

# The effectiveness of training for attack in soccer from the perspective of cognitive recognition during feedback of video analysis of matches

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The purpose of this study is to devise a method of training method that includes effective recognition for attack to reach the goal, and to evaluate the effectiveness by analysis of matches. The training was carried out for 28 members of K University soccer club in the second division of Kanto University soccer league (players of A team) for approximately one-half year from the beginning of February 2007 to August 2007. The training proceeded for 120 minutes, six days per week (one day off). Training was recorded by video, and objective analysis of on-site training, practice games, and a pennant race was fed back to players. Improvements based on analysis of the play were incorporated into the training. Game analysis was carried out using the DATA striker soccer input system to capture the position of the ball for each of 11 league matches, the process (number of people, number of the plays, time) that reached to a shot, the total number of shots, the score in the first half of the year in league matches in 2007 and in the latter period of 2006 before training.

The following results were obtained: Although with the organized attack from the position where the entire team was high by incorporating training which emphasized recognition, a lower number of players reached a shot, the number of the plays and total number of shots was fewer, the time shortened, and total goals improved. Therefore, training made it possible for play to be performed using the cooperative circumstantial judgment of the entire team toward tactics.

**Keywords:** Circumstantial judgment, Training of the recognition, Game analysis

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## 1. Introduction

In open skill sports such as soccer in which game situations constantly change, players are required to judge each situation quickly and accurately and to determine the manner of play based on their judgments. The quality of such judgment depends “not only upon the ability to select play but also upon perceptual skills associated with selective attention, cognition, and prediction” (Nakagawa, 1984). A cognitive aspect, such as prediction and judgment of situations, serves as a significant element of game performance. In their comparison of psychological

game abilities between Japanese and South Korean university players, however, Otake et al. (2006) pointed out that Japanese players were inferior to South Korean players in terms of skill in the prediction and judgment of situations. Therefore, it is important to conduct cognitive training in order to improve the level of Japanese soccer.

Cognitive training, defined as training for improvement of player ability to predict and judge situations, can be classified into 2 types; namely, (1) on-the-field training for offensive and defensive play, or in the form of games (Onishi, 1972; Nakagawa, 1982; Araki, 1995) and (2) off-the-field training based

on movies and videos (Kaino and Sugihara, 1983; Kaino and Sugihara, 1989; Nakamoto, 2005; Murai, 2007). As Nakagawa (1997) has reported, the efficacy of the latter has been demonstrated in research conducted in the laboratory where it is relatively easy to control conditions. In terms of the former, however, sufficient factual evidence has not been acquired. No matter how much training players have in the form of games, what they can learn from such training is limited if compared with the large variety of situations that may occur during an actual game. Christina (1989) and Martens (1987) point out that it would be difficult to find direct solutions to actual challenges through a verification of theories under laboratory conditions that are similar to those in actual games and that this is because human behavior and external factors interact in complex way with one another in actual game situations. For verification of the efficacy of training, such as cognitive training, that is intended for application to actual game situations, on-the-site action research is not only necessary but also productive.

To make such research effective, it is essential to actively repeat the following cycle : 1) Instead of cognitive training in the form of a specific game, identify problems to be resolved first through an analysis of the offensive and defensive play of one's team as well as the opposing team and design training in consideration of the cognitive aspect; 2) Conduct training as a part of daily practice with a coach who actively intervenes to provide assessments and instruction as needed; and 3) Verify the efficacy of training in actual games. Games are placed at the center of training because development of the cognitive aspect such as prediction and judgment of situations is thought to be more related to experience of games than to experience of sports. In games, as Oura et al. (1994) point out, players inevitably consider measures to compensate for their weak points as individuals or as a team. This may help individuals and teams to change their practice, which may be heteronomous and formal, to practice which is autonomous and reflective.

In this study, a new training method for effective offenses that lead to goal scoring was produced in consideration of the cognitive aspect. Verification of the effectiveness of this training method was conducted through game analyses.

## 2. Establishment of the Training Method

The subjects of this study were members of the K University soccer team (Kanto University Soccer League Part 2). Placing emphasis on defense strategy training, this team aimed at taking chances for counter attack while all members tracked back to the halfway line. The results of the team in the 2006 season totaled 8 wins, 7 losses, and 7 draws, showing the tendency for low scores (mean score for a game: 1.2) and a high number of tie games. A coach of this team, who is one of the researchers of this study, reflected on the results of the previous season and decided to devise a new training method to improve the effectiveness of attacks in scoring goals or in making shots with a view to 2007 league games.

