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ABSTRACT

Research indicates the necessity for predictive criteria other than grades to aid the community college student in making decisions concerning career, and goals. Three successive studies were conducted which demonstrate that unless there is a close correspondence between predictors and criteria, the available tests are able to predict only graded success. As a result a search is being made for criteria and predictors which will be useful in attaining foreknowledge of personal growth and satisfaction with the college experience. References are included. (PR)

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Predicting Criteria Other Than Grades
for Community Colleges

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This paper was presented as part of a symposium on
"Different approaches to placement testing in the two-year
community college" at the American Personnel and Guidance
Association Convention in New Orleans, March 1970 and appeals
for the development of new predictors and criteria of the
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Predicting Criteria Other Than Grades for Community Colleges

We are aware that what we do is offensive to many counselors in community colleges. "An expert on junior colleges" who reviewed one of the studies included in this report had this to say about our work. "I think the assumptions on which the study is based violate accepted philosophy of community colleges. Community colleges generally enroll students who have a low self-concept, are uncertain of future plans, and who have questionable potential for academic success. How could this type student benefit from 'knowing whether he will at least find the experience satisfying and useful later in his work'? (We had suggested this type of information might be helpful.) (Continuing he said) The last paragraph appalls me! The possibility of precollege testing for students to have information on 'likelihood of adjustment, satisfaction, job relevance, growth, etc.' (our suggestions again) destroys the concept of community colleges as a place where students can try to find their place in academic and career lines. Why give the student more strikes than he already has by trying to predict what he will do?"

After picking myself up off the floor I decided I'd keep researching this area. To start with, my value system is diametrically opposed to this view. I believe an individual benefits most by knowing as much about himself as possible at any point in time. The reviewer believes information hurts; I say in the long run it helps. The reviewer might counter that information in the right hands, expert hands, could be used to help others, but that those others should not be trusted with it. Again, I would disagree. One credo of the guidance system you have had described is that test results go directly to students. Great attention must consequently be paid to conveying

results in forms that can easily be understood by students. The system accepts as an unfortunate fact that there are not enough counselors and counseling time and that students are probably going to have to assimilate, interpret, and act upon the information independently. Feedback must therefore be clear, straightforward, and encouraging as far as decision-making is concerned. Such feedback must constantly be evaluated to make sure students are getting maximum benefit from it.

And it is here that I would disagree with the reviewer on a third basis. It was contended that the community college student in particular should be protected from knowing about himself. He was portrayed as so down-trodden and misfit educationally that perforce any additional information could only serve to lower his already low self-concept. I would argue that if prospective community college students are presently getting little from a guidance testing program, then they should become the focus of subsequent improvement. If that program is presently doing these students more harm than good, then it should not be scrapped but made to satisfy their needs. If some students can find nothing encouraging as regards educational decision-making in their test feedback, then the system is failing them and is due for radical change. The Washington Pre-College Testing Program is now giving highest priority to this problem and is committed to the notion that more not less information needs to be made available to community college entrants.

Just what is wrong with the current set of predictors of college performance as applied to the community college setting? Nothing, if students are satisfied with predictions of graded success in academic courses, English, mathematics, social and natural science. The battery, which consists of six high school GPA's coded from transcripts (English, foreign language,

etc.) and 12 test scores, produces very accurate grade predictions of academic course work whether taken at a 2-year or 4-year school. There is also nothing wrong if students are satisfied with predictions of graded success in vocational courses, auto mechanics, secretarial studies, data processing. Surprisingly, the battery, which was not devised with vocational-technical courses in mind, predicts vocational grades just as well as academic grades. The Washington Pre-College Program was greatly concerned some years ago about adding tests to make the battery work for vocational programs, only to discover that the battery works fine as it is. It may very well conflict with the objectives and ideals of some community colleges to accept that performance in agriculture and welding is so heavily determined by high school grades in English and electives, and test scores in English usage and quantitative skills. Vocational grades are apparently unwittingly influenced by the student's ability to read, to express himself verbally, to write coherently, etc. Whatever behaviors got good grades in high school get good vocational-technical grades in community college. So the Program does not have to be in a panic to come up with special tests for technical programs and indeed, can expect when such new tests are added, that community college vocational grade predictions will be the most accurate in the system.

