

Eyewitness Recollection of Sport Coaches

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Abstract

The current study is based on the works of Franks and Miller (1986) Eyewitness Testimony in Sport which measured coaches' observational accuracy from one half of an international football match. Franks and Miller used novice Physical Education students, with no previous soccer experience, to recall events accurately in six categories of questions reflecting important aspects of an international soccer game. These results showed a relatively low recall ability and observational accuracy recorded by this group of 42%. The aim of the current study was to assess the ability of experienced, qualified, football coaches (with a minimum of 6 months experience after obtaining their qualification) to recollect accurately critical events during 45 minutes of a football match. Subjects were allowed to take notes whilst watching the match before answering the six category questionnaire at the end. The results of the current study show that the probability of qualified, experienced coaches recalling critical events accurately is 59.2% (SD±15.3). Coach observation accuracy and recall ability is 17.2% greater than novice coaches reported by Franks and Miller (1986). It can be concluded that qualified coaches, who have greater familiarity with the sport being observed, have greater recall accuracy.

Key Words: Recall accuracy, Coaching, Observation, Football

1. Introduction

Performance analysis is a crucial aspect of assessing performance and is critical in determining the needs of individuals and teams and in identifying weaknesses or strengths in performance. It is important for individuals to receive accurate feedback in order to help improve performance (Weinberg and Gould, 2003), and has been highlighted as a vital component of athlete development (Biddle *et al.*, 2001, Horn, 1987). Newell (1991) argued that the information provided to athletes on their performance is crucial in the development of skills, and the effects will vary on an individual's stage of learning depending on when the feedback is given. The importance for coaches to provide athletes with feedback straight after performance was outlined by Jones *et al.* (2004) who argued that any delay in time may make feedback subjective and invalid as the coaches recall ability of critical events will be decreased. It is therefore important for a coach to have a good recall ability in order to remember the critical events of the game or training that are being observed and to provide the athlete

with accurate feedback. The use of notational analysis for assessing performance during a game and providing technical and tactical evaluation to performance was highlighted by Reilly and Gilbourne (2003) as a useful method for providing more accurate feedback. Individual's performance can be assessed step by step in order to give correct information on the strengths and weaknesses of performance.

Preparation for analysing performance was identified by Franks and Miller (1986) as an area that could benefit coaches in recalling critical or significant events. Thornton and Zorich (1980) stated that instructions given to subjects prior to testing would have an effect on recall and influence the results after video analysis. Their study involved subjects analysing a 45 minute video tape of a group discussion consisting of three males and three females. The subjects of the study were split into three groups; group 1 consisted of subjects watching the video and being given no instructions, group 2 consisted of subjects recording specific behaviours of the members of the discussion and group 3 consisted of subjects being given instructions on how to avoid recording behaviour errors and focus on the behaviour areas that were important for the purpose of the experiment. Thornton and Zorich (1980) identified that group 3 were the most successful at answering the questions correctly and they argued that it was due to the instructions and training given to subjects before the testing began.

Franks and Miller (1986) replicated the three experimental groups in their study to consider if any significant difference could be identified from different instructions in observational accuracy prior to watching the video of an international soccer game. Their results differed markedly from Thornton and Zorich as there was no statistical difference within the three groups, although a significant difference was identified in recall accuracy between six categories of questions relating to aspects of the soccer game (Table 1). All subjects were able to recall set piece information more accurately than the other categories. Franks and Miller argued that due to the subjects being novice coaches (3rd year physical education students) the set piece category showed the highest recall due to the game stopping in order for penalties, free kicks and throw-ins to be taken.

Franks and Miller (1986) concluded that for future research in this area it would be more beneficial to use experienced coaches for testing, allow for necessary training of observation skills to be undertaken prior to testing, reduce the number of critical events to be analysed during a game and identify the behaviours of coach's observation ability.

Table 1: Means and Standard Deviations of experimental groups by category of questions recorded in results of Franks and Miller (1986).

Question Category		Group 1	Group 2	Group 3	Average Total
Possession	M	30	28	46	35
	SD	21	16	23	
Shots	M	58	50	56	55
	SD	23	19	27	
Passing	M	36	18	28	27
	SD	15	17	23	
Set Pieces	M	64	70	78	71
	SD	26	27	23	
Crosses	M	34	22	40	32
	SD	18	14	13	
Goalkeeper contact	M	40	30	30	33
	SD	13	23	21	
Average		44	36	46	42

The study carried out by Franks and Miller (1986) made comparisons between eye witnesses in criminal situations and eye witnesses (coaches) in a sporting environment. An eyewitness was defined as someone who has witnessed an event or incident and can provide an account of what actually happened or what they identified. Clifford and Hollins (1980) stated that arousal levels are increased in eye witnesses during criminal situations causing inaccuracy and unreliability and this level of arousal is replicated during sporting events, as many demands are placed on the coach.

