

Development of tablet application based notational analysis system and the establishment of its reliability in soccer

Abstract

Multiple systems of notational analysis are been used in performance analysis of soccer to provide coaches and players with information on their performance. The development of these various notational analysis tools has further made the analysis of players and team performance possible to deliver information to coaches in real time. Establishing reliability for notational analysis in soccer is necessary for the information to be relied upon. Despite this development, however, most performance analysts seldom report the reliability of their analysis assuming that the present of performance indicators could reflect the reliability of their analysis. This paper aims to develop a tablet-based notational analysis system and establish its reliability in the game of soccer. Performance indicators related to the requirement for the game were identified, operationalized and installed on tablet application. Eleven performance analysts were provided with eleven tablets installed with StatWatch application and instructed to analyse the performance of a particular player during a soccer match based on the performance indicators. Cronbach's alpha and Cohen's Kappa reliability testing was employed to test the consistency as well the level of agreement between the performance analysts at $p \leq .05$ level of confidence. The result shows $\alpha = .90$ and $K = .89$ (0.10, 95%), $p < .001$, respectively which suggested a high consistency of their measurement and indicated that the agreement between the performance analysts on their analysis was perfect and far beyond chance. Reliability in the notational analysis of soccer using tablet application could be achieved. Performance analysts should ensure the reliability of their analysis before being relayed to the coaches to avoid any bias and misleading information.