In soccer, each player is required to exhibit accuracy of skill and quick judgment within a limited space while collaborating with other players to achieve harmonized team play (Japan Football Association, 1998; Nakagawa, 1997). If each player is able to predict how other members of his team will move and can perform in the game in consideration of such prediction, harmonized team play will be achieved through aggressive attacks on lightly-guarded positions with quick moves with the ball as the Japan Football Association recommends (2006, 2008). In order to attain this, it is necessary to devise a training method that enables the team to play the game based on their collaborative judgment of situations and their shared strategic purposes.

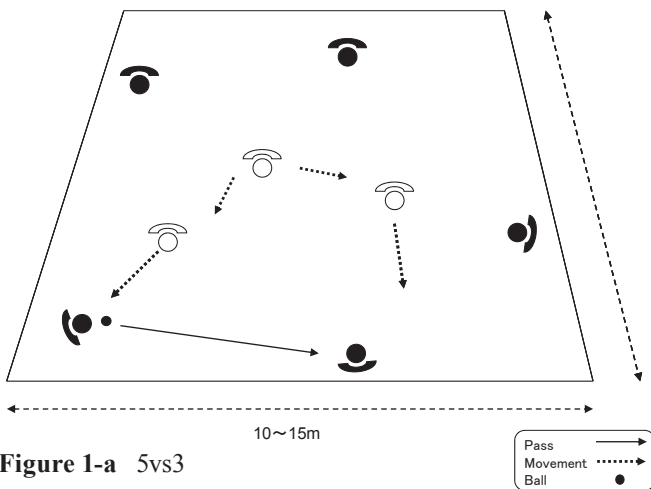
Based on the training method for effective attack created by Yoshimura (2003), three experts, who were licensed as soccer instructors, devised the training method presented in "references."

Using this newly-devised training method, 28 members of the soccer club (Team A) of K University soccer team underwent trained for approximately 6 months from early February to August 2007. Twenty of the 28 players participated in league competitions held in the fall of 2006 and in the spring of 2007. Together with a coach, one of the researchers was in charge of training for 6 days per week (with one day rest per week) including practice games and official games.

The details and objectives of this training are shown in **Table 1** and **Figures 1-a, 1-b, 1-c, and 1-d**. The length of each training session was approximately 120 minutes (including the time for warming-up and warming-down). Training was structured in

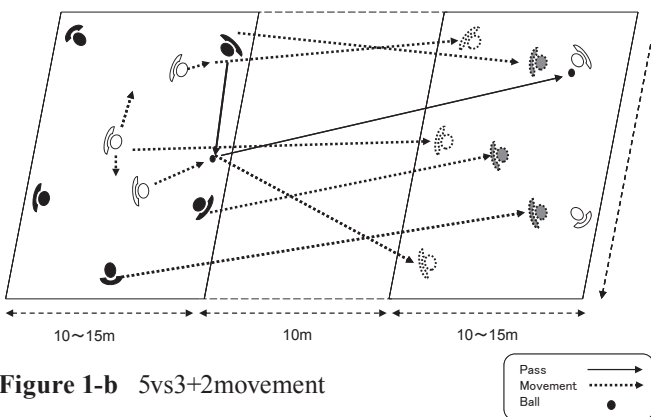
**Table 1** Methods and Objective of Training

Strategies for effective offense	Objectives of instruction	Key point	Graph
① Start an offensive play by gaining the ball around the half-line	<ul style="list-style-type: none"> <li>• Speedy action of the first defender for gaining the ball</li> <li>• Collaboration with team mates in gaining the ball</li> <li>• Strong determination to gain the ball</li> </ul>	Understanding of defense principles Judgment of situations Coaching	1-a, 1-b 1-c, 1-d
② Use a minimum number of dribbles and a maximum number of passes	<ul style="list-style-type: none"> <li>• Accurate, swift, and precise long passes</li> <li>• Readiness for not being in possession of the ball (awareness of present situation)</li> <li>• Control of number of touches based on judgment of situations (consciousness of one-touch play)</li> <li>• Correction of movement based on judgment of situations</li> </ul>	Securing of visual field Switch between offense and defense Coaching Judgment of situations	1-a, 1-b
③ Structure an offensive play with the involvement of 3 or 4 players from the starting point of offense	<ul style="list-style-type: none"> <li>• Awareness of the importance of offense before the opponent becomes ready for defense</li> <li>• Awareness of the importance of switching modes from defense to offense</li> <li>• Awareness of the importance of balancing</li> </ul>	Switch between offense and defense Collaboration of 3 or 4 players Awareness of the importance of support	1-c, 1-d