There is still something wrong with the battery, however, if all it predicts are grades, no matter how accurate a job it does. For what the typical community college entrant learns is that he is likely to do marginally in just about everything. This may be simple and straightforward--it is also very discouraging. The battery, you will recall, is designed to facilitate an individual's decisions among alternatives--whether to fulfill one's natural science requirement with chemistry or biology, whether to major in

English or history. It works best for the average student. For the superior student the feedback is that he will do well in everything, for the inferior student that he will do poorly in everything, given the ways grades are assigned in college. The battery currently slights students with lower potential for graded success because it does not tell them anything to help make decisions. Community colleges have other goals than passing out traditional grades and these need to be elaborated so as to form new criteria of the experience of community college study. What is wrong with the present predictor battery is that it is not large or diverse or relevant enough for the range of possible criteria.

You might wonder about that judgment. After all, if the battery had been found to work so well for vocational course grades, perhaps it could also predict such things as decisions about career, perceptions of college, plans and goals, etc. So we found out.

With one sample of 631 students from three community colleges it was possible to compare the predictability of the Washington Pre-College tests with the College Entrance Examination Board's new Comparative Guidance and Placement battery. The latter included twelve interest measures, i.e., interest in subject matter such as music, business, fine arts, so there were many intellectual and several nonintellectual predictors. There was only one intellectual criterion--first-year cumulative GPA but a host of nonintellectual criteria, all resulting from a questionnaire mailed to students during their freshman year. The questionnaire did not seek to measure extracurricular achievement as others have done (Richards et. al., 1967); the emphasis was instead on decision-making and personal growth in this setting.

The results were very disappointing. The nonintellective criteria were generally unrelated to the tests and to the intellective criterion, overall grade point average. It was easier to predict educational and vocational orientation and plans than either first-year college experiences or perceived college characteristics. These latter were considered most important in indicating actual effects of higher education. Especially disheartening was the lack of predictability for a 40-item, true-false Community College Satisfaction Scale which contained items such as "The instructors were more concerned than at other schools with being good teachers" and "Counseling and advising for students planning to transfer was inadequate." Where the predictors were successful, however, it was the nonintellective, CEEB interest measures that did the job. Wherever there was obvious overlap between them and some criterion, e.g., choice of a technological career was associated with low interest in humanities and high interest in engineering, the interest measures worked. It is my bias to lay the greater blame in this study on the predictor battery; although clearly the self-report questionnaire could be made more reliable, the absence of predictors having anything to do with readiness for change, occupational interests, and attitude toward higher education was the primary flaw. The message is that the present batteries predict grades and little else.

A second study sought to measure nonintellective criteria after community college; perhaps two to four years later might produce more stable judgments as to the gains from this educational experience. Predictability of fifteen such nonintellective, long-term criteria of community college success was compared with predictability of college grades for 1,775 students from six schools. Again, in contrast to the American College Testing Program assessment

which focuses on other kinds of achievement than grades (Baird, 1969), our indices stressed personal reaction and adjustment to school. And again, these nonintellective criteria came from a mailed survey while the intellective criteria, GPA's in seven areas, were taken directly from college transcripts.

The message was the same. Unless there is obvious overlap between predictors and criteria one is practically assured of negative results. The four nonintellective criteria which were predictable were items asking for number of college credits acquired to the present, whether the student had transferred to a four-year college, whether his program was academic vs. vocational, general, or business, and the question, "How far do you plan to go in college?" It is easy to see how these are related to grades. Survey items to measure emotional feelings, satisfaction, utility of college for employment, and type of current employment were not correlated with the battery of predictors.

A third study using mailed questionnaires produced the same results. Questionnaire data regarding post-high school education four years after high school graduation revealed the following items predictable from the precollege battery: choice of community college to begin college studies (-.51 with HS English GPA, -.42 with HS foreign language GPA, -.36 and -.34 with English usage and Vocabulary, respectively), amount of college credit earned, having received a B. A., extent of educational goal, and student status during each of the succeeding four years. Important items concerning satisfaction with earnings, occupational interest group, current and projected in 10 years, and occupational level were unpredictable.

So now the quest is on, and it is necessarily a dual quest. From students and community colleges themselves we must pinpoint what students are

doing there. We hope to take the promises in the catalogs, the goals of the teachers, the hopes of the administrators, and the dreams of the students and make reliable criteria out of them. At the same time there will be a parallel effort to develop useful predictors which administered in the junior year of high school can provide some foreknowledge of the likelihood of personal growth and satisfaction in this setting. But if, as pointed out, the best prediction is found when predictors and criteria correspond closely, e.g., a high school music achievement scale and a college music achievement scale, just what form will predictors take of such an elusive as "getting more out of life"?

