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A COMPARATIVE STUDY OF THE A.C.E. TEST AND THE IOWA SILENT READING TEST

ORPHA SHERMAN

PROBLEM

The purpose of this investigation is to study the relative effectiveness of the 1938 form of the American Council on Education Psychological Examination and the Iowa Silent Reading Test in predicting the success of freshmen during their first semester in college.

PROCEDURE

Both the A.C.E. test and the Iowa Silent Reading Test (Form A) were given to all freshmen entering Grinnell College in September 1938, but only those freshmen who ranked in the highest and lowest 10% (deciles) on these tests were used in this study. There were twenty scores in each decile. A freshman's grade average at the end of the first semester was taken as a measure of his success.

The grading system at Grinnell enables one to convert an assigned course letter grade into a numerical value. This in turn enables one to average all assigned course grades into a value known as a grade index. The highest numerical index is 4 and the lowest 0. An index of 1.5, or a C average, is required for graduation from Grinnell.

RESULTS

The results show that of those who ranked in the highest decile on the A.C.E. test, 91% secured a grade average of C or better, and 72% an average of B or better. Of those in the lowest decile of the A.C.E. scores, no one had an average grade as high as B, only 33% had grades between C and B, and 67% fell below the average required for graduation.

To supplement the above evaluations, a check was made on the results of the A.C.E. test of the last five years (1933-1937). It was found that 75% of the students in the lowest decile had left Grinnell by the end of four semesters (2 years), only 11% of whom left for reasons other than scholastic. 56% of these low decile students left by the end of the second semester (1 year), and 20% failed to complete the first year.

In tabulating results of the Iowa Silent Reading Test, the comprehension and rate scores were ranked separately. Thus it was possible to judge the predictive value of both reading comprehension and reading rate. Results of the comprehension scores show that at the end of the first semester 90% of those freshmen in the highest decile secured grades averaging C or better; 75% averaging B or better. All of those in the lowest decile had grades averaging below C. Results of reading rate scores indicate that 83% of those in the highest decile had a grade average of C or above, and 50% B or above. Of those in the lowest decile, again 100% secured an average grade below the graduation requirement.

When an evaluation of the A.C.E. test and the Iowa Silent Reading Test is made in terms of coefficient of correlation, it appears that neither test has any real predictive value. The correlation of the A.C.E. test to grade average is .24; the correlation of the Iowa Silent Reading Test to grade average is .125. These coefficients of correlation are lower than those reported by other investigators, probably because the relationships obtained here were determined from a restricted group, namely the lowest decile group. However, judging by the method of evaluation reported above, it is apparent that both the A.C.E. and the Iowa Silent Reading Test are significant in predicting the success of the highest and lowest decile freshmen at the end of the first semester. The predictive value of both tests seems to be about equal, although the reading test is somewhat more accurate in predicting the success of freshmen in the lowest decile. The fact that 75% of the freshmen in the lowest A.C.E. decile during the last five years remained in college only two years, and 56% remained but one year, is also evidence that such students are not sufficiently equipped to master work at Grinnell College.

To throw light on the above data, it was decided to examine the study habits of these same groups. All freshmen filled out the Wrenn "Study Habits Inventory," making it possible to assign quartile ratings to the inventory scores. 66% of the students in the upper 10% of the A.C.E. test had study habits in the third quartile or above; 52% of those in the lowest 10% had study habits in the second quartile or below. 75% of those who were highest in reading comprehension had study habits in the third quartile or above, and 70% of those lowest in comprehension had study habits in the second quartile or below. Of those in the highest decile in reading rate, only 59% ranked in the third quartile or above in study habits, while 75% of those in the lowest

reading rate decile ranked in the third quartile or above in study habits.

From these results it may be assumed that reading comprehension and study habits are closely allied, but that there seems to be little relationship between study habits and reading rate. Judging by the Study Habits Inventory, the high ranking students on the A.C.E. test have better study habits than the low ranking students.

CONCLUSION

This study indicates that both the A.C.E. test and the Iowa Silent Reading Test are valuable in predicting the success of the lowest and highest decile freshmen at Grinnell. The study habits of these freshmen, as measured by the Wrenn "Study Habits Inventory," are closely related to the A.C.E. test and the Iowa Silent Reading Test.

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