level Curriculum 2006 that our government made does not provide examples of what kinds of games or sports that can bring social and emotional skill. Maybe the intention is to make physical education teachers create their own games and sports, or some kinds of physical activities which make the subject more interesting for their pupils. The teachers can modify the games so that they suit the local situations, and bring all the desired outcomes, including social and psychological aspects. But not all physical education teachers can do that easily, because some of them are not from PE teacher education department trained. It is true until today said Mutohir (2009), that most of physical education teachers especially in primary schools are classroom teachers who normally have limited competence and experience in the field of physical education.

**Socio-emotional skills**

Socio-emotional skills that the author means are abilities included in emotional intelligence. Bar-On (Bar-On et al., 2000) defined emotional intelligence in terms of an array of emotional and social knowledge and abilities that influence our overall ability, to effectively cope with environmental demands. Socio-emotional skills consist of five main domains: intrapersonal skill, interpersonal skill, adaptability, stress management, and general mood (Bar-On, 1997b; 2006).

**Factors which may influence socio-emotional development**

The development of social and emotional skills can be influenced by several factors. These are temperament, family, peer group, school, art, mass media or electronic media, sex, and special educational programs. Kagan (Shapiro, 2003) said that a child’s temperament reflected a certain hereditary emotional series in his or her brain. It determined the child’s emotional behavior and expression. Interaction quality between the child and her or his family (parents and siblings), according to Houtmeyers (2000), can develop or weaken the child’s emotional intelligence. Asher et al. (Salovey & Sluyter, 1997) suggested that the child’s social tasks in friendship were learning to manage one’s self desire, and adjusted to friend’s desire, learning to express attention, expressing intention and emotion, learning to apologize, and learning to take care of friend, by means of giving help. Values in a child’s social tasks are included in the elements of emotional intelligence. Peer
group, according to Shapiro (2003), as a close environment can develop or weaken the child’s emotional intelligence. Schools are social and emotional education facilitation (Goleman, 1996). During the development process, as Yesilyaprak (Balci Celik, 2008) said, the function of the school is very crucial. From age 6 to 11, school life is a complementary educational experience which contributes to child’s adolescence years and further. Teachers, including PE teachers are models for the students. As Hyson (1994) points out, modeling and interaction between teacher and student, student and student were important for students’ emotional development. Teachers’ performance, teaching-learning processes, school environment, school facilitation are included in the evaluation of school accreditation. School accreditation refers to assessment of school properness and performance according to the standards of The (Indonesian) School Accreditation Board. The result is realized as recognition for properness as arranged in The (Indonesian) National Education Ministerial Decree No. 087/U/2002. The assessment components including teaching-learning process, school administration and management, school organization, facilities, human resources, public participation, and school environment. There are three grades or levels of assessment, namely A (excellent), B (good), and C (sufficient). In his study conducted on vocational schools in Blitar, East Java, Sugiyanto (2008) found that there was a significant positive contribution from a conducive school climate toward school’s success. If the school success was connected to school accreditation level received, then the school climate can be connected to school accreditation level. Davidov (1995) in his conception about theory, research, and practice in education, proposed the Vygotsky’s opinion, that there were three elements which will always be active in the school setting. They were environment, student, and teacher. Another finding of Sugiyanto (2008) showed that there was a contribution from teachers’ emotional intelligence or emotional and social skills toward school’s success, so the students’ emotional and social skills can be connected to school accreditation level. Art, according to Mandler (Strongman, 2003), and Arini (2001), can enrich the emotional experience, so it can indirectly influence the emotional development. Through the media, students got a model, figure in film or reading book, to face themselves or others (Gottman & DeClaire, 1998), for instance through the TV, video, and internet (Salovey & Sluyter, 1997). Some of researchers try to include sex within factors which influence social and emotional development. But the results were not the same. According to Bracket et al (2004) a female’s emotional intelligence was higher than male. But Tsaosis & Nikolau’s (2005) finding revealed that males demonstrated significantly higher control and use of emotions than females. And the result of research made by Petrides et al. (2006) showed that there was no difference in social and emotional skills between boys and girls. This author wants to ascertain whether there is a difference in social and emotional skills between boys and girls.

Physical Education and Socio-emotional skills
There are two theories which are able to explain how psychological outcomes can be gained from physical activities or physical education. They are Neuroscience and Social cognitive learning theory. Neuroscience theory considers that a certain level of intensity or frequency of physical activities may bring psychological effects (Rafey, in Rachmah, 2008). The brain works in an electrochemical way. Impulse run along the nerve fibre in electrical way because of the ion level difference from inner or outer of cells. In synapsis, the nerves communicate in chemical way through the neurochemical substance, called neurotransmitter (van Essen, 2007). Rafey (in Rachmah, 2008) said, neurotransmitters which are related to physical exercise are (1) Norepinephrine, which function to refine mood, intrinsic motivation, and self confidence. Acute or chronic physical exercise may increase the brain norepinephrine. (2) Serotonin, which regulating mood, controlling impulse, and mitigates against the toxic effect of stress hormone level.

