

ment of fatigue will cause gradual reductions of the number of bricks thrown in each successive inning. For example, if he unloads forty bricks in the first inning he will have less energy for the second and may throw only thirty-eight. The numbers mentioned are merely illustrative, the intention being to show a fact proved by many experiments that strenuous physical efforts result in lowered production. The number thrown in each inning is entered on a chart, and the points connected by a line which gives a curve showing the effects of fatigue upon a single worker in one test.

Elements in Test Selection and Standardization

Since bricks are neither readily available nor does their throwing have any counterpart in basketball it was necessary to choose a skill commonly used in vigorous games. It seemed wise, also, to select a type of activity which would involve muscles already conditioned by frequent use in order to avoid undue discomfort for the subjects. In addition, the movement should be one lending itself readily to standardization and to accurate measurement.

For the experiments, therefore, the choice fell upon spot running since the leg muscles normally are well conditioned; similar footwork is found in basketball; the activity is vigorous, and the effort can be measured easily and accurately by counting the number of times the right foot contacts the floor. As ultimately established, each participant was checked during ten innings in which he alternately ran in place for ten seconds and rested for ten seconds. The number of right foot contacts was recorded for each inning; and the total contacts for ten consecutive innings constituted an individual's "production". Most subjects repeated the test a number of times. The scores made in these repetitions, it will be noted, showed increased production, and thus demonstrated the effects of training and development of mastery of the exercise.

After selecting the skill and deciding upon administrative procedures and regulations, the next step consisted of establishing the pattern of a 100 per cent fatigue curve as a basis for comparison. If the runner applied himself and performed with maximum energy in each period, as was requested, the development of fatigue products would cause a decreased score in the following period.