The environment of the sport also has an impact on observational accuracy, with Olympic events considered more important than regional events (Leippe *et al.*, 1978). This would exert higher arousal levels within the coach and increase the possibility of an inaccurate recollection. Franks and Miller (1986) also argued that it is difficult for a coach to concentrate on every aspect of a game and in particular team games, as more players are taking part. Due to a lack of focused concentration during a team event the coach may be biased in their observation and results would be invalid and inaccurate.

2. Methods

2.1. Subjects

The current study assessed qualified football coaches who had previous knowledge of the sport and skills within the game and would be able to evaluate critical events more accurately. The subjects used in this study were eight adult qualified football coaches (age range 19 - 55, Mean of 25.8 years) with a minimum qualification of level 1 in one or more of the four Scottish Football Association (SFA) accredited coaching categories; children (5 to 11 years), youth (12 to 18 years), adult (18 years +) or specialist coach. Subjects had a minimum of 6 months experience after obtaining their qualification.

Table 2: Coaching awards and experience of subjects in study

Subject	Age	Coaching Awards Held	Coaching Experience
Subject 1	55	SFA Level 1 & 2	3 years
Subject 2	21	SFA Level 1, 2, 3 & 4	4 years
Subject 3	19	SFA Level 1	1 year
Subject 4	19	SFA Level 1	1 year
Subject 5	20	SFA Level 1	1 year
Subject 6	23	SFA Level 1	2 years
Subject 7	23	SFA Level 1	3 years
Subject 8	26	SFA Level 1, 2, 3 & 4	6 years

2.2. Procedure

The study involved subjects watching a high standard football game of 45 minutes which had previously been recorded on DVD. An older game was used (7 years old) as the coaches watched football on a regular basis and it was considered important to select a game they may not have seen or had forgotten about. All subjects watched the same game in a group setting but without being able to consult with one another. The use of video / DVD had previously been identified as an important tool for providing coaches with the necessary information to give athletes feedback, Hughes (1988), Patrick and MacKenna (1988), Doggart, Keane, Reilly, and Stanhope (1993) and Olsen and Larsen (1997).

The game used for the current study was of a high standard from the Scottish Premier League, Hibernian versus Heart of Midlothian from the 22nd October 2000. This game was selected as there were many critical events within the game for coaches to recall appropriate information.

The subjects were given criteria forms of the definitions of a football game and were required to read over these before commencing the study. After the subjects had read the criteria they were then given a copy of the questionnaire which they were required to complete after they had watched the game. The subjects were also given a form illustrating a football pitch broken down into certain areas, adapted from Hughes and Franks (2004), which was required for answering the questionnaire. The subjects were allowed to take notes and write down certain points of the game that they felt was necessary for completing the questionnaire at the end of the video. The subjects were instructed to only take these notes whilst watching the game. Qualified coaches are used to taking notes on performance throughout a game and therefore it was felt necessary they were allowed to do so during testing. Once the game had been viewed the subjects were required to answer the questionnaire.

2.3. Questionnaire

The Franks and Miller (1986) questionnaire was replicated after contacting the original author. This was used so that correct comparisons could be made after testing to see whether or not using qualified coaches actually had a better ability to recall critical events during a game. There were thirty questions in the questionnaire broken down into six categories considered important aspects within a football game as detailed in the

original study. Each category required subjects to answer five questions on the critical events to be addressed during the game. The six categories included; possession, shooting, passing, set pieces, crosses and goalkeeper contact. Subjects were allowed to take appropriate notes and told to use the criteria form for completing the questionnaire properly. This allowed for each subject to record to the best of their ability up to thirty events during 45 minutes of game play. The aim of the questionnaire was to assess the coach's ability to record accurately the critical events that occurred during the game.

3. Results

Table 3 shows that the results varied throughout each of the six categories but the overall recall percentage for the subjects tested was 59.2%. This indicates considerable improvement compared to Franks and Miller (1986) who only identified coach recall of 42%. This may be due to subjects being qualified coaches with greater familiarity with the sport being observed and therefore having greater recall accuracy.

Table 3: Total number of questions answered correctly by each subject for all 6 categories (5 questions in each).

