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DEVELOPING EFFECTIVE QUESTIONING IN TEACHING GAMES FOR UNDERSTANDING (TGfU)

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Abstract

The use of questioning is often used to enhance the teaching of games utilising the Teaching Games for Understanding (TGfU) approach. However, for questioning to be effective, it needs to be planned and specific to the outcomes that the teacher/coach requires from the participants. A process has been developed to assist teachers and coaches to construct effective questions. The process involves the teacher/coach analysing the categories of games-invasion, striking/fielding, net/court and target games and then choosing a sport from one of these categories. Following this the teacher/coach determines the elements to be an effective player using the subcategories: technical, tactical/strategic, cognitive and rules. Games are then designed around one of the subcategories or a combination. Questions are then designed in each of the subcategories listed above.

Introduction – Teaching Games for Understanding

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.

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 & Thompson, 1998. p.1). There are other terms and variations of Bunker and Thorpe's (1982) 'Teaching Games for Understanding'. Some of these include: 'Game Sense' (ASC, 1999), 'Play Practice' (Launder, 2001), the 'Games Concept Approach' (Wright, Fry, McNeill, Tan, Tan & Schemp, 2001, cited in Light, 2003) and more recently, 'Playing for Life' (Australian Sports Commission, 2005).

Teachers and coaches 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. They key to the teacher/coach 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 though 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 will generally relate to a particular tactical 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.

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, 2003) was implemented with Year 7 and Year 9 students 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 TGfU framework. This change has implications for practicing teachers in relation to both the content and teaching strategies traditionally utilised in the teaching of games.

Research (Light, 2002, 2003; Thomas, 1997a; Turner & Martinek,1999; Werner, Thorpe & Bunker, 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. Light (2003) examined the response for teaching games for understanding pedagogical approach in an Australian University to Bachelor of Education students studying primary teaching. Student evaluations were generally positive indicating an increase in enjoyment, understanding and cognitive engagement in the games. In comparing games sense to skill-based teaching, 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). 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).

Turner and Martinek (1999) compared two middle school physical education lessons on hockey – one using the traditional method and the other TGfU. They found that there was a clear trend towards better decision making for the TGfU group, who also scored higher for procedural knowledge. The TGfU approach enabled students to control a hockey ball more adeptly, make better passing decisions, and execute passing more effectively than under a technique approach. Harrison, Blakemoore, Richards, Oliver, et al (2004) in their study of volleyball players, found that TGfU also increases self-efficacy of players.

One of the aims of TGfU is encouraging players to become more tactically aware and to make better decisions during the game. As well, it encourages young players 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). Research by McKeen, Webb and Pearson (2005) 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 TGfU workshops where PDHPE teachers were asked to identify what they perceived as the strengths of TGfU, a number of themes emerge. Teaching games for understanding was found to:

- encourage a holistic approach to the teaching of games
- develop critical thinking and problem solving
- develop deep knowledge and understanding of the game
- promote high levels of participation and enjoyment for participants
- promote player centred learning and relevance of skills and tactics
- cater for varying abilities
- foster efficiency in aspects of implementation

(Webb, Pearson & McKeen, 2005).

TGfU and questioning

Developing critical thinking and deep understanding are elements of quality teaching in any domain. The notion of questioning and teaching 'thinking', not knowledge is used throughout teaching (Harpaz & Lefstein, 2000; Golding, 2004). The teachers' role is to facilitate students' thinking, helping them to develop thinking skills and behaviours.

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. If the goal is to make students think, the TGfU approach to teaching games is far more appropriate than skill-based. With the tactical approach, players learn the structure of the content taught and the relationships between the concepts that comprise it and are able to transfer these concepts to other situations (Butler, 1996). The TGfU approach challenges teachers and coaches to understand the deep intellectual structures of playing and learning to teach a game effectively (Hopper, 2002).

The key to the teacher is the questioning technique and the relevance to the student of the introduction of rules and technique. The focus is on the student and problem solving (Webb, Pearson and Forrest 2006). Questioning skills and the ability to develop appropriate activities to allow the questions to be answered are central to the success of the Game Sense (TGfU) approach (Light 2003) and are fundamental reasons for the approach being so valued as a pedagogical model of quality teaching (Pearson, Webb and McKeen 2005). If practitioners are not taught a process they may simply copy games and imitate questions accepting simplified responses (Forrest, Webb and Pearson, 2006).

