

A Study on Accuracy as Affected by a Set for Speed

K. P. BHATTACHARYYA

Indian Statistical Institute, Calcutta

In this study the relationship between speed and accuracy as influenced by mental set of the workers was investigated. A total of 36 individuals comprising both the sexes served as subjects. The extent of relationship between accuracy of output and the speed of work was found out by using rank correlation coefficient. The analysis of the results disclosed that there is no positive and significant relationship between speed of work and accuracy in work.

The relationship between speed and accuracy in job performance, specially in an industrial set up, is an important issue of investigation. In this connection a proper understanding of the concept of 'mental set' is essential in estimating its implication in the solution of any problem, be it physical or mental in nature. While discussing 'mental set', Ruch (4) states that "the situation we are in at any particular moment gives us a 'set' which renders some perceptions and thoughts more likely than others". Johnson (2) also observes that "all thinking takes place within a context which includes the thinker's motives, attitudes, and memories of past experience, as well as his particular 'set' at the moment". May *et al* (3) found in their studies 'Set for speed as a variable in problem solving' that accuracy is hampered if the subjects are set to work speedily.

In the present paper the problem of the relationship between speed and accuracy as influenced by mental set of the workers concerned has been investigated. The subjects comprised of both the sexes, twenty-six in all, who manually scored objective test answer sheets, the sex ratio between male and female being 9 : 4. There was not a much wide range

of variation in academic qualifications, previous experience, and age among the scorers. The responses of the examinees were recorded on the answer sheets, which were bunched in several lots, each consisting of twenty such sheets. The scorers had to count the number of right responses in each answer-sheet with the aid of a scoring stencil with the positions of the right answers punched in proper places. After finding out the total correct responses, they removed the scoring stencil and counted the number of omissions, i.e., the blank spaces indicating questions left unanswered by the examinees and noted down these two scores separately. Their performances were checked and the errors committed by each individual scorer were found out. Scoring time, i.e., the time taken to score every lot of answer sheets by each scorer was noted down. A mental set for speed of work was implanted in the workers by casting an impression that the result was urgently needed, hence scoring should be accomplished as speedily as possible. As all the workers were hired on a daily piece-rate basis, they were eager enough to show their workmanship and were highly motivated to finish the task in short time. The scorers had to score under two conditions. Under condition I, they wrote down the roll number, name, lot identification number and the scores on a printed proforma and under the second condition, no such whereabouts were required to be filled up by them, they simply wrote down the scores in appropriate places on the answer-sheets.

Table-I below shows the sex-wise classification of the range of scoring error per lot, and time taken to accomplish scoring of each lot.

TABLE I
Range of scoring-error and scoring time

Scorer Group	Range of scoring error				Range of scoring time (In mts)	
	Condition I		Condition II		Condition I	Condition II

Male	1.36 — 7.40	0 — 5.50	35.00 — 100.00	37.00 — 116.00		
Female	5.10 — 7.58	1.50 — 4.70	44.67 — 71.00	38.00 — 62.33		

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It is apparent from table I that less errors are committed under the second condition than under the first and it has been shown by the present author in a paper 'The effect of change of activity in repetitive work' (in press) that this difference is statistically significant ($p < .05$).

In order to find out the extent of relationship between the job efficiency, i.e., accuracy of output and the speed of work rank correlation coefficient was found out between scoring error and scoring time for each condition and the results are presented in Table II below.

TABLE II

Rank correlation coefficient between scoring errors and scoring time and the corresponding p-values

Scoring Group	First condition			Second condition		
	N	r	p	N	r	p
Male	14	.32	>.05	18	-.30	>.05
Female	4	.60	>.05	8	.61	>.05
Combined	18	.26	>.05	26	.21	>.05

It is obvious from Table II that no positive and significant relationship between speed of work and accuracy in work performance could be found in the present investigation. As a mental set of speedily accomplishing their work was implanted in the subjects, accuracy of work suffer to a great extent. In this connection the study of May *et al* (3) cited earlier should be referred. A similar study giving emphasis on accuracy, i.e., imbibing the subjects with a mental set for accuracy, is worth investigating in order to have more accurate results of mental set on the output and accuracy of the job performed.

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