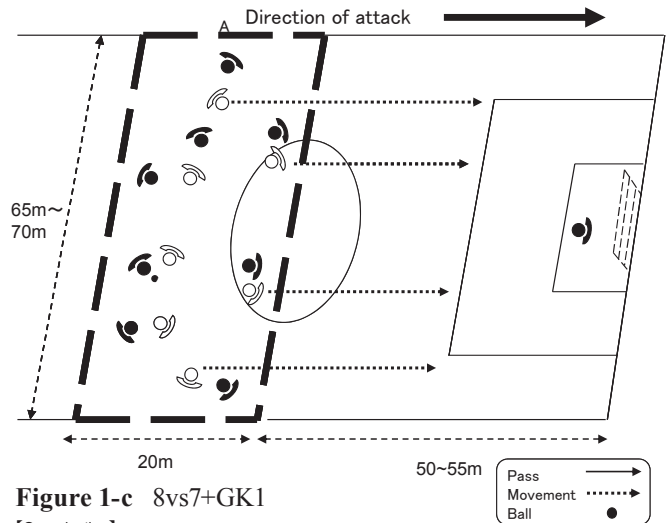
**Figure 1-a** 5vs3

**[Organization]**  
 Keep the ball by passing it within a grid.  
 Pass the ball among the group of 5 players.  
**[Procedure]**  
 3 defenders try to gain the ball from the group of 5 and to keep it.  
 The group of 5 tries to keep the ball from the 3 defenders. If the ball is taken by the opponent, the group tries to take it back by swiftly switching their modes from defense to offense.  
 As the key tasks, 3 defenders should collaborate in gaining the ball from the group, while the group should switch their modes swiftly from defense to offense if the ball is taken by the opponent to take it back from them.



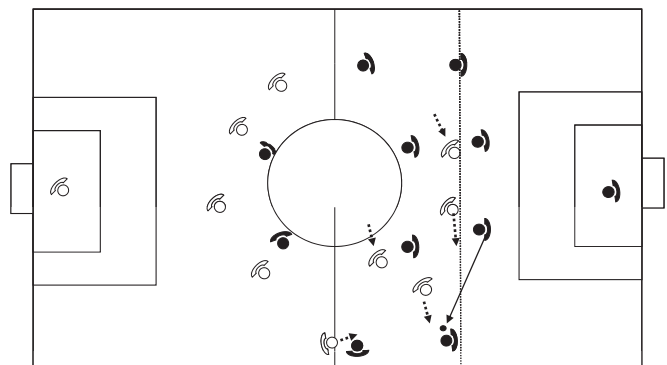
**Figure 1-b** 5vs3+2movement

**[Organization]**  
 The group of 5 players try to keep the ball from 3 defenders within Grid A.  
**[Procedure]**  
 First, 5 players (black group) play against 3 players (white group) as shown in Figure 1-a. 2 other players of the white group prepare themselves for receiving the ball.  
 If the ball is gained from the black group, the 3 defenders (white) pass it quickly to their team mates in Grid B.  
 The black and the white switch their roles as offenders and defenders. The 3 white group members move to Grid B as quickly as possible to pass the ball. Three of the 5 black group members also move to Grid B.  
 Five players (white) try to keep the ball from 3 players (black) in Grid B, while 2 players (black) prepare themselves for receiving the ball in Grid A.  
 The key tasks are smooth performance of the switch between offense and defense and speedy attack against the opponent.



**Figure 1-c** 8vs7+GK1

**[Organization]**  
 In Grid A, 8 players try to keep the ball from 7 opponent players by passing it among them.  
**[Procedure]**  
 The group of 8 try to keep the ball within 2 touches in Grid A.  
 The group of 7, if gaining the ball from the opponent, switch their modes promptly between offense and defense and aim at scoring a goal. Keep it in mind that passes are more effective than dribbles.  
 The group of 8, if the ball is taken by the opponent, switch their modes promptly from offense to defense.  
 Promote awareness of the first defender.  
 If the ball is gained back from the opponent, the group of 8 go back into Grid A and try to keep the ball within 2 touches.  
 Both groups should boost their awareness of the importance of quick switches between offense and defense and of balance among 3 or 4 players involved in offenses.  
 Most importantly, both groups should ultimately aim at scoring a goal.



**Figure 1-d** Team Tactics

**[Organization]**  
 Training is performed in the form of a game of 11 vs. 11. If interrupted, the game is started again from the initial position.  
**[Procedure]**  
 The players should try to engage in a systemic defense in the zone that is as close to the opponent's goal as possible and switch their modes from defense to offense smoothly.  
 The players should defend not for the sake of defense but for the sake of effective offense.  
 Most importantly, the players should ultimately aim at scoring a goal.

consideration of the conditions, understanding, and skill of the players.

