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Decision making by coaches and athletes in sport

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Abstract

Decision-making is a fundamental element of any sport, especially open, fast, dynamic team sports such as volleyball, football, soccer, rugby, and basketball. In order to succeed in winning any game and competition at national and international level in all individual and team sports there is a need to reconsider all success factors in order to make a better decision to win. At the elite level, coaches and athletes appear to consistently make good decisions in situations that are highly temporally constrained. Although there is no systematic ways of decisionmaking in sports for decision making agents such as coaches, athletes, and referees, there are some characteristics that seem general enough to take away from these fields. This article is to identify these features, then relate them to the methods applied to study decisions in sports by mostly focusing on coaches and athletes.

1. Introduction

Decision making can be observed as the intellectual process resulting in the selection of a belief or a course of action among several different options. Every decision making process produces a final choice that may or may not prompt action. In general, decision making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Decision making is one of the central activities of management and is a huge part of any process of implementation (Reason, 1990).

Sports offer an exceptional occasion for the study of decision making for a several reasons. In the field of sports decision making, there are a number of different decision agents (coaches, referees, players, spectators, etc.), tasks such as play-calling and ball allocation, penalty kick, and circumstances during play, timeout, and switching players.

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This provides the chance to study a variety of interesting decision making designs and strategies in sport. Yet, each mixture of the above features produces a unique interaction of important elements that influence the way decisions in sport are made. In this study, I looked into contributing factors, styles and technical and tactical strategies of the coaches and athletes, focusing on the answers to the following question; what are the contributing factors for coaches and athletes to make better decisions? how do coaches and athletes apply experience and the knowledge of decision making skills in sport occurrence?, what are the styles and methods of coaches and athletes' decision-making?

Johnson (2006) highlights three characteristics of decision-making in the field of sports. First, he claim that they are naturalistic which means decision-making agents (mainly coaches and athletes) naturally always encounter the decision in sport environment with some degree of task familiarity. The researchers address several important points that the difference between the study of decision making in the laboratory and the ''real world'' is an important distinction that has only recently been appreciated in decision research (Orasanu& Connolly, 1993).

Secondly, Johnson (2006) argues that since the majority of sports decisions are dynamic, decisions in sports reveal over time. The impact of this dynamic aspect is double. There are internal dynamics, meaning there is not so much a single point of decision as there is a course of deliberation. Information is not immediately gathered and processed; rather a decision maker must accrue information over time, and subsequent processing of this information takes additional time. On the other hand, sports situations and decisions possess external dynamics, meaning that the situation itself changes over time. Thirdly, the author places emphasis on decisions which are often made online during the tasks or intense timely stressful situation which is related to, but distinct from, the dynamic nature of sports decisions. So, most decisions made by athletes, coaches, and referees are made while the play is in motion. He concludes that an element of variability must be realized when studying sports decisions.

2. Coaches' decision making

Coaches make critical decisions that are immediately examined by fans and the media. They are often evaluated based on the outcome and not on the intention for their choice, and how they balance the art and science of decision making. Coaches' extensive technical knowledge in their field may not be enough to win the game. Potrac, Brewer, Jones, Armour and Hoff (2000) suggest that coaches must have the pedagogical skills of a teacher, the counselling wisdom of a psychologist and the administrative leadership of a business executive. Coaches at top level must be competent to guide the more specialized physical, technical, tactical and psychological preparation of a top athlete with their styles and leadership (Sherman, Fuller and Speed, 2002).

In an extensive study, Grĕhaigne, Godbout, andBoutheir (1999), suggested a theoretical framework that was specially designed to deal with the complex combinations of open and closed-skill situations in team sports. In their framework, they underline coaches as a teaching process in which "instructive choices" about the style of coaching and teaching (such as from direct teaching styles to indirect teaching styles) are made based on the strategic focus of tactical performance, and the apparent need to focus on technical skill improvement. Furthermore, in the Grĕhaigne, Godbout and Boutheir(1999) framework, teaching style is applied during games or practice, based on the ways in which the technical (motor) skills must be performed either in set play situations and/or in dynamic tactical situations. The authors argue that set plays are better learned with more direct styles and tactical play is better encouraged by the more indirect styles. In addition, they indicated that their framework could help team sport coaches focus their thinking on important educational decisions. The authors also stated that their framework could provide structure for the development of the body of knowledge about teaching team sports.