Social cognitive learning theory argues that psychological outcomes from physical education are created by the students’ perception and cognition in the physical education learning, and the contextual or situational factors. Ommundsen and Bar-Eli (1999) said that there is no evidence which shows a direct relation between physical education and psychological outcomes. The relationship can be explained only by Social Cognitive Learning Theory from Bandura (1986). The role of physical education teacher is important to form the learning climate, which then affects the students’ perception and cognition (Ommundsen & Bar-Eli, 1999). Social cognitive research on learning and motivation had shown that students’ cognition in turn influences their affection, motivational behavior, and skill mastery in physical education (Lee et al., 1992).

Children’s participation in games and sports has implications for the development of peer relations and self esteem (Weiss & Duncan, 1992). Peer relation and self esteem are parts of socio-emotional skills. By interacting and communicating with other children, by expressing oneself through movement, a child gains poise and self confidence, as well as an understanding of human being and human relationships. Furthermore, through play the child recognizes the existence of individual differences among children. He or she sees that some are gifted, others handicapped, some slow learning, and others poorly coordinated (Bucher & Thaxton, 1979).

**Saman Dance**

Saman dance originated from Aceh, the northwest side of Indonesia. It is a massive dance, a folk dance which done by many people. This dance was introduced and developed by Syekh Saman in the 16th century. The dancers dance in a row while sitting or standing on their knees on the floor. The movements of odd number persons are different from those of the even number persons. The principles are, firstly, from the religious point of view, the dancers dance while sitting or standing on their knees shows that human must always praise the Lord. Secondly, from the social point of view,
the dancers set themselves in a row and make coordinative or synchronized movements to show that humans in society must support each other, live and cooperate harmoniously. Thirdly, from the art point of view, this dance aims to entertain and offer messages through the singing of the song. The dance is accompanied by a vocal sound, without a musical instrument. First, a member of the dance group sings a section of a song while the others are dancing. Then, in the next section, all group members are singing together while dancing. After that, the ‘solo vocalist’ and all members sing to each other while dancing until the dance finished. The song contains lyrics of advice or wise sentences (Marzuki, 2005). The dance lasts about 5-7 minutes. For primary school students the movements of the dance are basic movements, without ornaments, in order to be easy to dance.

Saman dance in this case functions as education media, so it can be categorized into education dance ( Ina, 2002). Education dance, said Laban ( in Triana, 2005), and Hidayat (2005), places emphasis on learning. It is not art show oriented. It is not necessary for the pupils to dance fluently or beautifully, but importantly they can learn to dance cooperatively and harmoniously with their friends beside each of them (Hidayat, 2005). The number of dancers in one group are 18 to 20 persons, all girls, or all boys. Primary school physical educators can use this dance and include it into physical education as a rhythmic activity.

Saman dance has both physical and psychological benefits. Physically, moving head up and down, moving head from left to right are exercising the neck muscles, swinging arm backward, upward, forward to put it across in front of the chest trains the arm joint muscles, sitting, kneeling, bowing and moving up over and over train the thigh and shin, and also back muscles (Lawrence and Hope, 2007; Raven, 2003) Psychologically, the Saman dance as a massive dance can develop pupils’ interpersonal relations, when they learn to move harmoniously with their friends beside each of them. They have to control their arms and body movements. If someone makes a wrong movement, he or she will get confused for instance, abilities to tolerate other’s feelings and act cooperatively, sense of coherence, and being of importance in the group. They have to control their arms and body movements. They are not allowed to be angry if anyone beside them makes a wrong movement and get confused, because anger will destruct the following movement. After several exercises, when the pupils can dance together correctly, they will perceive a mastery experience, and also collective efficacy (Bandura, 1997). Togetherness will arouse an ability to tolerate other’s feeling, a sense of involvement in group, social responsibility, and also happiness.

Dance, except as a means for recreation, or health, is often considered as an ally of physical education and sport. It is common for these fields to share in objectives, to develop pupils totally, and care about the quality of life (Nugroho, 2000). Saman dance as an art is indirectly recognized in influencing emotional development, because according to Mandler (Strongman, 2003), art practice in
a certain amount will be able to influence emotional experience. Sutoyo (2005) also found that art education in primary school may stimulate brain function balance, between the right and left hemisphere.

In summary, it has been told that social and emotional skills or emotional intelligence can be developed and learned (Shapiro, 2003; Goleman, 1996). Play is a child’s work (Bucher & Thaxton, 1979), so the social and emotional skills can be easy to teach in the playing atmosphere. Physical education provides the student an opportunity for playing or being physically active while doing social learning. Saman dance is a physical activity which bring opportunity to learn social and emotional skills. From age 6 to 11, school life is a complementary educational experience. During the development process the function of the school is very crucial, so the properness of the school can influence the students’ social and emotional skills. Many experts investigated if there was a difference in social and emotional skills, but the results were different. In the light of this information, I predicted that:

(1) Socio-emotional skills increment of PE Plus group was higher than socio-emotional skills increment of Regular PE.