Training for the cognitive aspect was performed based on the cognitive training devised by Inomata et al. (1993). In an investigation by Inomata et al., university handball players were directed to form into pairs for participation in communication training with the use of videos. This training was proven to be effective in improving their cooperative performance in relation to judgment of situations and strategic accuracy. Following this method, the coach of the target team and the researcher conducted game analysis based on videotapes of the official games and weekly practice games and acquired feedback on this analysis data from players as training for the cognitive aspect in addition to on-the-ground instruction. The players were asked to attend a weekly meeting where videotaped games were evaluated based on analytical discussion between the players and the instructors and where the objectives of the training were explained.

### 3. Game analysis

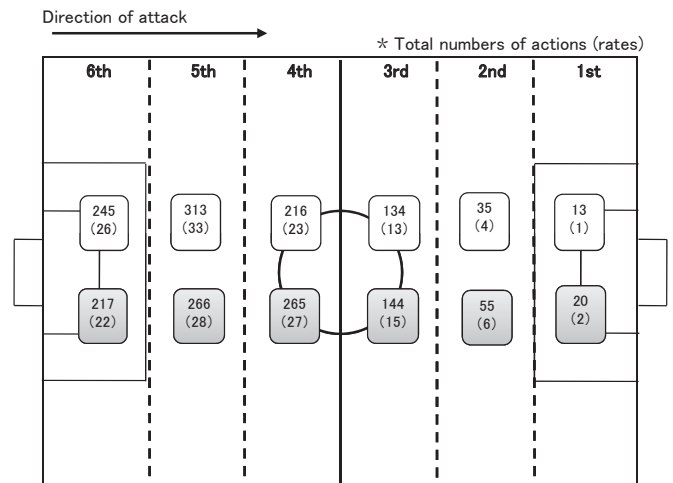
Game analysis was conducted in the following manner: The target games were videotaped using a Sony Hard Disk Drive Handycam Camcorder DCR-SR 100. The video file was transferred onto a personal computer and converted into an MPEG video format. With use of a soccer analysis tool produced by Data Striker Inc., analysis of the video data was conducted.

The target of the analysis comprised 11 games each of league competitions in the second half of the 2006 season (September 8 - November 24, 2006) and the first half of the 2007 season (April 2 - May 27, 2007). Based on the index used by Yoshimura (2003) in his research on the efficacy of offense, the analysis in this study was performed in terms of ball gaining positions, shot making (number of players involved, number of actions, and time taken), total number of shots, and total scores.

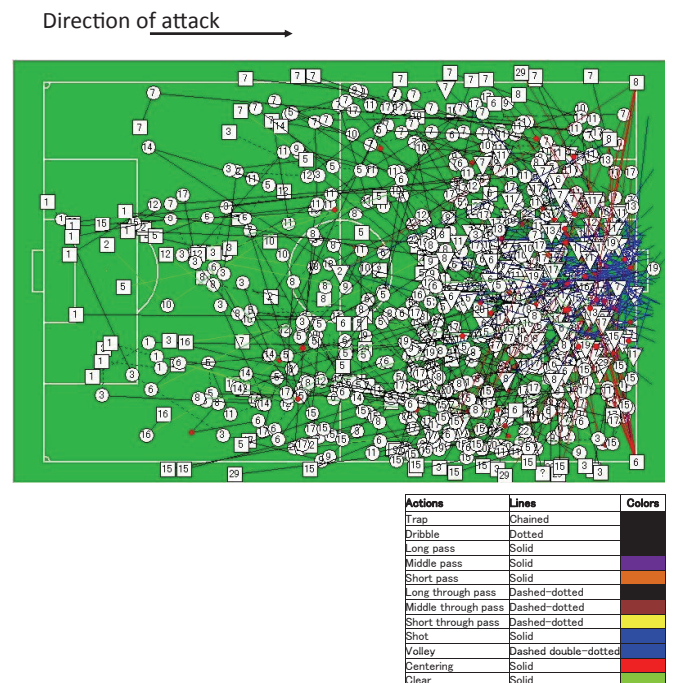
## 4. Results and Discussion

### 4.1. Ball gaining position and shot making

**Figure 2**, in which the soccer court was divided into 6 zones, shows the numbers of successful ball gaining actions in the respective zones for the league competition games analyzed in this study. As is clearly shown, the number and rate of ball gaining



**Figure 2** 2007 Second Semester (above), 2007 First Semester (below) League's (each 11 games) defending position and percentage



**Figure 3-a** 2006 Second Semester's Shot tracks (11 games)

actions around the halfway-line (Zones #4 and #3) and in the opponent's zones (Zones #2 and #1) were higher in the first half of the 2007 season, after the newly-devised training, than in the second half of the 2006 season.

**Figures 3-a** and **3-b** show shot making. As is apparent from these figures, shots were made mainly from the center of the opponent's zone in the games performed in the second half of the 2006 season and at various spots in the opponent's zone in the games performed in the first half of the 2007 season. In the latter, shots tended to be simpler.

