

Title	On measuring reaction time with timing tester
Sub Title	
Author	中井, 忠雄(Nakai, Tadao) 篠原, しげ子(Shinohara, Shigeko)
Publisher	慶應義塾大学体育研究所
Publication year	1969
Jtitle	体育研究所紀要 (Bulletin of the institute of physical education, Keio university). Vol.9, No.1 (1969. 12) ,p.61- 62
JaLC DOI	
Abstract	
Notes	Abstract
Genre	
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00135710-00090001-0061

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

On Measuring Reaction Time with Timing Tester

By Tadao Nakai*

Shigeko Shinohara**

Researches into reaction time have been conducted in various fields. However, comparatively few of them had prediction intervene between the time at which a stimulus was given and that at which the reaction was produced. We, for our part, making use of the "*sojun*" reaction method, measured the reaction time in the case in which there was a clue to prediction and in the case of its absence.

The following is a report on our inquiry into the relation between reaction time and prediction space as well as on the comparison of the result of the inquiry with that of an inquiry according to N2 of the Cornell index form.

The subjects of the experiment were 58 students of Keio Gijuku University, who are members of the Baseball Division of its Athletic Association. The instrument used was a timing tester manufactured by the Tosoku Kogyo K. K. (industry company), with which time might be measured down to the one-hundredth of a second. The instrument is operated in such a manner that, when the pointer in the form of a pendulum having a period of two seconds is judged to have been brought in line with the "*sojun*" line on its way back one and a half seconds after starting, the key is to be pushed. The window through which the pointer passes is semicircular and its right half is rendered adjustable. In our experiment we effected adjustment in the following seven "sets" or stages in their order:

1st: total closure, 2nd: 2/3 closure, 3rd: 1/3 closure, 4th: total opening, 5th: 1/3 closure, 6th: 2/3 closure, 7th: total closure. The experiment was made ten times in each set. Results:

In regard to the reaction time, there was a general tendency toward the good in

* Full-time Lecturer of the Institute of Physical Education, Keio University.

** Assistant of the Institute of Physical Education, Keio University.

the order of third-grade students, first-grade students, fourth-grade students, and second-grade students, not being in line with the order of grade. The tendency concerning each set improved as it passed through the stages of total closure, $2/3$ closure, and $1/3$ closure, in the case of the fourth, second, and first graders, the best result being achieved by the set of the total opening. On the other hand, the third graders, whereas they showed a similar tendency with respect to total opening, did not correspond to the area of the prediction space in other sets.

As far as halfcocked reaction was concerned, high percentages were noted in the cases of total opening and $1/3$ closure. Also, high percentages were shown by the senior students. Particularly, the third graders attained 64 percent in the 4th set and 45 percent in the 5th set, which made then quite conspicuous.

The result of the investigation by means of the Cornell index was that, compared with students in general as well as with the group of those who showed a normal reaction, the group of the students who showed a half-cocked reaction had a less tendency toward "depression" and tended to have a deeper concern for the function of the body.

From the above-mentioned results, it is conceivable that reaction time has to do not only with the reaction against stimulus but is, generally speaking, also affected by the presence or absence of a clue to prediction. We may further presume that the ability to utilize any clue, however insignificant it may be, will call for deliberation.