Question Category		Total %
Possession	M	32.5
	SD	18.3
Shots	M	95.0
	SD	14.1
Passing	M	70.0
	SD	23.9
Set Pieces	M	60.0
	SD	23.9
Crosses	M	37.5
	SD	16.7
Goalkeeper contact	M	60.0
	SD	30.2
Average		59.2

The results by category show that the recall accuracy of shooting, passing, and goalkeeper contact categories are high as the subjects were able to answer most or all of the questions asked. Recall accuracy in the possession and crossing categories was low as each subject only managed to recall some of the information and were only able to answer a few of the questions correctly (Table 3). The recall accuracy of the set piece category shows a mixed response as only four of the subjects were able to recall the information to answer four of the questions and the other subjects were only able to answer three or less of the questions asked.

Table 4 shows the overall recall ability of each coach from the study and how many questions each subject answered correctly out of the thirty asked. Table 4 indicates the variety of results throughout all of the 8 subjects but with an average overall recall percentage of 59.2%.

Table 4: Number of questions answered correctly by each subject (thirty questions)

Overall Recall Ability	Correct out of 30	Total %
Subject 1	22	73.3
Subject 2	14	46.7
Subject 3	22	73.3
Subject 4	23	76.7
Subject 5	19	63.3
Subject 6	11	36.7
Subject 7	13	43.3
Subject 8	18	60.0
Average	17.8	59.2 (SD± 15.3)

4. Discussion

The findings show that overall recall accuracy is higher when using qualified coaches as opposed to novice coaches. Subjects within the current study who had less experience had a better recall accuracy than subjects with more experience. The subjects with less experience completed their coaching awards more recently than the more experienced coaches. Coaches who had gained an award recently would have been made aware of the elements that comprised critical events in soccer and this may have helped them in recalling events of the game watched. A coach who has been working for a long time will develop patterns and ways in which they coach and this may influence how they observe performance (Crisfield, 1998). If a coach works with the same individuals for a long period of time then they may focus less on observing the athlete accurately. The level at which a coach works will determine the amount of observation needed to be successful. If a coach is working with an elite group then less emphasis is placed on observing the athletes strengths and weaknesses as they should be at an autonomous level. If a coach is working with beginner or intermediate level athletes then more focus is placed on identifying strengths and weaknesses in performance (Pyke, 2002; Martens, 2004).

Analysed by category the subjects tested in Franks and Miller (1986) study were able to recall more accurately the set piece information compared to the other five categories. Their inexperience may have meant placing greater emphasis on the set piece as a critical event. The concentration of the novice coach would influence recall accuracy as they would focus attention to what was happening even if the observation did not necessarily link to the question being asked. The current study shows that overall coach recall was significantly better than Franks and Miller (1986) and that the shooting category was recalled more accurately than the other categories. A qualified coach would interpret a shot at goal as being of high importance and would influence concentration and observation accuracy of how this event occurred allowing for a better recall of events.

4.1. Limitations and internal and external validity of the study

The present study highlights several limitations within its methodological approach. A greater subject size is of benefit to any study as it helps to increase the statistical significance of the data obtained, however, the data gathered during the present study has indicated significance even though only eight participants were used.

It was expected that the participants in the present study would have limited previous experience of using video recall as a method of providing feedback to the athletes they coach, especially those working with children.

The experience and coaching awards held by the subjects varied greatly across the group, although all of the participants met the set criteria for the study. It may be more valid to have used narrower criteria, which would have provoked a more specific evaluation of the recall ability of a group of coaches with the same level of expertise and duration of experience. Additionally, the level of coaching they were currently involved in could have affected their ability to recall critical events within a game.

5. Future Research

Future research would be required in order to increase the comprehensiveness of the study. A larger sample size could be used to ensure statistical relevance and narrower exclusion criteria could have been used to evaluate the recall ability of coaches of a specific experience level. Due to limitations within the existing literature regarding sports recall, as opposed to criminal situation recall, any further study would be beneficial as it will add to the current knowledge gap within sports recall literature.

Further study could include designing a training programme for coaches to practice and develop the skills necessary to effectively recall important events within a performance as well as identifying player's strengths and weaknesses during games.

In conclusion the results of the study show that qualified, experienced coaches' observation recall accuracy for critical events was 59.2% giving an increase of 17.2% from novice coaches used in the Franks and Miller (1986) study, showing that qualified coaches who have greater familiarity with the sport being observed have greater recall accuracy than novice coaches.

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