Regarding effective offense, Yoshimura (2003)



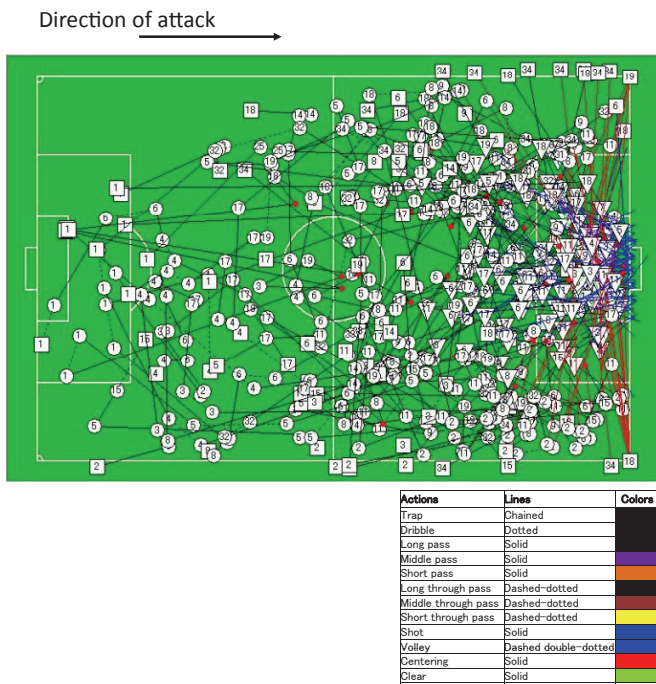


Figure 3-b 2007 First Semester's Shot Tracks (11 games)

states, "Players should gain the ball and take the chance to attack as often as possible. Ball gaining should be performed around the halfway-line or at a position that is as close to the opponent's goal as possible. This is a significant factor for effective offense." When the results of this analysis are reviewed in light of this statement, it was suggested that the players, after the training, became able to gain the ball at the points which were as close to the opponent's goal as possible and to switch their modes swiftly between defense and offense and that this enabled the players to perform in a unified and systemic manner for shots before the opposing team could take systemic defensive action.

#### 4.2. Time, number of actions, and number of players involved in making shots

Figure 4 (a, b, c) shows time, number of actions, and number of players involved in shot making in the games analyzed. The number of players involved, number of actions, and time taken in the former and