(2) There was a difference in socio-emotional increment among the three school-accreditation level groups.

(3) There was a difference in socio-emotional increment between female and male students.

**Method**

**Participants**

Participants of this study were six fifth grade classrooms, from six different public elementary schools in Semarang, Central Java, Indonesia, and representing 3 school accreditation levels (A,B,C). Two classrooms at each accreditation level were randomly assigned into experimental group and control group.
Table 1.
Sample distribution, by school accreditation level, group, school, and sum of students

<table>
<thead>
<tr>
<th>School Accreditation Level</th>
<th>Experiment Group</th>
<th>Control Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fifth graders</td>
<td>Fifth graders</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>SDN 01</td>
<td>SDN 02</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>34 students</td>
<td>36 students</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>SDN 03</td>
<td>SDN 04</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>32 students</td>
<td>38 students</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>SDN 05</td>
<td>SDN 06</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>28 students</td>
<td>33 students</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>107</td>
<td>201</td>
</tr>
</tbody>
</table>

All the participants were Javanese. They did not understand what was the meaning of the song’s lyric because it was in Aceh language. They just know the melody and the rhythm to match with their movements. Their mean age was 11.

**Research Design**

The dependent variable in this study was socio-emotional skills or emotional intelligence according to Bar-On’s (2006) definition, which consisted of 5 aspects namely intrapersonal skill, interpersonal skill, self adjustment, stress management, and general mood. The independent variables being treatment/control condition, biological sex, and school accreditation level.

**Measures**

The assessing instrument was ‘Skala Perasaan’, a four point Likert-type inventory of 56 items, that was modified for (Indonesian) children from Bar-On EQ-i for youth. This scale had an Alpha coefficient 0.945., and was administered as pretest and post-test.

**Procedure**

Two months before the study. The author asked for and received permission from Semarang Local Educatin Office, to conduct an educational research for primary schools in Semarang. The author also got information about schools which were grouped in each accreditation level. Then two schools of
each accreditation level were “chosen” through lottery, to be nominated into intervention group and control group. After that author made a contact with schools and PE teachers who were nominated as participants and asked them if they would like to join the study. Fortunately they did. An Indonesian national dance teacher was recruited to train the PE teachers from the intervention group to dance and assisted when they taught their students. The study began with pre-test for students. The six fifth classes from six schools did not complete the pre-test at the same time or same day (but in the same week) because they had to fit it with the PE time for each school. After completing the pre-test, the students in the intervention group were taught to dance until the time finished. At second until sixteenth meeting they were taught PE for first 35 minutes, then at the last 35 minutes they were taught to dance (Saman dance).

The time allocation for Physical Education was 70 minutes (2x35 minutes), and was done twice a week, up to 16 meetings. The intervention for experimental group (94 students) consisted of sport, games, play and massive dance (Saman dance). The control group (107 students) received sport, games, and play in physical education according to common curriculum, without Saman dance.

**Results**

The proportion of number of members from each group and the gained score of socio-emotional skills can be seen as follows:

Tabel 2.

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<tr>
<th>Accreditation level</th>
<th>Sex</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>9.584</td>
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<td>16.891</td>
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<td>17.436</td>
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<td>10.15</td>
<td>13.917</td>
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<td>9.47</td>
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<td>9.86</td>
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<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>5.54</td>
<td>13.637</td>
<td>28</td>
</tr>
<tr>
<td>Female</td>
<td>10.06</td>
<td>12.867</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>7.98</td>
<td>13.310</td>
<td>61</td>
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<table>
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<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<tbody>
<tr>
<td>Total</td>
<td>9.46</td>
<td>14.972</td>
<td>102</td>
</tr>
<tr>
<td>Female</td>
<td>8.98</td>
<td>15.440</td>
<td>99</td>
</tr>
<tr>
<td>Total</td>
<td>9.22</td>
<td>15.168</td>
<td>201</td>
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</table>
The gained scores (post-test scores-pre-test scores) of each group (treatment groups, school accreditation groups, and sex group) were then examined with Three Ways Anova.

Table 3.

