

An Investigation into Goal Scoring Patterns in Association Football

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Abstract

This thesis investigates goal scoring in professional association football. There has been a vibrant debate in the research literature about how goals are scored. Researchers have discussed the location of the scorer on the field of play, the number of touches of the ball taken, the type of pass, the number of passes in the sequence preceding each goal, and when in a game goals are scored. There has been a growing interest in identifying the most successful area of the field where the final pass leading to a goal was made and has led to debate about one area in particular, Zone 14. The quantification of the number of passes preceding goals has fuelled debate about the tactical success of ‘possession based’ football and ‘Direct Play’. Approximately 90% of goals in association football are scored within 23 yards of the goal and the majority of these with less than five passes.

This research presented here analyzed goal scoring in Open Play to determine if the most successful method of gaining entry into the scoring area was from ‘Passing the ball behind opponents or to a player level with the last defender’, compared with ‘Crossing’ the ball and any ‘Other Methods’ that were not included in the other two categories. This new approach maps 7 areas of the field, rather than the 18 used in the extant literature, to record where the final pass was made in each category. It is argued that the use of 7 areas sensitive to the offside law yields a much better analysis of performance. Data were recorded about in which ‘third’ of the field possession was regained and the number of passes in each sequence. The thesis presents new operational definitions for the quantification of lost possession. It is argued that these definitions provide a more accurate account of events preceding goals specifically in relation to what the literature has regarded as ‘zero’ pass goals. Data for this study were gathered from three seasons of the English Premier League and the Australian ‘A’ League and three tournaments of FIFA World Cups and UEFA European Championships. A total of 3,175 goals in Open Play were analyzed. These data enabled comparisons to be made

within and between league football and international tournaments. Goals were captured and coded with Sportscode Elite software V.9. Data were analyzed with SPSS software V.19.

The results presented here report that the most successful method of scoring in all international tournaments and in 4 of the 6 league competitions was from ‘Passing the ball behind opponents’; the vast majority coming from an area identified as Zone 14+, the area between the half way line and the penalty area. The majority of goals were scored with 5 passes or less and from regained possessions in the middle third of the field in every competition. The least successful category for scoring in 11 of the 12 competitions was from ‘Crosses’. The evidence from this research provides coaches with the most effective of three strategies to score goals in professional association football while leaving them to decide how best to implement these strategies with the players at their disposal.

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