SOCIAL SCIENCES

I. SOME PSYCHOLOGICAL CONCEPTS UNDERLYING MEASUREMENT

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In the case of the essay versus the objective, or short answer test, the stock arguments for the latter are usually given as follow: (1) increased reliability; (2) greater objectivity, and (3) administrative economy in giving and scoring the tests. On the other hand, the essay test has been accused of unreliability, subjectivity, and other faults. Dr. Ben Wood of Columbia College relates an interesting example of the subjectivity of the essay test. A group of subject matter specialists was engaged in marking history test papers. One of the examiners, who is a prominent professor of history in a well known college, having attained his Ph. D. degree some time ago with a major in history, wrote out what he conceived to be model answers to all the questions on the test. Somehow his answers became mixed up with the papers which were being marked, and the other examiners gave it marks varying from forty to ninety. In other words, many of the examiners thought so little of this intended "key" to the correct answers that they assigned it a failing mark.

Objections to the short answer tests are also heard rather often. It is contended that the objective tests do not measure the really important outcomes of education, such as skills, habits, attitudes, and ideals, especially the latter two factors. Furthermore, it is claimed that the student is not required to apply and organize his knowledge. Objection is also made to the time, care, and often the expense necessary in constructing the new tests.

All of these various pros and cons concerning the two types of tests are of value. The statistical desiderata (for example, validity and reliability) have been the main criteria for a good test. But some very important psychological considerations, at present greatly neglected, should also carry weight. Some of these are: What effect does the specific test given have upon the pupil's method of study? Does a pupil study as much or more in preparation for an essay test as he does in preparing for a true-false test? In any case, what are the underlying reasons? Do students use the same method of preparation for both tests? Which do most students prefer to take, the true-false or the essay test? These are matters which are concerned with the psychology of the examinee.

The Method of the Study

With a view to studying these and allied questions, a questionnaire was prepared and given to 154 college students, (freshmen and sophomores) in a teachers' college. The object of the investigation was explained, and an appeal was made to the students to give answers indicative of their honest opinions. No student signed his questionnaire, unless he desired to do so. The students were told that the results would not be used against them in any shape or form. Five major and two subsidiary questions were asked. The five major questions were:

1. Which do you prefer to take, an essay or a true-false test?
2. Which do you study harder in preparation for, an essay or a true-false test?
3. Do you use the same method of study in preparing for one type of test as you do in preparing for the other?
4. Which do you consider the easier? Why?
5. Which do you consider the fairer test? Why?

Results

All of the students answered the first question, 111 or 72% stating that they would rather take a true-false test than an essay test. From this result it is evident that among students the essay test does not have as many protagonists as some of us are inclined to think. Obviously, the objections to the true-false test come from a minority, but this may be a gratuitous assumption, if applied to any situation other than the one presented here.

The second question was answered by 127 students, 99 or 78% stating that they studied harder in preparing for an essay test than they did in preparing for the true-false exercise. Six wrote that there was no difference in their preparation. Many educationists are of the opinion that one of the main reasons for giving a test is to stimulate student preparation. If this be granted, then the essay test, according to the testimony given, fulfills this purpose better than the true-false. On the other hand, other educationists discount the value of written examinations, and would be inclined to say that it is probably true that the essay test calls for more "cramming"; but what is the value of this "cramming"? This position "begs the question," there being quite a difference between legitimate study and "cramming," a process contradictory to all principles of studious application, except the principle of recency.

In this connection the answers to the next question are timely, for 106 of the 154 students use, in preparing for an essay test, a method of study that is different from the one used in preparing for a true-false test. It would be very much worth while to ascertain the psychological characteristics of these two methods of study, and then we would have some real teaching reasons for giving a true-false or an essay test, or perhaps both. No effort to analyze these two methods of study was made in the present investigation, because of the subjective method of inquiry used and also because of the extent of such a problem.

The majority of the students, 93 out of 132, believe that the true-false test is easier than the essay. Their reasons for this belief are worth quoting, largely because of the inaccuracies and erroneous ideas contained therein. Eleven account for it on the basis that the true-false test "requires less thought," another 11 on the basis "less detailed," 9 "less bluffing," 8 "better chance to guess," 6 "less energy," 5 "more definite." At the same time 39 students considered the essay test easier, 9 giving as their reason for this opinion that it was "not so exact," 5 "easier to bluff," 5 "easier to think," 5 "better arranged material," 4 "express own oponion," and 3 "less material covered." Many other reasons were given but their frequency of occurrence was less than those mentioned.

It is probable that the true-false test is easier than the essay test, since the former is a recognition test, and the latter is of the recall type. Zeigler tells of an experiment in which the recognition test is supposed to have been proved easier than the recall form: "An experiment was tried in several Cleveland classes with the result that the later test (recognition) invariably gave the higher average. The test was tried in this way. The same class was divided into two groups which, in the judgment of teacher, were of equal merit; that is, adding up the monthly average of the one group gave the same general percentages as in the other. But when the tests were given with exactly the same questions, the one list arranged for completion and the other for selection, the group receiving the selection list made an

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[1]Zeigler, S. H. *The Social Studies in the Junior High School.* Ph. D. thesis. The University of Pennsylvania, 1923.

[2]Benson, C. D., Lough, J. E., Skinner, C. E., and West, P. V., *Psychology for Teachers.* Boston, Ginn and Company, 1926.

average of 11.4% better marks than the group working with the completion list."[1] Many objections could be made to the technique of the "experiment," ranging from the poor method of equating the groups to the failure to control such variables as teaching ability, intelligence, and other factors taken care of when use is made of experimentation as a method of research in classroom methodology. It is probable, though, that recognition tests are easier than recall tests, because in the latter are four processes: (1) impression, or the receiving of experience; (2) the retention of this impression, this being a matter of the plasticity of the neurones and the modifiability of the synapses; (3) recall through association, all mental happenings being connected in some way; (4) recognition of the image as past experience.[2] The recall test appeals to all four of these mental processes, but the recognition appeals only to the last one. However, the recognition test is a type of mental experience worth cultivating.

Of those answering the question, 76 students, or 60% thought that the true-false test is fairer than the essay test. As their reason for this belief 17 gave "the wider range of material" of the true-false test. Other reasons had a frequency of 5 or less. On the other hand, 9 of those who thought the essay test fairer were of this opinion because it affords a chance "to express your own opinion," while 7 wrote it "avoids guessing." Evidently these reasons were better thought out than those given in answer to the preceding question.

In conclusion, the results of this study add nothing to the technique of testing as far as its statistical side is concerned. Ordinarily a test is considered "fair" if it is valid and reliable, student reactions being of minor importance. But when the question becomes one of truly educating the individual, student reactions are greatly augmented in importance. If it is proved that a certain type of test is more conducive to "cramming" than another is, then we must orient our testing program in terms of desirable psychological processes on the part of the examinee. Of course no contention is made that such a thesis has been proved in this paper; however, we do have here a different angle of approach to an old problem.