One instrument being administered statewide this spring is a Vocational Interest Inventory which provides ipsative scale scores on eight vocational interest groups as defined by Anne Roe: service, business contact, organization, technology, outdoor, sciences, general cultural, and arts & entertainment. The first set of 56 items consists of occupations with socio-economic level controlled, e.g., proofreader's helper vs. cook's helper, agent for top movie stars vs. history professor. Item analyses have established that each alternative correlates highly with the scale for which it was written and does not correlate with other scales, e.g., that proofreading contributes to general cultural and not to anything else. A second set of 56 items are competing activities based on the eight groups so that like the first set each Roe group is matched against each other group twice. An example: "If I worked for a politician, I would rather (a) write speeches (b) arrange a speaking tour to major cities." The results of this first administration will be made in standard score and ranking form together with a listing of college majors, community college vocational programs, apprenticeship trades, armed forces

school programs, and on-the-job training programs which would logically fall under these eight interest groups, e.g., under service would fall both the four-year college social welfare bachelor's program and on-the-job training in cooking.

Other instruments based on ideas supplied from people in community colleges and hopefully waiting in the literature can be given experimentally, e.g., the family background and work values questionnaire of Paine et. al. (1967) and various scales designed to measure readiness for change. If the program is going to provide information regarding the kinds of satisfaction and dissatisfaction one can expect in college, measurement of this complex trait must be attempted at the high school level. If strides in social maturity are important to students, then again this trait must be assessed before as well as after.

In the course of evaluating an OEO teacher aide program at Seattle Community College I was struck by the discrepancy between the official definition of college success, i.e., that of the federal and college bureaucrats involved, and the actual definition of success, i.e., that of the teachers and students. If OEO looks only at test scores, grades, and college credits earned, it will have to conclude the teacher aide program is a bust. Depending on how tests are presented to these students, the majority of them can be expected to hand them in blank. To analyze data such as these is ridiculous but it's been done. However to observe and record and interview students and teachers over the year is to come to a quite different conclusion about the success of this educational experience. Almost all students at the year's end felt that they were now more willing to try new things, had greater confidence they could still learn, and now understood children better and had greater

interest in working with them. They were satisfied with their studies, felt their classes useful, and very much enjoyed the time spent at school. Both students and teachers felt they had learned all the classroom skills necessary to perform as very capable aides. I personally feel these outcomes of college experience so worthwhile to predict, that I will continue to argue for a greater share of testing time to search out nonintellective predictors and to better account for community college criteria other than grades.

References

- Baird, L. L. Prediction of academic and nonacademic achievement in two-year colleges from the ACT assessment. Educational and Psychological Measurement, 1969, 29, 421-430.
- Burnett, C. W. The community junior college: an annotated bibliography. Columbus, Ohio: The Ohio State University, 1968.
- Cory, C. A comparison of four models for making predictions across institutions. Unpublished doctoral dissertation, University of Washington, 1968. D. A. Order No. 69-13,550.
- Horst, P., & Smith, S. The discrimination of two racial samples. Psychometrika, 1950, 15, 271-289.
- Lunneborg, C. E., & Lunneborg, P. W. Predicting success in community college vocational courses. Journal of Counseling Psychology, 1969, 16, 353-357.
- Lunneborg, C. E., Lunneborg, P. W., & Greenmun, R. Prediction of multiple aspects to the community college experience. Measurement and Evaluation in Guidance, 1970, 2, 234-242.
- Lunneborg, P. W. 1968 Community College Survey. Seattle: Washington Pre-College Testing Program, University of Washington, 1968. (Duplicated)
- Lunneborg, P. W. A psychologist's view of teacher aide training at Seattle Community College. Seattle: Bureau of Testing, University of Washington, 1969. (Duplicated)
- Lunneborg, P. W. Prediction of post-high school educational experiences from an aptitude/achievement test battery. Seattle: Bureau of Testing, University of Washington, 1970. (Duplicated)

References (cont'd)

- Lunneborg, P. W., Lunneborg, C. E., & Greenmun, R. An attempt at predicting long-term, nonintellective indices of community college study. Educational and Psychological Measurement, in press.
- Paine, F. T., Deutsch, D. R., & Smith, R. A. Relationship between family backgrounds and work values. Journal of Applied Psychology, 1967, 51, 320-323.
- Richards, J. M., Holland, J. L., & Lutz, S. W. Prediction of student accomplishment in college. Journal of Educational Psychology, 1967, 58, 343-355.
- Seibel, D. W. Testing practices and problems in junior colleges--a survey. Princeton, New Jersey: Educational Testing Service, 1966.
- Washington Pre-College Testing Program. Community college survey. Seattle: WPCTP, University of Washington, 1967.