### Anova Test Result

<table>
<thead>
<tr>
<th>Sources</th>
<th>SS</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>27148,780</td>
<td>1</td>
<td>27148,780</td>
<td>318,254</td>
<td>0,000</td>
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<tr>
<td>School Accreditation level</td>
<td>144,047</td>
<td>2</td>
<td>72,023</td>
<td>0,844</td>
<td>0,431</td>
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<td>Sex</td>
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<td>1</td>
<td>65,719</td>
<td>0,770</td>
<td>0,381</td>
</tr>
<tr>
<td>Treatment*School Accred</td>
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<td>2</td>
<td>579,655</td>
<td>6,795</td>
<td>0,001</td>
</tr>
<tr>
<td>Treatment*Sex</td>
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<td>22,833</td>
<td>0,268</td>
<td>0,606</td>
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<tr>
<td>School Accred level*Sex</td>
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<td>Treatment<em>School Accred Level</em>Sex</td>
<td>13,511</td>
<td>2</td>
<td>6,756</td>
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</tbody>
</table>

*Adjusted R Squared = 0,629*

Notes:

SS : Sum of Squares df: degree of freedom

Table 3 revealed that

a. The treatment group (PE Plus & Regular PE) had an F value 318, 254; with p= 0,000 (p<0,01). There was a significant difference in socio-emotional skill increment between intervention group (which received PE Plus) and control group (which received Regular PE). Table 2 shows that the treatment/PE Plus group gain 21.90 score, higher than control/RPE group (-1,92). The first hypothesis stating that PE Plus group’s socio-emotional skills increment was higher than RPE group was accepted. As an emotional intelligence education program PE Plus succeeded in enhancing primary school students’ socio-emotional skills. It is an accordance with Ulutas & Omeroglu’s (2007) research result, that an emotional intelligence education program can influence a child’s emotional intelligence (socio-emotional skills).

b. There was no significant difference in socio-emotional skills among the different accreditation level group (A,B,C ). F = .844; p = .431 (p>0,05). It means that the second hypothesis stating that there was a difference in socio-emotional skills increment among the three school accreditation level groups was refused.
c. The intersection between school accreditation level group and treatment group together had a value of $F = 6.795; p = 0.001 (p < 0.01)$. It means that both accreditation level and kind of treatment together had a simultaneous effect to the development of socio-emotional skills (SES) among primary school students. So, even though the socio-emotional skills increment was not significantly different among the three accreditation level groups (A,B,C), it was estimated that there was a difference in socio-emotional increment among them. It will be clearer if the analysis continued to Pairwise Comparison, which especially compared the socio-emotional skills (SES) increment, from different kinds of treatment and from school accreditation level groups. The result of analysis showed that there was a difference in SES increment between A accredited school and B accredited school; there was no difference in SES increment between B accredited school and C accredited school; and there was a difference in SES increment between A accredited school and C accredited school.

Conclusion
We have to be careful with this conclusion, because there are several uncontrollable factors that may influence the socio-emotional development. Those factors are (1) PE teachers’ personality. Patient teachers and impatiant teachers are different in their way of teaching. (2) Students’ temperament. Temperament difference may bring different increment of socio-emotional skills. Maybe there are some temperaments which hamper the socio-emotional development. (3) Family background and students’ activities out of school. This result can not be generalized, even if in the author’s country, which has many races with many kinds of tradition. Many more investigations need to be done.

References


SECTION 7: Moving, Learning, & Achieving Quality Outdoor Journeys and Recreation Pastimes
1860-2010: Celebrating 150 years of organised football in South Australia

Shane Pill - Flinders University, Australia

The Adelaide (Crows) Football Club celebrates 20 years in 2011. No doubt much will be made of and written about the period and events leading up to and culminating in the arrival of the Adelaide Football Club into the Australian Football League. However, there was an Adelaide Football Club in Adelaide and instrumental in the embryonic shaping of the type of football played in the colony of South Australia in the mid 1800’s. So dominated has Australian Football become with the Melbourne centric version of the history of the game that the 150th anniversary of the formation of the Adelaide Football Club passed without the ceremony accompanying other milestones in the development of Australian football. The myth (Stewart, 2008) that an 1858 Melbourne schoolboys football game was the first game of Australian Rules football was used to celebrate the 150th anniversary of Australian Football by the Australian Football League (AFL) in 2008. Yet, the significant contribution to Australian Football history that exists in the story of the original Adelaide Football Club was left unmarked in the public consciousness. This paper celebrates the formation of the Adelaide Football Club in 1860 and its historical significance together with the actions of club delegates in shaping football in Adelaide and thus, embryonic Australian Football.

Introduction

Despite the substantially Victorian-Australian Football League (VFL-AFL) historical narrative of the development of the game providing only cursory consideration to the formation of Australian football in South Australia (AFL, 2008) South Australia played an important part in the evolution of Australian football. This paper recognises the contribution of the 1860 Adelaide Football Club and three clubmen particularly significant in the evolution of Australian Football as it occurred in South Australia.

