

"The Distance Traversed by College  
and High School Basketball Players  
and Effect of Rule Changes upon  
Distance Traversed in College Games.

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"In an attempt to determine the effects of the ten second rule and the rule eliminating the center jump, as regards the distance traveled by college basketball players, the following data were obtained. This is the continuation of a similar project reported on in 1931, before the inclusion of the ten second rule and the rule eliminating the center jump after the scoring of field goals. Data are also available on the distance traveled by players in high school basketball games, but no comparison can be made relative to the effect of the two rules in question as no study was made on high school players before the incorporation of these changes into the official rules.

"The measurement was made possible through the development of an electrical pursuit apparatus which provides for numerical registration of unit distance traveled. The piece

L. Messersmith, L. L. Corey, M.S. Distance Traversed by a Basketball Player, Research Quarterly, American Physical Education Association, 1931. of apparatus consists of a tin base, on which is etched a basketball court laid off to scale, wired in series with a storage battery, an electric impulse counter, and a small brass tracing wheel four inches in diameter. Strips of insulating tape are placed on the wheel at half-inch intervals so that rolling it along the floor makes and breaks a circuit each half inch. The impulse counter records these contacts, each one of which, with the calibration employed, indicates a distance of two feet on the playing floor. To determine the number of feet traveled by a player the experimenter follows the movements of the player on the small floor with the tracing wheel. Rolling the wheel from one end of the floor to the other produces a total of 47 contacts, which multiplied by 2 gives 94 (the length of the college floor in feet)., so any inaccuracy in the result lies in the inability of the operator to follow accurately the movements of the player. When checking high school games the small floor is decreased proportionately in size to conform with actual measurements of floors where players are being observed. All observations were made from a position above the floor where a clear and unobstructed view of the playing floor was available at all times. The apparatus used in the present study is identical with that used in 1931 so that the relative difference in distance traveled by players in college games in the two experiments should be reasonably accurate, even though slight inaccuracies might be present in recording the number of feet traversed by a player in any one game.

"In 1931 it was found that the distance traveled by college players ranged from 2.25 miles to 2.50 miles per game. in the present study, however, the distance traveled have been consistently longer, ranging from 3.87 to 3.97 miles per game. Complete records have been kept of several games but only three representative games are included in Table I.