

Sophon Sakookaew 2009: The Effects of Position and Approach Angle of Football Kick Outside the Penalty Area on the Accuracy in Football Shooting. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Siriporn Sasimontholkul, Ph.D. 72 pages.

This research aimed to observe the trajectory of the ball when the approach angle of the football player to kick the ball were 15, 30, and 45 degrees. Moreover, the accuracy of the free kick shooting was also investigated and compared among the three approach angles and among three positions, which were 30, 60, and 90 degrees from the goal line. Volunteers were football players of either Division 1 or higher. They were right foot dominantes and had experience of taking free kicks of at least three years. To collect the data, each football player performed free kicks, at 25 yards from the penalty area, either directing the ball to the left or the right top corner of the goal. The ball was placed at 30, 60, and 90 degrees from the goal line, and for each position the players had to run at the ball with three different approaching angles of 15, 30, and 45 degrees and perform 10 free kicks per angle. The two dimensional trajectories of the ball were recorded by a camcorder placed behind the football player. The numbers of the balls that reached their target in either the left or the right top corner of the goal, were recorded as successful shots. The non-parametric Friedman test was used for statistical analysis and the alpha level was set at .05.

The results showed that the ball position and the approach angle of running at the ball during the free kick affected the shooting accuracy. When the ball was placed perpendicular to the goal at 90 degrees, the shooting accuracy was highest, no matter what the approach angle was, compared to the other positions. Moreover, the approach angle of 45 degrees led to the most success of free kicks while the approach angle of 30 degrees led to the least success.

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Thesis Advisor's signature

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