Existing accounts of Australian football history and analysis of newspaper reporting using the State Library of South Australia and the Australian Trove search engines provided the material used in this examination. The emergent evidence suggested that Australian Football history should recognise the role played by the 1860 Adelaide Football club in creating a context from which Australian Football evolved.
Football beginnings in Adelaide

Founded in 1836, football was played in the colony of South Australia very early in its history. Irish colonists were organising football games as early as 1843 in the South Australia (State Library of South Australia, 2010a). This football game was most likely Caid, a forerunner to Gaelic football played by teams of any number of players and of unlimited duration, or until players were thirsty (State Library of South Australia, 2010b). This is not to suggest Irish football was a forerunner to Australian Football. Blainey (1990) indicated there is strong evidence to dismiss the idea that Irish football is the forerunner of the Australian game, and scant evidence exists to support it. Blainey (2010) explained the idea that Australian Football is an offspring of Irish football is nothing more than a myth, however, the evolution of Australian Football was influenced by those who initiated and played football in the colonies.

One of those is Adelaide businessman and sportsman John Acraman. He is reputed to have imported 5 round footballs from England in the early 1850’s and paid for the first set of football goalposts, erected on the sportsfield of St Peter’s College, as early as 1854 (Blainey, 1990; Wimpress, 1983). The goalposts enabled schoolboy games of football on the sportsfield of St Peter’s College, played with a kick from the hand and a free kick for fair catch (Wimpress, 1983), both of which are later to feature in the rules of Australian Football. Games of football in early Adelaide were also organised by ‘old Collegians’ of St Peter’s College. These games were played using Harrow Rules (Wimpress, 1983). Harrow Rules has several features in common with the rules of Australian Football. Kicking from the hand, marking (or fair catch), running with the ball in hand, tackling the player with the ball by shoulder charging, scoring by kicking through upright goals, and the absence of an ‘off-side’ rule are elements of this early code of football (Harrow Rules, n.d.). This is not to assert that Harrow Rules led to Australian Football. However, the 1858 schoolboy’s game in Melbourne could not have been an antecedent Australian Rules football game as Tom Wills hadn’t met yet with Hammersley, Thomson and, Thomas-Smith to write down the first Melbourne Rules, as that occurred in 1859. However, it is apparent that “games from 19th century English Public schools were the crucible from which evolved Australian football” (p. 129).

The initial Melbourne rules, a compromise between Cambridge and Rugby rules and reflecting the football backgrounds of the men at the 17 May 1859 meeting of the Melbourne Football Club (Harms, 2009; The Age, 17 May 2009), were also missing elements that would become familiar to Australian Football; such as, the requirement to bounce the ball while running with it. Similar to the Harrow Rules used in early games of football in Adelaide, the Melbourne Rules permitted free kicks when the ball was caught from a kick from the hand, not allowing the ball to be picked up off the ground, running with the ball in hand if it had been picked up on the bounce or from a kick from the
boot, scoring by kicking the ball through upright goals, and the absence of an ‘off-side’ rule. What is evident is that in 1860 a game of kicking and scrimmaging ‘football’ was being played by members of the Adelaide Football club as it was by Melbourne football clubs.

1860: The Adelaide Football Club

On the 26 April 1860, at a meeting at the Globe Inn on Rundle Street (Dunn & Main, 1974) William Fullarton, Robert Cussen and John Acraman established the Adelaide Football Club (Wimpress, 1983). Two days later on 28 April, the first game of the Adelaide Football club was played. The gathering of players was divided into two teams with captains J.B. Spence and Acraman. The game started at 2.00pm and lasted nearly three hours before finally being won by Acraman’s team (Dunn & Main, 1974). The Adelaide Football Club continued to organise regular games of football, primarily through a notice in the local papers calling for a muster of players. On match day the gathered muster would split into two teams with team affiliation decided by geography (members of the club living north or south of the River Torrens) or school (old Collegians and other Adelaide club members). The opposing teams were distinguished by the wearing of pink or blue caps. The Register reported a match between the South, captained by John Acraman (blues), and North captained by Robert Cussen (pinks) (Wimpress, 1983). This game between members of the Club living north and south of the Torrens attracted a large crowd. The game was won by the blue cap northerners (South Australian Advertiser, 17 September, 1860).

Robert Cussan was also captain of the ‘pinks’ come the start of the 1861 Adelaide Football Club season in the opening game against Tom O’Halloran’s ‘blues’ (South Australian Advertiser, 29 April, 1861). As the membership of the Adelaide Football Club grew, however, the club began to resemble an association, with teams from north (of the Torrens) south (of the Torrens) and ‘old Collegians’ playing games. In 1862, Tom O’Halloran captained the ‘Collegians’ against a ‘town’ team, to which a large crowd of ladies and gentlemen attended to witness the interesting sport (South Australian Advertiser, 23 June 1862). Adelaide Football Club games were a major outing and amusement for people of the city of Adelaide.

...finer sight can scarcely be seen than 60 or 80 impetuous youths contending with earnest emulation to drive the ball home to opposite goals. We hope the ladies will largely grace those matches with their presence and thus lend an impulse to what is considerable importance to the healthy development of the youth of the colony

(State Library of South Australia, 2010c)
Adelaide football Club matches remained a popular outing for people of the city of Adelaide throughout the 1860’s. The South Australian Advertiser (27 April 1868) indicated the muster for the opening game of the 1868 season between members living north (blues) and south (pinks) of the Torrens attracted a large gathering of spectators—including a considerable number of ladies, who appeared to evidence great interest in the progress of the game.

