THE time has long since passed when educators are willing to rely on the intelligence quotient as a dependable measure for classifying potential college students. Even if the IQ had been found to indicate an innate intelligence which remained constant, there are too many other factors in a student’s make-up and environment which affect performance.

Interest, motivation, persistence, successes, failures, and change can impede or impel an individual. The multiple factors which influence achievement and effectiveness are equaled only by the complexity of the processes utilized in assessing potential and predicting college success.

**Academic Performance Is Predictable**

Based on the patterns established by their students over many years colleges can predict reasonably well the academic performance of candidates. The best single predictor is the high school grade point average, but prediction accuracy can be increased by using a predictive composite composed of weighted high school grades and weighted admissions test scores. The high school grades and the test scores may be weighted in relation to the emphasis of the college program: e.g., engineering schools may place more weight on mathematics and science scores. The predictive index formed by totaling the weights, when applied to expectancy tables, shows the candidate’s likely chances of obtaining “C” or “B” grades or higher in the college. Expectancy tables are readily available to high school counselors from colleges which prepare them.

The American College Testing Program has expectancy tables for all colleges using their services. Currently they print out for colleges a report on prospective students which provides the following information: the last two high school grades, the ACT standard scores and percentile ranks, the percentile rank in the college to which the report is sent, the probability of grade expectancy of “C” or “B” or better, and the percentile rank of the predicted GPA in four areas: English, mathematics, natural sciences and social sciences.
Several states have carried out state-wide validity studies and have established equations for the prediction of academic performance in state colleges and universities. Services are available to assist colleges with prediction studies through the College Board Validity Study Service and the American College Testing Program Research Service. This vast amount of information about candidates, combined with the personal recommendations which have been submitted, contribute toward a more humane process of selecting college students. When the college and the applicant can be provided with information about the probability of success, better decisions can be made.

**Levels of Achievement Can Be Identified**

Having identified potential candidates, it is important to learn how far they have developed. Achievement tests have been designed with discriminating items to ascertain the level of progress of students in subject matter areas. Must all students take freshman English? Achievement scores can indicate where a student should be placed and decisions can be made to cut the waste of repetition of subject matter already learned.

The College Board Admissions Tests Program offers combinations of aptitude and achievement tests. Colleges may request applicants to take the tests which apply to the program to which the student is applying. Retired forms of the College Board Achievement Tests are available for administration on a college campus through the College Placement Tests Program. Many colleges are now requesting Advanced Placement Tests scores to determine the proper level of placement of entering students. The Comprehensive College Tests, recently developed by the College Board, provide measures of college level achievement in five basic areas of liberal arts (English composition, humanities, mathematics, natural sciences, and social sciences) and in fifteen subject matter areas. These are being used for placement and for granting credit by examination for applicants who have had some educational experiences.

As school systems develop sequential testing programs, K through 12, the need for admissions testing for college will decrease. The educational history of an individual student will be recorded by aptitude and achievement scores readily translatable and usable for college admissions. In the near future standardized tests for continuous evaluation K through 14 will be available through the Cooperative Test Division of Educational Testing Service. This will be an important tool in assisting educators to develop greater continuity in the school program.

At the present time numerous students about to enter college have repeated the content of some courses and have uncovered gaps in major subject areas. Analyses of the scores from the student's school history will be feedback to show strengths and weaknesses and to indicate the kind of program best suited for the student at a particular level. Recognition of the ability and development of students in each school will provide a basis for planning a continuous, but flexible curriculum.
Consideration of Non-intellective Factors

Test scores indicate how well an individual student performs at a given time, but do not measure qualities like motivation, interests and values, or student interaction with environment. Non-intellective factors are being investigated to a greater degree as predictors of college success.

One of the most important investigations is of the interaction between the student and environmental characteristics. George G. Stern has developed two instruments, College Characteristics Index and the Activities Index. These measure the psychological press of the college environment and the personality needs of the students. Stern has worked out a technique for finding the relationship between them. Using the two instruments, D. L. Thistlethwaite found that National Merit Scholars and Certificate winners selected colleges of greatest productivity. Further he found that high ability students in high productivity colleges were more scholarly and flexible, and less authoritarian than those students of equally high ability who entered institutions of low productivity.

In recent years there have been increasing efforts to define and measure creativity, motivation, interest and values, but the instruments are still in the research stages and not ready for general use. The Kuder Preference Record and the Strong Vocational Interest Blanks developed in the 1930's are still the best high school counseling instruments to help counselors and students find what interests they have similar to those of a number of vocations. As yet, the prediction of performance in subgroups, such as business administration, computer related occupations and artistic vocations, is only experimental.

New Experimental Comparative Prediction Batteries have been developed by John W. French. This set of tests is designed to give not only a general prediction of academic success, but also a comparative prediction of success in different academic and vocational fields. The batteries include measures of such factors as induction, integration, memory, number, space and visualization. Combined with an interest index the batteries provide a prediction of success for high school and college students in twelve major fields of study.

Research Continues

What are the factors that influence the successful development of a potential scholar into a successful member of society? To date, no one has the answer, and there is little comprehensive research reported in this area. An eight year Study of Academic Prediction and Growth initiated by Educational Testing Service in 1961 will follow the same students from fifth grade through twelfth. The purpose of the study is to determine how intellectual growth varies with or is affected by the characteristics of the school and the community, and the characteristics and background of the students.

From these studies it is hoped that new insights will be found into the process of intellectual growth and the factors that affect it. The Center for the Study of

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Higher Education in Berkeley, under the direction of T. R. McConnell, will attempt to identify and study what events, what factors appear to influence the success or failure of students as they progress through college.

For most college programs, the academic success of most students can be predicted with reasonable accuracy but the total picture is far from complete. Until some common understanding results in acceptable definitions of success, values, motivation and creativity, the sketchy measures used today will have little impact in any general assessment of college potential. As research progresses, each aspect of the individual and the learning environment will reveal some facet of the total.

Meanwhile, the counselor in the sending district bears the brunt of collating information and predicting potential. The urgency of present needs should give impetus to the compilation, disbursement and evaluation of all possible aids for effective assessment.

References


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