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ABSTRACT

Mount Royal College, a Canadian community college, has an open door policy on admissions. Hence it needs a strong counseling division in order to place entering students at appropriate skill levels. Since the American College Testing Program tests have seen limited use in Canada, research is needed to establish and validate local norms. The usefulness of the Cooperative English Test (Reading) and Van Wagenen Scales in the prediction of both freshmen English grades and freshmen grade point averages is investigated here. Their predictive value was found to be extremely low. Nonetheless, the test scores were found to have some limited utility in the counseling process and this may be enhanced by further research on the local norms collected on students that have entered the college since 1966. (DG)

mount royal college

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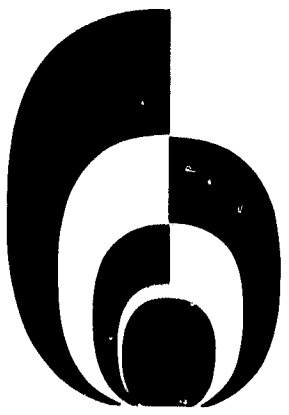

RESEARCH REPORT

THE USE OF READING TESTS FOR ENTRANCE AND PLACEMENT TESTING IN A COMMUNITY COLLEGE

This paper is one in a series of research reports prepared by the Educational Development Services, Mount Royal College, Calgary, Alberta.

THE USE OF READING TESTS FOR ENTRANCE AND PLACEMENT TESTING IN A COMMUNITY COLLEGE

by

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I. INTRODUCTION

Perhaps the most significant concept to emerge in the recent spectacular expansion of post-high school institutions of higher education is the idea of a "comprehensive community college" (Campbell, C., 1970). The term is used in the generic sense and describes an institution that does not grant degrees and is basically orientated to community service, the volume of such service widely depending on the urban or rural location of the college.

Mount Royal College stresses the "open door policy." It offers programs to persons beyond high school age of vocational, technical, industrial, agricultural, and semi-professional aspirations. There are also university parallel courses in the liberal arts and sciences, providing first and second year credit toward a baccalaureate degree. Within the institution a counselling service is available to assist students in various dimensions. It is within this setting that the present research becomes relevant (Campbell, C., 1970).

The promise of a community college is to provide further educational opportunities to students for whom the door to higher education or specialized training would otherwise be closed. The value in such an institution is the guidance it can offer to reconcile student aspirations with realistic educational goals. Within this setting and its stated goals, it becomes imperative that the basic tenet of a "teaching institution" be relinquished to a "teaching and research

institution." It may be for this reason that standardized tests have not been developed for junior colleges and especially junior colleges in Canada (Seibel, 1966).

In the United States, the American College Testing Program (A.C.T.) is attempting to apply its testing to the community college. Because of the limited use of the A.C.T. in Canadian community colleges, more research needs to be done to establish and validate the use of standardized instruments (D'Oyley, 1969).

Hoyt (1966) reports that the tests used by the American College Testing Program cannot be used as valid measures of predictors of success in a college, because of the biased sample on which the tests have been standardized. Hoyt's research indicates clearly that these tests cannot be valid as a measure of performance in freshman grades (Hoyt, 1966).

The present study is an attempt to assess the use of certain entrance tests as predictors of success in the courses chosen by the freshman. The problem is relevant because it assesses not only the success of the new "open door" trend, but also it can be used to improve counselling services so that educators may be capable of reconciling "aspirations with realistic educational goals" (Campbell, G., 1970, Hoyt, 1966).

Part of the function of counsellors in a community college is to assist in placing students entering at various skill levels. The placement is rather difficult to say the least, and becomes an even more awesome task when standardized

instruments are used that have been normalized on a different population. Entrance tests standardized on American college populations have long been used for college admissions procedures and for counselling purposes at Mount Royal College in Calgary. The present study was designed to assess the validity of these standardized tests for predictive purposes.

For this purpose 189 subjects entering the college in 1968 were randomly chosen and the college entrance tests were administered. These subjects were followed up in the spring of 1969 to obtain their final grades received in English and their final grade point average. These measures were chosen because of their demonstrated value as criterion measures (Percival, 1966, Regan, 1966, Black, 1966, 1967, 1968, Coutts et al., 1955).