Researches show that because of coaches' long term experience and being great athletes in the past, it does not mean that he or she will be an effective coach (Gilbert andTrudel, 2005). Even though coaches depend mostly on their own individual experience and the observation of other coaches as sources of knowledge, it is largely through shared experiences that collective understandings begin to develop, meaning that professional culture of coaching starts to take formation (Cushion, Armour and Jones, 2003).

3. Technical aspect of decision making in sport

Technical skills are defined as "the specific procedures to move one's body to perform the task that needs to be accomplished" (Martens, 2012, p. 169). In order to maximize the team performance in sport, technical feature of coaches and athletes' skills and strategies should be practiced in game-like situation. The process for learning technical skills can be explained in terms of volume of practice and attention to correct skill technique in performance (Thomas, 1994).

Wood (2014) highlights technical learning of decision-making in three categories for an athlete. First, beginner athletes are not always aware of what they did wrong, nor do they know how to correct errors. They need basic, specific instruction and feedback. And then, the athlete understands the fundamentals of the technical learning and is in the process of refining the skill combination. They experience fewer errors and can detect some of them on their own. Routines are more consistent and learners begin to know what is relevant and what is not. Finally, as last stage of technical learning, the athlete performs the skill automatically in a more dynamic environment without having to focus on execution because mixed skills is practiced in game play (Hopper andKruisselbrink, 2006).

4. Tactical aspect of decision making in sport

Tactical skills are defined as "the decisions and actions of players in the contest to gain an advantage over the opposing team or players" (Martens, 2012, p. 170). In order to better comprehend tactical learning in decision-making for both coach and athlete, it is important to recognize how specific and practical a tactic is. The successful application of a tactic involves performing the right skill by both agents at the right time on the field to achieve the general strategic objectives of the game that were decided upon before the game started. Strategies refer to the general game plan. Tactics are related to strategies set by both agents. Gréhaigne et al. (1999) identified the fundamental difference between tactics and strategy to be one of time.

Researchers argue that tactics operate under strong time constraints because they must be decided upon and then implemented under pressure during game play. Strategies can involve more elaborate cognitive processes because decisions can be made without time constraints, since strategies are determined before a game begins. The specificity of tactics means that tactical learning cannot be easily separated from technical skill learning, since a tactic is only successful if performed skillfully. Gréhaigne et al. (1999) found that a closer look at game play revealed that there are two different types of strategic actions in team sports: tactics and schemas of play. Tactics, as described above, are decisions about how to move, when to move and where to move that are made in dynamic and at times unexpected situations in a game. Schemas of play, according to Gréhaigne et al, are pre-planned sets of actions and are performed in a studied manner (also called set plays). Set plays are practiced until they can be performed automatically.

5. Coaches' decision making styles

Chelladurai and Arnott (1985) describe three different decision making styles of the coach, including the autocratic style, participative style and delegative style, and suggest that the best decision style in any circumstances rely on the configuration of the attributes of the problem. They argue that situational elements were the major factors attributed to coaching style rather than the traits or personality of the coach.

Linda Mayor (2004) also emphasized situational leadership style as the most common style for coaches and outlined four subdomains of this style; telling,selling, participating and delegating. He argues that before a leadership style can be implemented in the decision making situation in sport, level of readiness should be assessed to determine the coach's best fit leadership style. Elderton (2006) stated that a good coach will use different styles at different times and using the cooperative style most often when the situation calls for learning, decision-making, and problem solving.

Similarly, Sherman et al. (2002) recommends flexible use of decision making and coaching styles. They stated that it may be necessary for the coach to engage in coaching behaviors to which the athlete is receptive. What may be an appropriate coaching behavior to one athlete may be ineffective approach for another. Marshal (2006) findings

backs up the idea that successful coaching of high-level athletes involves a much more consensual process than the do-as-I-say approach.

6. How to improve coaches' decision-making style

As commonly acknowledged, strategic decision making and tactical strategies can be learned in participating game-like situations, where corrective feedback is given and received during practice (Voight, 2002). Based on the feedback the coach receives, coaches can effectively implement the games strategy or personal skill development of the players. According to Dunn (2006), for coaches, feedback is a critical part of the learning process in the decision-making. Players need to know whether mistakes are tactical, technical or both. Coaches then need to address the appropriate aspect.