Adelaide Football Club games were played according to the Club’s own rules (Devaney, 2010). There distinctiveness from rugby rules is evident in media reporting of Adelaide Football Club matches against Her Majesty’s 14th Regiment in 1867. The Advertiser (13 May 1867, cited in Fagan, 2010) reported that the pleasure of watching was marred to a considerable extent by the rough play which was shown by the military who played a rugby style game.

As the population of inner and outer Adelaide grew new football clubs emerged in the towns. Kensington and Port Adelaide were two of the first to form. Local variations of play, according to different sets of rules, also evolved. The Kensington Football Club, established in the early 1870s, developed its own rules (Devaney, 2010). A report in 1872 of an annual general meeting held at Mr Carter’s schoolroom on Beulah Road Norwood, mentions a code of rules being adopted (Manning, cited in State Library of South Australia, 2010). There were then, at least two sets of rules for football in Adelaide in the early 1870’s – the Adelaide Football Club rules (which were most likely adapted from the Harrow Rules) and the Kensington Rules (which appear to have been adapted from Rugby rules). This meant that when teams from different localities gathered to play the code of rules under which the game would be governed needed to be negotiated. The Kensington rules became a popular alternative choice for inter-club football games.

By the early 1870’s John Acraman had retired from playing and he had become the President of the Adelaide Football Club. The Adelaide Football Club continued to play internal games between its members as well as now engaging games against other clubs. However, 1873 saw concerns arise within the Adelaide Football Club about the multiple sets of rules used for inter-club football. The South Australian Advertiser (30 April 1873) recorded that at the Adelaide Football Club annual general meeting a committee was appointed to prepare a conference between the Adelaide, Kensington and Port Adelaide clubs for the purpose of arranging a code of rules for regulating matches. The South Australian Advertiser (14 May 1873) reported Adelaide Football Club delegate Charles Kingston was voted the chair of a meeting between the clubs, 10 May 187, at the Prince Alfred Hotel. After discussion a code of rules was drawn up and it was resolved that the rules be submitted by the delegates to their clubs, and if no alteration be made, the rules be printed.
Despite the agreement reached at the Prince Alfred Hotel, the Kensington rules remained in use in Kensington and Port Adelaide Football club inter-club matches (Frost, 2005). The Adelaide Football Club refused to use the Kensington rules. Adelaide had a fashionable following and would not have been eager to modify its rules to play other clubs (Blainey, 2010). However, The Adelaide Football Club was clearly keen to unify inter-club football, as evidenced by the club delegate meeting initiated by the Adelaide Football Club. It would take another four years for this pursuit of a unified code for football in Adelaide to be realised by the Adelaide Football Club.

It was reported in the *South Australian Advertiser* (21 May 1874) that at the beginning of the 1874 season His Excellency Governor Musgrave accepted the office of President and John Acraman accepted the position of Vice President of the Adelaide Football Club. However, there appears to be no record in the newspapers of Adelaide Football Club games in the 1874 and 1875 seasons. In 1876, the Adelaide Football Club structure, which had from its inception promoted intra-club teams based on locality, faced a split as a group of former players broke away to form the South Adelaide Football club (South Adelaide Football Club, 2010). Later in the year, the Adelaide Football Club reformed as the Old Adelaide Football Club (*South Australian Advertiser*, 29 July 1876).

At the start of the 1876 season the Adelaide Football Club continued to refuse to play inter-club football using Kensington rules. The *South Australian Advertiser* (10 July, 1876) and the *Observer* (State Library of South Australia, 2010e) both refer to games played by Adelaide on 8 July 1876 using the old Adelaide rules by agreement. *South Australian Advertiser* (10 July, 1876) reported:

> The huge attendance at this match should be a hint to the members of our leading Football Clubs to return to the old and popular rules [...] Football as it is presently played under the Kensington Rules is so clogged with conditions that a player is occupied half the time in considering whether he is playing the game or whether he is violating one or other of the numerous rules [...] in consequence the game lacks excitement, disputes to the umpires are endless, and the settling of these occupies one-third of the time devoted to the playing of the match...spectators too, get tired of watching a game pregnant with disputes.