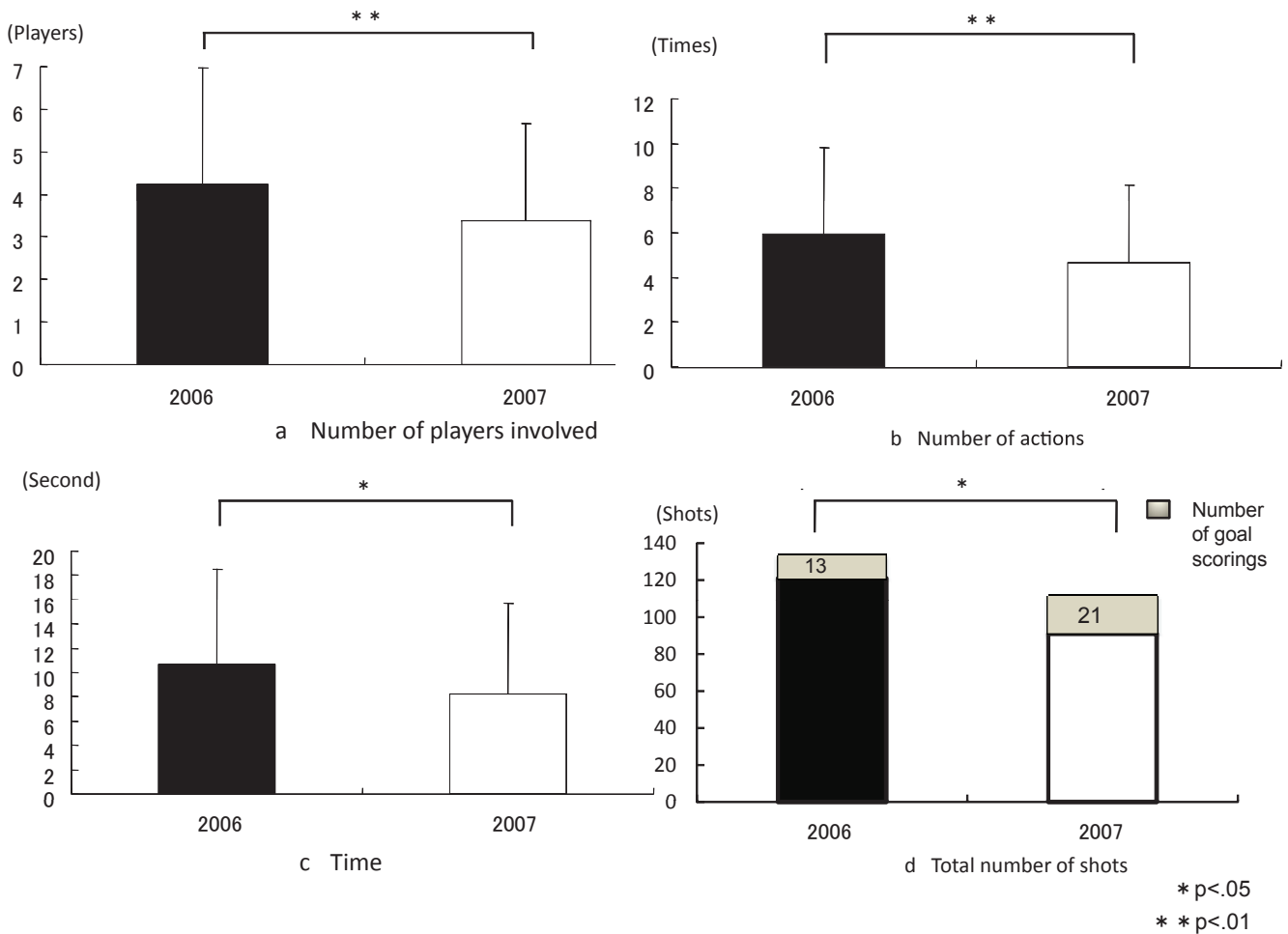


Figure 4 Difference in number of players involved until a shot, number of plays, time, and total shots after training

in the latter were, respectively, 4.2 players and 3.4 players, 5.9 times and 4.6 times, and 10.7 seconds and 8.2 seconds, showing that the latter was lower than the former regarding each of these items. Unlike experimental studies, control of conditions is difficult in practical studies such as this because members of both teams can differ from game to game in actual competition. In this study, therefore, it was difficult to statistically process game analysis. For the sake of reference, however, a t-test without repetition was conducted. As a result, significant difference was observed in the number of players involved ( $t=2.808$ ) and number of actions ( $t=2.861$ ) (level of significance=5%).

These results indicate that number of players involved, number of actions, and time were reduced because the strategic purpose of swift attack was shared among the players and because the players became able to collaborate in their judgment of situations to achieve coordinated team play. It is said that an effective offense is structured with the involvement of 3 or 4 players from the starting point of offense to the goal (Yoshimura, 2002). In order to perform a swift and smooth attack, therefore, well-balanced performances and the involvement of a suitable number of players are required. Considering this view and the results of this study, the following can be said: If only 1 or 2 players are involved in shot making, an opponent may detect the intention of the attackers. By contrast, the involvement of 3 or 4 players may confuse the opponents as defenders and may allow the ball holder to have more options for passing for a more effective offense.

### 4.3. Total score and total number of shots

**Figure 4-d** shows the total score and total number of shots in the games in this study. Rate of successful shots in the second half of the 2006 season was 9.7% (13/ 134 shots) and that in the first half of the 2007 season was 18.8% (21/ 112), being higher in the latter than in the former.  $\chi^2$  test revealed a significant difference ( $\chi^2 =4.194$ ) (significance level=5%).

Okumura et al. (1991) have demonstrated that the process of situation cognition is important at any stage and at any level and that selective attention to situations varies depending on the level of performance in this process, which is associated with the speed and accuracy of situation cognition. The

training including the cognitive aspect used in this study was supposed to contribute to improvement of the judgment of situations and the players' selective attention to determine in advance who would make what type of pass to whom, which helped in increasing the rate of goal scoring with the optimal number of players involved in shooting within the optimal time.

### 4.4. Efficacy of training that covers the cognitive aspect

In this study, a method of effective training, including cognitive training, for offense in soccer was devised and was verified in actual games. Judging from the results shown above, this training method was supposed to be effective.

In training for resolving tasks that are generated at random and change in various ways such as the judgment of situations in soccer, there is a limit to its effectiveness in actual games even if resolutions of certain tasks are trained for as a part of practice that is performed in the form of a game. As Hatano et al. (1980) and Söhön (1983) suggested, therefore, players should experience the resolution of atypical tasks in various different ways in order to acquire the skills required to take flexible and adequate measures.

Many researchers have investigated relations between technical levels and levels of prediction or judgment of situations in sports. For example, levels of prediction of courses and pitches in tennis (Takeda et al., 2002; Hirata et al., 1998), levels of attention of soccer players (Sugahara et al., 2002), and levels of judgment of situations in volleyball (Sasaki et al., 2005) were investigated with a focus on their relation to technical levels. The superiority of regular players was revealed in all these studies. Interestingly, Oura et al. (1994) demonstrated in their study on kendo players that regular players with rich experience of matches were superior in initiative judgment to irregular players with less experience in matches even if the former and the latter were at the same performance level and in possession of the same length of experience of kendo. This indicates that it is important to tackle numerous tasks involving unprecedented and atypical factors as seen in actual matches, in addition to ordinary practice, in order to develop the ability to make accurate judgments of situations.