As coaches receive feedback, coaches' demonstration and sampling play a critical factor in coaching success and decision (Hodges and Franks, 2002). For instance, coaches must play an active role throughout practices, enhancing play either by stopping the game for the whole team at a teachable moment or by taking individual players aside and instructing them about how they could improve their decision making or technical skills in that situation. Furthermore, the content of coaches' verbal behaviour (what they say and how frequently they say it) plays a vital role in the improvement of team's overall performance (Lacy andDarst, 1985). Because sports coaches all have a preferred coaching style, the appropriate selection of leadership styles, according to Hersey and Blanchard (1977), is dependent on the group "level of readiness." In their study, they viewed the level of readiness as one of the major indicators leaders can use to determine the point at which their leadership style should change.

A coaching style is a way of behaving. So, coaches spend most of their time using their preferred coaching style. Sometimes this style works well for them. Sometimes it does not. Knowing what your coaching style is and being able to change it is critical in order to appeal to the different types of athletes that you coach (Gilbert andTrudel, 2005). Using a style that is incompatible with your athlete's needs will result in you becoming frustrated that the athlete is not making changes and it will also result in the athlete becoming frustrated that they are not being coached effectively.

7. How to improve athletes' decision making style

Similarly, athletes should be encouraged to make a decision by evaluating options and being allowed to make mistakes and purposely inspect these mistakes so that it does not occur in the future. For this atmosphere to be reached by athlete, the coach must provide the change and environment.And the biggest impact on whether athletes end up taking responsibility is how the athlete is coached. Coaches try to incorporate a sharing style of coaching where they use questioning techniques to draw out their athlete's thinking. To use questioning technique means not relying on a "traditional" style of coaching which is usually based around the directive style of coaching (Dunn, 2006). However, it is not suggested a coach never use a directive style of coaching.

However, if coaches mainly rely on this style and give their athletes the answers to most of the problems they face, then the athlete never learns to address issues themselves. They need to learn and practice decision making. If an athlete does not get the opportunity to learn and practice decision making in training, they do not get it right in a competition. Overall, coaches who use an athlete-centered approach have a better chance of developing athletes who have self-awareness and who have the abilities to make great choices in both training and then competition (Voight, 2002). Decision making is more natural to certain athletes, so they focus more on improving the quality of their decisions. Other athletes who are less natural decisionmakers are often able to make quality assessments, but then need to be more influential in acting upon the assessments made.

In addition, Hanson (2005) studied athletes' decision making styles and believes that athletes decision making skills depend on their behaviour style and certain behavioural profiles take more vital action than other types. In his study, he outlines four characteristic of athletes' behaviour styles; dominant, interactive, steady and compliant styles. Dominant and interactive styles have a natural disposition to make rapid decisions. Both these types base their decisions on different criteria. Interactive styles make their decisions fast (and often change their mind as quickly again) based on intuitive feel for what is happening around them. They do not pay specific attention to facts and raw data. Both dominant styles and interactive styles can learn from each other by sharing each other's tendencies to

more fully explore options. The author claims that steady styles, on the other hand, take more time to reach decision. They actually prefer the status quo and often prefer not to make a decision. When they do make a decision, it can often happen too late. Their decision is based on feelings and relationships with those around them. Compliant styles make highly detailed and logical decisions. The author further suggests that all data must be considered prior to them actually making their choice. This high level consideration takes time, often to the frustration of faster style decision makers.

Evans, Horgan and James (1979) conducted an extensive study on the rugby players and coaches, and described strategy as the art of planning how to use skills to gain fair advantage over an opponent. They argue that a team's strategy is an attempt to map out the course of a game and control the competitive tempo. At the advance level of competition, more complex strategic planning will go into the planning for game. They proceed to associate tactics with the actual execution of skills during a game. Tactics are the means by which the strategy is put into action. Similarly, Thomas (1994) found that motor learning research has divided game performance into two components; technical learning (skill) and tactical learning (cognitive). However, game performance was not conceived to be the sum of these two components, but rather the interaction between them. It is commonly well-known that practice situations should be similar to game performance in order to maximize transection (Magill, 2001), which would suggest that practice sessions should also be characterized by the interaction of technical and tactical learning, with the objective of improving the quality of decision making by players on the field.

8. Conclusion

The purpose of this article based on the extensive literature review was to identify what is involved in decision making in sports, how coaches and athletes make effective decision. The article also emphasizes some of their decision making styles and methods that have been used in sports. In every area of the sports, whether in a professional or amateur, or school setting, coaches and physical education teachers have been dealing with how to teach kids an effective tactic and technique of sports play and help them be better decision makers. A review of literature supports that it all depends on their skill performance and their decisions are all based on their experience, practice, feedback, intuition.

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