Kensington and Port Adelaide Football Clubs held out against adopting Adelaide rules or modifying their own rules (State Library of South Australia, 2010h) even though a meeting of club delegates in 1876 agreed to new rules (AFL, 2008; State Library of South Australia, 2010g). These included that the ball may be taken in hand at any time but that the player shall be liable to be held or thrown until he drops it, the removal of the cross bar and top rope of the goals, the ball would be oval instead of round, and that the player could run with the ball (State Library of South Australia, 2010f;
The resurrection of football which took place in Adelaide last year must have gladdened the hearts of every true lover of the game. The new rules that were adopted proved a decided success and will, I have great hopes, be adopted by every South Australian club during the coming season. The Kensingtons and the Ports held out against every innovation last year but this year it is hoped they will come round. If football is to prosper in the colony everyone must bear and forbear. The Englishman who has been accustomed to the Rugby rules is undoubtedly at a disadvantage now that the great principle of ‘off side’ under which he had been brought up has been abolished

(State Library of South Australia, 2010h).

In 1877 the Adelaide Football Club again tried to force the issue of multiple rules for football in Adelaide and the suburbs. Adelaide captain and committeeman, Nowell Twopenny, was strongly opposed to the rugby-influenced Kensington Rules (Devaney, 2010) and in 1877 he led a movement to form a football association that could bring uniformity to the game in South Australia (South Australian Advertiser, 24 April 1877). An initial meeting was held at the Prince Alfred Hotel on 19 April (Devaney, 2010). At this meeting Twopenny, Joseph Osborne (Captain of Woodville) and G. Kennedy (Captain of South Adelaide) met and decided to create an association to oversee the future development of the game (South Australian Advertiser, 24 April, 1877). A second meeting soon followed on 30 April with the purpose of again trying to agree on a uniform set of playing rules for the new association of clubs. Twelve clubs were represented at the meeting and various rules and codes were discussed. The by-laws of the Sydney Football Association were discussed (Frost, 2005) but Twopenny spoke in favour of running with the ball, arguing that from his experience it was sine qua non (without which it could not be) genuine football (Devaney, 2010). Charles Kingston advocated the adoption of the Melbourne Rules so that inter-colonial matches could be facilitated (Devaney, 2010). The agreed rules were reported to closely approximate the 1874 Victorian rules (Wimpress, 1983). Agreement on the use of an oval ball, goals with no cross bar, each team to consist of twenty players, goal posts of unlimited height, and the need to appoint field and goal umpires to be sole judges of decisions emerged from the meeting. The other major outcome of the April 30 1877 meeting was the formation of the South Australian Football Association (SAFA). The SAFA was, therefore, formed before the Victorian Football Association, formed in May 1877. Twelve clubs played in the inaugural SAFA 1877 season: South Park, Willunga, Port Adelaide, Adelaide, North Adelaide, Prince Alfred College, Gawler, Kapunda, Bankers, Woodville, South Adelaide and
Victorian. The Adelaide Football Club had finally achieved its aim of a common agreed set of rules for inter-club football in Adelaide.

Following the meeting of 30 April 1877, a committee of the Old Adelaide Football Club was appointed to investigate the practicality of challenging a Melbourne Club, described by the South Australian Advertiser, 2 July 1877, as a bold course which speaks highly for the enterprise of the Club. Richard Nowell Twopenny was later to write most favourably about life in Adelaide and the Australian passion for sport in the book, Town Life in Australia (1883). He described the Victorian football rules thus:

The solution of the best game of football problem should be found, as I believe it has been found, in Melbourne. But I would ask them to remember that the Victorian game was founded by rival public school men, who, finding that neither party was strong enough to form a club of its own, devised it--of course not in its present elaborate state--as a compromise between the two.

Twopenny, who also captained Adelaide in an inter-colonial football match against St Kilda in 1877, and who was a player for South Australia against Victoria in 1881, visited Perth in 1882. He brought with him the rules used in South Australian football, becoming “a prominent figure in football circles” and captain of a local team (Christian, Lee & Messenger, 1995, p. 4). Twopenny’s influence on the game in South Australia as a player and leader of the movement that formed the SAFA is worthy of recognition in the South Australian Football Hall of Fame (John Acraman is already an inductee). Considering that he was influential in Australian Football development in two states provides for a case to be made for his initiation into the AFL Hall of Fame. Devaney (2010) purported that as Twopenny was at the forefront of the Adelaide Football Club endeavours which led to the first ever official matches between teams from different colonies at the end of inaugural SAFA and VFA’s seasons, arguably makes him the father of Australian Football.

**Conclusion**

This examination of the Adelaide Football Club history suggests that the development of Australian Football in South Australia was evolutionary and marked by compromise, negotiation and finally a vision of inter-colonial football that could be fostered through similarity in the rules used for Melbourne and Adelaide football. The Adelaide Football Club was an innovator from the start, with its own code of rules clearly distinct from the rugby influenced rules of the Kensington Football Club. It is also apparent that the rules evolved to meet the needs of players and to foster the game. For a period the Adelaide Football Club and Kensington Football Clubs competed for heart of South
Australian Football, but the vision for one code for inter-club football by the Adelaide Football Club eventuated in the formation of the SAFA in 1877. The irony is that Old Adelaide Football club amalgamated with Kensington in 1881. It then assimilated with North Park in 1885, West Adelaide in 1888 and finally North Adelaide in 1889 (Devaney, 2010.). Adelaide Football Club, which had begun by dividing into two team teams based on geography (north or south of the River Torrens) had eventually evolved into North and South Adelaide Football Clubs.

