Abstract

Top-order batting positions do matter in One Day International cricket (ODI). In the starting days of ODI cricket, the primary metrics used to assess and compare hitters' performances were batting average and strike rate. These are thought of as traditional methods. Researchers have created a variety of statistical methods to assess batting performance.Principle component analysis (PCA), Random Forest Clustering (RFC), and Neighborhood Clustering (NC) were the three rating criteria, we used to evaluate toporder batting. These not only let us assess the individual performances of each top order, but also allow us to compare their batting performances both inside and between rules on an equal footing. In ODI cricket, top-order batsmen were evaluated. We ranked the batters, and we found a connection between the ranking points of the batters and the proposed rating standards.

A correlation of 0.837 with a p-value = 0.000 is discovered between PCA ranking and RF ranking, 0.942 with a p-value = 0.000 between PCA ranking and NC ranking, and 0.855 with a p-value = 0.000 between RF ranking and NC ranking. By applying the same ranking systems.

We comprised the results of the proposed criteria with the ICC results and found a significant correlation. Moreover, we measured the impact of home ground and opening partnership score on match outcomes by applying binary logistic regression and complementary log-log regression. Binary logistic regression was performed as it has the lowest AIC. It is concluded that the opening partnership score is one of the significant factors for match-winning.