

Stretching the Field: A Study of Decision Making in Various Small Sided Game Formats in Football

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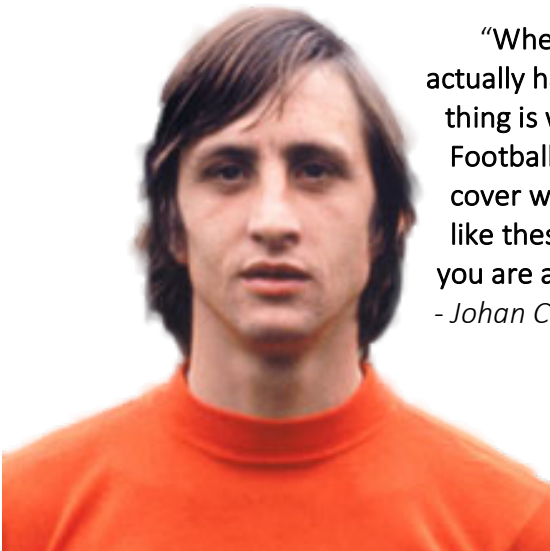
Introduction

Small Sided Games in Football are widely recognized as an important training tool in aiding both the fitness and decision-making abilities of footballers, at both professional and amateur levels. One of the most important aspects that separates an elite footballer from an amateur or semi-professional player is the ability to make good decisions quickly and accurately under immense levels of pressure. Football players across the world hear their coaches repeatedly stress the importance of making good decisions in a dynamically changing environment – one in which the decisions one makes with, or without the ball, are all reflected by the ever-changing location of the ball, one's teammates, and the opposing team.

The research question:

In which format (6v6, 8v8, or 11v11) afforded the greatest improvements in forward, attacking play and decision making in young footballers?

The hypothesis was that the 8v8 format would provide the most improvement for all three teams studied (Under 9, Under 10, and Under 11). Knowing the answer to this question would allow clubs to provide a better pathway for their players to the 11v11 match, and be able to teach them to make better, faster decisions under pressure from a younger age, thereby improving their development as players. Players would also benefit by learning more about the game and its tactical qualities from a younger age, thereby preparing them with more opportunities to succeed in football.



“When you play a match, it is statistically proven that players actually have the ball for 3 or 4 minutes on average. The important thing is what you do for those 87 minutes without the ball.

Football is a brain game, where to run, when to run, when to cover when to press, when to move, how to move, it is decisions like these that that come from the brain that determine whether you are a good player or not.”

- Johan Cruyff

Theory:

Decision Making is defined as the active and continuous process by which an athlete, in this case, a football player, explores game-relevant information in order to determine the various possibilities available to achieve his or her goals and selects a response, based on his or her interaction with the environment of the match (Praxedes, et al, 2018). The decision making of a football player or a team across a period of time is defined as its tactical behaviour, which “can be understood as the individual or collective functional adaptations to the task demands presented in a dynamic environment” (Ric, Hristovski, Goncalves, Torres, Sampaio, and Torrents, 2016; Folgado, Bravo, Pereira, and Sampaio, 2018; Olthof, Frencken, and Lemmink, 2015).

The Team Centroid is the geometric centre of the team, and the Surface Area is the smallest polygonal space that covers the entire team.

The game formats that were studied were 6v6, which the Under 9 and Under 10 teams played on official match days, 8v8, which all three teams played on practice days, and 11v11, which the Under 11 team played on official match days.

Method:

Fields were set to regulation size for each of the matches. Players were outfitted with GenGee Insait KS Performance and Data Analysis System trackers, six anchors were placed around the field, and a GenGee ball with a chip inside it was used in play. Data was collected consistently throughout the match by use of the trackers and anchors. Three teams of AFC were measured. Players (N=31) were between 9 and 11 years old. 27 Matches were played and analyzed in total.

Raw data used (x & y coordinates)

- Surface Area
- Team Centroid
- Passing, Pass Completion

GenGee data used:

- Passes, Passes Completed
- Passes Forward, Passes Forward Completed
- Player Position

Results:

For the Under 9 team, there was a significant difference in results between the 6v6 and 8v8 formats for Passes, Passes Completed, Passes Forward, and Passes Forward Completed. There were 38%, 15%, 45%, and 5% improvements in each statistic in favour of the 6v6 format.

The Under 10 and Under 11 teams did not show a significant difference between the two formats for these categories. In terms of the Team Centroid, there was not a significant difference found in terms of the data analysis; however, the comparative statistics showed that the Team Centroid in 6v6 format for the Under 9 team was 10% higher up the field than in the 8v8 format.

Finally, for the Surface Area, it was found that the space the team covered increased with the increase in field size and player numbers. However, the Under 9 and Under 10 teams covered more space relative to the field in the 6v6 format, and the Under 11 team covered more space relative to the entire field in the 8v8 format.

Recommendations:

Under 9 and Under 10 players should remain at the 6v6 level, or perhaps be tried at the 7v7 game format. Under 11 players however should play at the 8v8 level rather than the 11v11 level in order to experience the greatest improvement.

Further research:

Further research should be done on other small sided game formats. It is possible that the 7v7 and 9v9 formats could show more improvements in decision making skills for young athletes, as they allow a greater number of options for formational changes and tactical adjustments.

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