John Acraman, assumed a pivotal role in establishing football as a both an organised sport and spectator pastime in Adelaide. Adelaide Football Club captain, Richard Nowell Twopenny was instrumental in unifying the clubs into an association in 1877. I conclude by suggesting John Acraman and Richard Nowell Twopenny are worthy of similar status in the history of Australian Football as Victorians Tom Wills and William Hammersley by inclusion in the AFL Hall of Fame. I also conclude that the decision by the embryonic SAFA, brought about by the vision of the Adelaide Football club for inter-colonial football, to adopt similar rules to the Victorian code of rules in creating the context from which Australian Football could evolve. The early evolution of football in South Australia is therefore central to the moving, learning and achieving that led to the eventual creation of the Australian Football League.

References
Manning, G. (n.d.). *A colonial experience*. The Manning Index of South Australian History:


Endnotes


Giddens. Sociology 17.
SECTION 8:

Poster Presentations – non peer reviewed
The Effects of Maximal and Sub-Maximal Aerobic Exercise on the Bronchospasm Indices in Non-Athletic

Mohsen Ghanbarzadeh – Islamic Izad University, Iran

Introduction

Aerobic exercise has been shown to influence the immune system and inflammatory processes. It can also modify the expression of cytokines and the levels of inflammatory markers. Several studies have demonstrated that aerobic exercise can improve pulmonary function by reducing the bronchospastic response to exercise. However, the effect of maximal and sub-maximal aerobic exercise on the bronchospasm indices in non-athletic individuals is not well understood.

Materials and Methods

A total of 30 non-athletic subjects were selected for the study. The participants were divided into two groups: sub-maximal (n=15) and maximal (n=15) exercise groups. Both groups performed the same exercise protocol, consisting of 30 minutes of Moderate aerobic exercise (60% of heart rate reserve), followed by 5 minutes of recovery.

Procedures

The participants were measured several times during the exercise protocol, including before exercise, immediately after, and 2 hours after exercise. Pulmonary function tests were performed using a spirometer, and bronchospasm indices were measured using a peak flow meter.

Results

Table 1 presents the results of the study. The sub-maximal exercise group showed a significant decrease in bronchospasm indices compared to the maximal exercise group. The maximal exercise group showed a slight increase in bronchospasm indices, but the difference was not statistically significant.

Discussion

The results of this study suggest that sub-maximal aerobic exercise may be more effective in reducing bronchospasm indices compared to maximal aerobic exercise. This may be due to the lower intensity of sub-maximal exercise, which may result in lower inflammatory responses.

Conclusion

In conclusion, sub-maximal aerobic exercise may be more effective in reducing bronchospasm indices compared to maximal aerobic exercise. Future studies are needed to further explore the mechanisms underlying these findings.

References


The Study of relationship between Personality Traits and Amount of Agression among Soccer Players of Khuzestan Clubs – Iran

A.B. Mehdipour, A.H. Habibi, T.Acmsha and T.Shirani - Shahid Chamran University of Ahwaz, Iran

The incidence of aggressive behavior can largely depend on individual's personality traits. The objective of the present study is to examine the relationship between personality traits and the amount of aggression among Khuzestan soccer players. This correlational study was performed on soccer players of Khuzestan clubs which were present at Premier League, League One and League Two, season 2010-2011. All members of the community were selected in our sample. Subjects were asked to complete a short form of the NEO personality questionnaire (Costa and McCrae, 1992) and Beck and Perry aggression questionnaire (1975). Data were analyzed by Pearson correlation coefficient. The results showed that there is a considerable correlation between extraversion and aggression. The relationship between conscientiousness and aggression was not found to be significant. Moreover, there was a negative relationship between neuroticism and aggression. The study revealed that there is a negative relationship between openness and aggression. Therefore, this study indicated that the role of personality traits in aggressive behavior should be considered in the development of preventive programs.

Keywords: personality traits, high aggression factor, aggressive soccer players.
Frequency of teacher augmented feedback in secondary physical education

Michael Spittle, Mick Kennedy and Sharna Spittle – Deakin University, Australia
Use and beliefs around teaching styles in secondary physical education

Michael Spittle, Mick Kennedy and Sharna Spittle – Deakin University, Australia
A Comparative Study of Bodybuilders Strength Performance of rural and Urban Areas of Andhra Pradesh, India

Dr Kaukab Azeem – King Fahd University of Petroleum & Minerals, Saudi Arabia
Effect of Diurnal Variation on the Ability of Basketball Players
– A Study

Dr Syed Ibrahim & Dr Kaukab Azeem – King Fahd University of Petroleum & Minerals, Saudi Arabia