II. PROCEDURE

The subjects were randomly selected from all entering students registering in the fall of 1968. All subjects were beginning a two year program at the college.

All students are required to write several different tests before they begin their term. Of these tests, the following instruments were chosen as independent measures for this study, yielding thirteen variables.

1. The Dvorak-Van Wagenen Diagnostic Examination of Silent Reading Abilities, Form M, Parts 2 and 3, and
2. The Cooperative English Test, Form IB (Dvorak, 1953, E.T.S., 1960).

The nine scales from the Van Wagenen test were:

1. Perception of relations
2. Vocabulary in context
3. Vocabulary in isolation
4. Range of information
5. Central thought in reading
6. Simple details
7. Completing related ideas
8. Inference
9. Interpretations.

Similarly the Cooperative English Test yielded four scales. Those were:

1. Vocabulary
2. Level of comprehension
3. Speed of comprehension
4. Total reading.

These scales were chosen as independent measures because the literature supports the idea that measures of reading and writing ability provide vital clues to cognitive ability and effectiveness of school learning (McMurray, 1964, Samuels, 1967). Psycholinguistic research also supports the fact that measures of language ability correlated significantly with intelligence, achievement, etc. (Bernstein, 1961, 1962, Gleser et al., 1959, Mann, 1944, Lawton, 1963).

Salisbury (1936) states that thinking occurs in a language. It is a process of organizing incoming ideas, ideas derived from reading, listening, observing, and sense experience

(Salisbury, 1936). These cognitive processes are clearly related to concept formation and hence should demonstrate some correlation to achievement scores (McMurray, 1964).

The independent measures in this study assess the students' ability to see complex ideas expressed in written language and to interpret this information. In general, they assess the level of the individuals' background of general information and his cognitive ability to form inferences (Dvorak, 1953, E.T.S., 1960).

Since language ability does correlate significantly with achievement measures, the dependent measures chosen for analysis were:

1. Freshman English grades, and
2. First semester grade point average.

These measures were obtained from classroom instructors and assumed to be reliable indicators of the students' ability.

III. THE ANALYSIS

Data was collected and punched on I.B.M. cards for analysis. Means, standard deviations, and correlations were obtained. All programs were run on the I.B.M. 360/50 and 1130 system using Hallworth's system of computer programs and Bottenberg and Ward's regression program (Hallworth and Brebner, 1967, Bottenberg and Ward, 1963).

For the regression analysis a procedure similar to Bottenberg and Ward's was used. For this analysis, the following assumptions were made:

1. The distribution of the criterion scores were normal.
2. Each array of the predictor variables had the same overall variance, and
3. The prediction of the criterion from the independent measures was linear.

Multiple linear regression models were constructed and an F-Test used to test for significance. The critical level of acceptance was set at the .05 level.

IV. RESULTS

It seemed evident after scrutinizing the correlation matrix, that prediction would appear rather superfluous because of the rather low correlations obtained between the independent and dependent measures.

Some significant correlations did occur but only between those variables denoted as criterion measures and between some scales on the Reading Tests. These correlations should be logically significant.

The first set of regression models assessed the predictive ability of the nine Van Wagenen scales for English grades (see Table I). As can be seen, these scales were not found to be useful as predictors for either the males or females.

INSERT TABLE I ABOUT HERE

The second set of regression models tested whether the same nine scales on the Van Wagenen would predict grade point average significantly different from zero (see Table II). Again, the results were negative for male and female subjects. However, when the subjects (male-female) were combined, we get a significant F-value. The needed F-value in the latter case was lowered considerably because of the size of the sample.

INSERT TABLE II ABOUT HERE

The results in Table III indicate that Coop scales for the total group can be used as significant predictors of an English grade, but not for a prediction of grade point average (see Table III). It may be that English grades have a higher correlation with the Coop scales (although not significantly higher) than these same scales have with grade point average. This may account for the difference in a significant F-value for the criterion measures.

