

A Preliminary Investigation of the Types of Examination Which Provide the Most Satisfactory Basis for Giving Grades

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Most of the research concerning the comparative merits of the objective and the essay examination has dealt with reliability and validity. Very little research has attempted to compare the different types of examination with reference to their merits as basis for giving grades.

In an attempt to find the type or types of examination which furnish the most satisfactory basis for assigning final marks in Educational Psychology, 57 students were given an objective and an essay test on each of four units into which the course had been divided. For two of the units the objective test was given first and for two units the essay test was given first. At the end of the semester scores were tabulated as follows: total objective score, total essay score, total combined score, and total score on two objective and two essay tests. The last named combination of scores was the method previously used in the course. Letter grades were assigned on each distribution according to the Missouri Plan, and the marks thus given each student were compared. It was found that a reasonably satisfactory distribution was secured by each of the four types of scores, but the most satisfactory one was secured by the combination of scores made on two essay and two objective tests. This distribution more nearly approximated the normal, provided more decided breaks at the division points, and secured a more adequate separation of students at the two extremes. Reliability of the objective tests was $+0.84 \pm 0.03$ and of the essay tests, $+0.92 \pm 0.01$. The coefficient of correlation between essay and objective tests was $+0.81 \pm 0.03$.

A comparison of the marks assigned students on the four plans shows that 56 per cent received the same grade regardless of the plan used. It appears that the best students were best regardless of the method of measurement used, the poorest were uniformly low, and the decidedly average were average regardless of the plan by which they were measured. Students near the dividing point between two grades were likely to be near the borderline on all plans but did not always receive the same letter grade.

To secure further evidence in a course of the same general type but under somewhat different conditions, 114 students in General Psychology were given both an essay and an objective examination covering the work of an entire semester. The reliability of the essay examination was $+0.80 \pm 0.02$ and that of the objective, $+0.84 \pm 0.02$. The coefficient of correlation between the scores on the two examinations was $+0.66 \pm 0.04$. One half of the group took the objective examination first, while the other half took the essay first. Scores were tabulated as follows: objective score, essay score, and combined essay and objective score. Letter grades were assigned as had been done in Educational Psychology. Again, a reasonably satisfactory distribution of scores was obtained by all methods, but the most satisfactory one was secured by combining essay and objective scores. Of the 114 students, 54 per cent received the same letter grades on all plans. Again, it was observed that students decidedly in a grade division were usually found in the same division on all plans, while those near the division points were likely to receive different letter grades on different plans, but to remain near the borderline.

Due to the small number of subjects involved, conclusions remain tentative. The procedure is being repeated with 93 students in Educational Psychology. Conclusions tentatively reached are:

1. Either essay or objective examinations furnish a reasonably satisfactory basis for assigning marks in General Psychology or Educational Psychology, but a combination of the two types yields a somewhat better distribution of scores. This may be due to the combination scores being based on a larger number of questions.

2. A majority of students receive the same letter grade regardless of the type of examination used, and those who receive different marks are usually the ones near the borderline between two grades.