Types of questions

Teaching through questions is an instructional format in which tasks are communicated through questions that pose problems that guide student activity towards particular goals or questions that pose problems to be solved (Siedentop & Tannehill, 2000). Questions can be organised into four types depending on the cognitive activity involved. They are recall, convergent, divergent and value questions (Siedentop & Tannehill, 2000). Recall questions are those that require

memory level answer, for example: 'Where should your eyes be when they are dribbling?' Convergent questions aid analysis and integration of previously learned material require reasoning and problem solving, for example: 'Why should you stay between your opponent and the basket?' Divergent questions require solutions to new situations through problem solving, for example: 'What ways would you start a fast break off a steal?' Value questions require expressions of choice, attitude and opinion, for example: 'How do you react?'

Effective questioning

Effective questioning is a move away from the traditional teacher-centred model of teaching to a more student-centred approach as questioning provides opportunities for the students to think for themselves. In doing so, situations are created whereby the students learn skills and tactics inferentially through being placed in circumstances for them to apply these skills.

The use of a questioning protocol (what? where? when? why? with whom? how?) is a key pedagogical tool in TGfU (Griffin & Butler 2005). In virtually every game or practice teachers need to look at the scenario and ask students the following questions: What is going wrong?, Where does the problem occur?, When does the problem occur?, Why does the problem occur?, Who owns the problem?, How can it be fixed? Mitchell, Oslin and Griffin (2006) reinforce that the quality of your questions is critical and these questions should be an integral part of your planning. They propose that questions fall into three categories:

- Time. 'When is the best time to?'
- Space. 'Where is or where can?'
- Risk. 'Which choice is safest and which is most risky?'

Teaching Games for Understanding is player-centered where the player has to take control and make decisions. This in turn empowers them and makes them responsible for their learning process. However, if questions are not challenging, then this learning process breaks down. It is essential that practitioners and students have practice and feedback given to them on their questioning technique. Effective questioning should promote reflective thinking, decision-making and communication. The gradual progressions involved in TGfU pedagogy benefit all learners, whether they are high or low achievers, as the games and questions can be tailored to suit. Teaching games for understanding requires the learner to make the connections that lead to successful outcomes.

A process to develop effective questioning with TGfU

It is important that practitioners have a process to develop effective questioning techniques and are well prepared and have a planned process. The following procedure is an example of how this can be undertaken.

A process for sport analysis and developing questions in TGfU
1. List the elements to be an effective player in a sport. Pick a sport from invasion, striking/fielding, net/court or target games. 2. How did you determine which elements were needed to play the game effectively? 3. Place each of the elements into one of the subsets listed below A. Technical B. Tactical/strategic C. Cognitive D. Rules 4. List some games that you would use to develop the elements in each or in a combination of the subsets. 5. Under each element list questions that would develop understanding in the sport. Give examples of the four types ie recall, convergent, divergent and value. A. Technical B. Tactical/strategic C. Cognitive D. Rules

Table 1. A process for sport analysis and developing questions with TGfU.

Using basketball as an example in the above process, elements needed to play the game effectively could include: technical/skills such as dribbling, shooting, passing; tactical/ strategic such as playing the right options, attacking plays and defence patterns; cognitive such as motivation and confidence; and knowledge of rules. These elements would be determined by analysing all the skills, tactics and characteristics that the students see in an effective basketballer. A small-sided game of two versus one could then be used to develop the tactical option of when to pass and when to dribble and/or shoot as well as defensive options. Once the questioning comes into play in the above process (under 5) many tasks can be set and discussed. For example, in addition to the types of questions the questioning protocol of Griffin and Butler (2005) can also be utilised. Under technical, tactical/strategic, cognitive and rules ask the teachers or coaches to have What? Where? Why? With whom? How? questions or using Mitchell, Oslin and Griffin (2006) approach have questions address time space and risk.

Complexity of questions need to be progressive whereby a fundamental understanding of games within and across categories is developed by examining principles of play, tactics, rules and techniques (Forrest, Pearson & Webb, 2006). By using this process across categories of games, practitioners will be able to develop a bank of both generic and sports specific questions. By comparing sports and games in all four categories, development of the understanding required provides opportunities for higher order thinking from players.

Conclusion

Questioning is an integral part of the TGfU approach and it is essential that coaches and practitioners have a process that enable them to provide appropriate and challenging questions. This paper has analysed a process by determining the elements to be an effective player before embarking on effective questioning to enable players to become more effective in what they are doing.

Practitioners must have deep knowledge and understanding of concepts and ideas and for players to be challenged and be engaged in critical thinking and problem solving. The learning environment needs to be structured to support learning and involve the players in the process. To achieve significance in learning outcomes, students need to see and understand the relevance of what they are learning.

It is vital for TGfU practitioners to develop and use such questions in a meaningful way. Adopting a planned questioning process will provide opportunities for players to gain a greater understanding of the game and develop tactical and technical skills. By questioning and challenging players, the teacher/coach creates an atmosphere of thinking and problem solving, developing inquisitive players who usually make the best tacticians and play-makers Den Duyn, 1997).

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