INSERT TABLE III ABOUT HERE

A final test was made to assess the validity of using achievement grades as a predictor of grade point average. Our hypothesis was that this should yield a highly significant F-value since these two measures are significantly correlated both statistically and theoretically. Table IV reports this

test. The F-value is unusually high. A careful check and recheck was made on the calculation but no error was evident. The F-value indicates an unusually significant predictor in English grades for predicting grade point average. This latter result seems reasonable and supports the findings in the literature.

INSERT TABLE IV ABOUT HERE

V. DISCUSSION

The results of this study confirm Hoyt's (1966) findings that standardized tests have little relevance as indicators of performance in freshman courses. The correlations between the scales on the Dvorak-Van Wagenen test and the English grades and grade point average are extremely low. The same statistical relationship occurred between the Scales on the Cooperative English Test and the freshman criterion scores.

One can only imply, firstly, that the samples which were randomly chosen did not represent the normal population. Secondly, the standardized tests, which report reasonably high reliability coefficients, may not be valid for the sample on which the present study was based. Thirdly, it is quite possible that grades given to these students are also not reliable as an indication of the students' ability (Bate, 1970).

The problem encountered in this study is significant for counsellors wishing to use test results for realistic guidance. It is evident that caution must be used in test interpretation. Furthermore, the goal of future research in community colleges must be set in the direction of establishing a combination of tests that relate to specific curricula and that will assist educators and counsellors in effective guidance for realistic educational goals. Present testing procedures at Mount Royal College, although not entirely irrelevant, are perhaps somewhat inconsequential in terms of their usefulness to the total guidance it provides, both for student and educator. Some progress has already been made in establishing local norms based on a large sample of students that entered the college since 1966. Further research is needed to assess the reliability and validity of these local norms and to measure their effectiveness as tools counsellors and educators can use for realistic guidance to students.

It is perhaps not completely fair to say that the standardized tests given at Mount Royal College are inconsequential. The results do support some limited use of the scores as evidence of success in college for a given student. Both the Van Wagenen and the Coop Tests have some predictive utility, although not as high as may be practically useful. At any rate, counsellors and student advisors may well use subscale scatter and overall performance to indicate present strengths and weaknesses for an individual. After more research

is completed on local norms, these same tests may be an invaluable aid for the educator in the role of realistic counselling.

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TABLE I

R - SQUARED OBTAINED IN USING NINE VAN WAGENEN SCALES TO PREDICT ENGLISH GRADES

Predictors	Criterion	R-Squared	F-Ratio
Van Wagenen Scales - for females	English Grade	RSQ = .167	F = 1.44
Van Wagenen Scales - for male sample	English Grade	RSQ = .030	F = .43
Van Wagenen Scales - for total group	English Grade	RSQ = .020	F = .46

TABLE II

R-SQUARED OBTAINED IN USING NINE VAN WAGENEN SCALES TO PREDICT GRADE POINT AVERAGE FOR MALES, FEMALES AND FOR THE TOTAL GROUP

Predictors	Criterion	R-Squared	F-Ratio
Van Wagenen Scales - for females	G.P.A.	RSQ = .224	F = 2.08
Van Wagenen Scales - for male sample	G.P.A.	RSQ = .126	F = 2.01
Van Wagenen Scales - for total group	G.P.A.	RSQ = .120	F = 3.12*

* Significant at the .05 level

TABLE III

R-SQUARED OBTAINED IN USING FOUR COOP READING SCALES TO PREDICT ENGLISH GRADES AND GRADE POINT AVERAGE

Predictors	Criterion	R-Squared	F-Ratio
Coop Reading Scales - for Total Group	English Grade	RSQ = .043	F = 2.80*
Coop Reading Scales - for Total Group	G.P.A.	RSQ = .036	F = 2.30

* A value of 2.41 was needed for significance at the .05 level

TABLE IV

R-SQUARED OBTAINED IN USING ENGLISH GRADES
TO PREDICT GRADE POINT AVERAGE

Predictors	Criterion	R-Squared	F-Ratio
English Grades for total sample	G.P.A.	RSQ = .471	F = 15.66**

** Significant at the .001 level.