In games, participating players inevitably consider

their individual and team weak points and devise countermeasures to compensate for them. By adopting a training method that is based on game analyses and measures as shown in this study, practice, that could be heteronomous and formal, may be qualitatively altered to become autonomous and reflective, which may contribute to the development of skills required for the flexible and accurate judgment of situations.

## 5. Summary

This study was conducted with the aim of devising a method of training, including cognitive training, for effective offense for goal scoring and to verify the efficacy of the method through game analysis.

The subjects of this study were 28 members of the K University soccer club (Team A) belonging to the Second Soccer League of Kanto University. They participated in training for approximately 6 months from early February to August 2007. The training was performed 6 days per week (with one day rest per week) for 120 minutes per session. Besides on-the-ground instruction, objective and ongoing feedback was provided to the players for the sake of performance evaluation and instruction with use of the videotaped and analyzed data of practice games and official games.

Game analysis was conducted using a soccer analysis tool produced by Data Striker Inc. in terms of ball gaining positions, shot making (number of players involved, number of actions, and time taken), the total number of shots, and scores.

From this analysis, the following was clarified:

By adopting training, including cognitive training, as a part of daily practice, all team members came to engage in systemic offense in the opponent's zone and increased total scores while decreasing the number of players included in shooting, the number of actions, number of shots, and the time taken for shots. It was considered that the training enabled the players to share the same strategic purposes and to make judgments about situations in a collaborative manner.

## Acknowledgement

We would like to express our gratitude to the members of the K University soccer club for their cooperation in training and surveys, to Dr. Hirata of Senshu University for his valuable advice, and to the staff of Data Stadium Inc. for their collaboration in data analysis.

## Notes

Data Striker is software for soccer game analysis developed by Data Stadium Inc. This tool allows users to input video data into a computer. Accumulated data is actively used as OPT data authorized by J League. On a team level, this tool allows players to review games from various angles using data input and to verify the findings from playback video. (See <http://www.datastadium.co.jp>)

## References

- Araki, S., Nisimura, K., Sagano, T. (1995). A Study on Cognition of Game Situation in Rugby Football : The Effect of Visual Training on Lower Level Players, *Bulletin of Faculty of the Education, Hiroshima University. Part 2, Educational research*, 44, pp. 125-131. (in Japanese)
- Christina, R. W. (1989). Whatever happened? to applied research in motor learning? : J. S. Skinner et al. (Eds.) *Future directions in exercise and sport science research*. Champaign, IL : Human Kinetics, pp. 411-422.
- Hatano, G., Inagaki, K. (1983). *Culture and cognition, present age basic psychology 7 Idea, intelligence and language*, University of Tokyo press, pp. 191-210. (in Japanese)
- Hirata, D., Matsuda, H., Saijo, O. (1998). The change of cognitive skills by the development of tennis performance, *Tokyo Journal of Sport and Physical Education An Annual Report*, pp. 49-54. (in Japanese)
- Inomata, K., Koyama, T., Araki, M., Nakagawa, A., Takeda, T., Koyama, T., et al., (1993). An effect of the cognitive training in the handball, A specialist in Japanese Olympic Committee / a scientific research report. No.III, A study about the team management, The third report, 11-21
- Japan Football Association (1998). *Technical Report FIFA World cup'98*, pp. 7-9, pp. 45-56. (in Japanese)
- Japan Football Association (1999). *1998FIFA World Cup FRANCE Technical Report*, pp. 4-5, p63. (in Japanese)
- Japan Football Association (2002) *2002FIFA World Cup KOREA/JAPAN Technical Report*. pp. 1, 80. (in Japanese)
- Japan Football Association (2006). *2006 FIFA World Cup Germany JFA Technical Report*, pp. 7, 14-15, 28-29, 64. (in Japanese)
- Japan Football Association (2008). *UEFA EURO 2008 JFA Technical Report* (in Japanese)
- Kaino, T., Sugihara, T. (1983). A study on the anticipation of net-play in tennis : the effect of perceptual training on beginners, *Japanese Journal of Sport Psychology*, 10(1), pp. 63-66. (in Japanese)
- Kaino, T., Sugihara, T. (1989). The learning effect of pattern recognition on a tennis net-player's anticipation : Improvement in the speed and accuracy of motor response, *Research of physical education*, 34(2), pp. 117-132. (in Japanese)
- Martens, R. (1987). *Science, Knowledge, and sport psychology. The Sport Psychologist*, 1, pp. 29-55.
- Otake, M., Lee, W., Yoshimasa, M., Suda, Y., Koga, H., Hasegawa, Nozomu. (2006). An Examination of Psychological Competitive Ability in Soccer Players. —A Comparison between the Universiade Soccer Players of Japan and Korea— *Football Science*, 3, pp. 9-14.
- Murai, G., Inomata, K. (2007). Effects of video-based tactical training in American Football, *Journal of Research Institute of Health and sport sciences Chukyo University*, 21, pp. 29-38. (in Japanese)

Nakagawa, A. (1982). A Field Experiment on Recognition of Game Situations in Ball Games : In the Case of Static Situations in Rugby Football, *Research of physical education*, 27(1), pp. 17-26. (in Japanese)

Nakagawa, A. (1984). Some basic concepts for the study on situational judgement in ball games, *Research of physical education*, 28(4), pp. 287-297. (in Japanese)

Nakagawa, A. (1997). Acknowledge technology of team play, *Coach manual for player and mental management*, pp. 131-146, Taishukan Publishing. Co. (in Japanese)

Nakamoto, H., Sugihara, T., Oikawa, K. (2005). The effects of video-based perceptual training on baseball batting anticipation and performance for novice batters, *Research of physical education*, 50(5), pp. 581-591. (in Japanese)

Okada, E., Takenouchi, T., Yamanama, K. (1991). Analysis of situational Judgement Process of Soccer Player at the Games, *Japanese Journal of Sport Psychology*, 18(1), pp. 10-11. (in Japanese)

Onishi, T (1972). *Rugby, Sport operation course 3*, Fumaido, pp. 140-142 (in Japanese)

Oura, Y., Goto, K. (1994). Expertise in Skills for Interpersonal Matches and Its Cognitive Consequences: A Case of Japanese Fencing, *The Japanese journal of educational psychology*, 42(1), pp. 1-10. (in Japanese)

Sasaki, K., Muramoto, K., Saijo, O. (2005). Erforschung der Situationsbeurteilung beim Volleyballspieler-Was Trainer unter Spiel mit "guter Situationsbeurteilung" verstehen-, *Bulletin of Nippon College of Physical Education*, 35 (1), pp. 11-20. (in Japanese)

Söhon, D, A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Sugawara, Y., Muramoto, K., Ashihara, M., Wakasugi, R., Hirata, D., Saijo, O. (2002). A study on Attentional Style of the University Soccer Players: Differences between the Sexes. *MEDICINE AND SCIENCE IN SOCCER*, 22, pp. 173-177. (in Japanese)

Takeda, M., Sekiya, H., Oba, W. (2002). The Influence of Service From on the Anticipation of Courses and Spins of Tennis Serves, *Japanese Journal of TENNIS SCIENCES*, 10, 69-75. (in Japanese)

Yoshimura, M., Nogawa, H., Kubota, Y., Suenaga, S. (2002). Tactics of Offence in Soccer-Jyuntendo University School of Health and Sports Science. (in Japanese)

Yoshimura, M (2003). Tactics of Offence in Soccer-Training for Effective Offence, *Jyuntendo University School of Health and Sports Science*7, pp. 48-61. (in Japanese)

**Appendix**

- (1) An effective offense starts with gaining the ball around the half-line.  
 This is a defense strategy needed for effective offense. In soccer, no offensive action can be made without possession of the ball. In order to score a goal, players need to gain the ball and to create a chance for offense as often as possible. What is more, players are required to gain the ball around the half-line or at the position that is as close to the opponent's goal as possible.
- (2) Use a minimum number of dribbles and a maximum number of passes for an effective offense.  
 As is reported in the Technical Reports of the 1998 FIFA World Cup France and the 2002 FIFA World Cup Korea/Japan (Japan Football Association, 2002, 2003), a sufficient length

of time and a sufficient number of players are required to break down the defenses of an opposing team. Meanwhile, an increase in time and number of players involved can result in heightening the risk of conceding a goal. The most significant challenge for players is to balance 2 conflicting themes, scoring and conceding goals, to reduce potential risks as much as possible and to perform effective offense. As indispensable measures for this, players should make accurate and speedy passes, especially long passes towards the front line. They are required to utilize the most effective passes selected based on their correct judgments and to improve the accuracy of their intermediate-range passes in a time-pressure situation.

(3) An effective offense is structured with the involvement of 3 or 4 players from the starting point of offense to the goal. This is a condition for making an effective offensive play. The individual players involved in an offensive play are expected to play their respective roles such as supporting the ball holder, balancing, and breaking down the defense of the opponent (Yoshimura, M., 2003).



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