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ABSTRACT

The placement of students in the correct level of English composition classes is approached in a variety of ways by two-year open admission colleges. This report describes the analysis of a potentially quick, effective method of student placement, based on structural linguistics, which asked each student to combine as many brief kernel sentences into as many long sentences as possible in ten minutes. There were well over 100 possible combinations. The scores of 400 students in 1975 and 376 students in 1976 were correlated for five variables: test score, high school grade point average (GPA), Otis Intelligence Quotient Score, college GPA, and grade in the current English course. The test score was found to be a less reliable indicator of course achievement than high school GPA for students with a GPA over 2.25; knowledge and learning habits were found to be more contributory to achievement than fluid ability with language as measured by the test. However, the linguistics-based test was found to be a fast and accurate method for assessing the ability of students with a GPA under 2.25 to master basic English skills in remedial composition courses. (AYC)

# A COMPUTER ANALYSIS OF AN EFFECTIVE INSTRUCTOR-INVOLVED LANGUAGE PROFICIENCY TEST

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One of the most difficult problems facing an English Department in a two-year open admissions college is the placement of students in the correct level composition course. Various colleges rely on ACT scores, I.Q. scores on a range of test instruments, reading scores, high school grade point averages, grade point averages in high school English classes, combinations of all of these, and any number of other indexes of student achievement. None, however, are particularly quick and expert in predicting student achievement upon which proper placement rests. And all of them leave out the role of the classroom instructor of English in making an evaluation.

Coincidentally, structural linguists have been making advances in their studies of the nature of language, its origination, and the levels of its acquisition among groups as well as individuals. And, of course, many of their findings are being put to practical use in teaching composition, particularly on the two-year level at open admissions colleges. The classroom instructor of English has had a large role here.

It would seem that aspects of structural linguistics might be applicable to the problem of a quick, effective method of student placement. Accordingly, a quick, ten minute test was devised and administered at Charles County Community College. While the results reveal promise, they also reveal some of the problems inherent in such a test. In some ways the test proved to be a good predictor and in others not as good as the traditional methods.

The test asked each student to combine as many brief kernel sentences into as many long sentences as possible. Each of the kernels had to appear in each of the combined sentences. The kernels were:

Ed tried to get a grade
Ed tried to get a C
The C was in history
Ed studied at night
Ed should have been sleeping.

An example of a proper combination featuring usage of all the kernels would be: Ed should have been sleeping; but he tried to get a grade of C in history, so he studied at night.

There are well over one hundred possible combinations of these kernels. The students were allowed ten minutes to complete as many as they could. A ratio of deducting twice as much off for a grammatically incorrect sentence as for a correct one reflected the researcher's value that an incorrect sentence was of less value, for scoring purposes, than no sentence at all. Each correct sentence was scored as a positive unit. The raw score was the sum of the scores given each sentence. See sample test.

# SAMPLE TEST

Ed tried to get a grade.
Ed tried to get a C.
The C was in history.
Ed studied at night.
Ed should have been sleeping.

Combine these short sentences into as many different long sentences as possible. Each long sentence must include all of the underlined words.

Example: Ed should have been sleeping, but he tried to get a grade of C in history so he studied at night.

Ed tried to get a grade of C in history, so he studied at night when he should have been sleeping.

Ed studied at night to get a grade of C in history, so he tried to get that grade, but he should have been sleeping.

By studying at night, when Ed should have been sleeping, he tried to get a grade of C in history.

Ed tried to get a good grade in history, so he studied at night when he should have been sleeping, to get a C.

To get a grade of C in history he tried and studied at night when he should have been sleeping.

The test was administered to students in the following courses:

| | |
|---|---|
| Introduction to Composition | Composed of students with below 2.25 high school grade point averages. |
| Composition and Rhetoric | Composed of students with high school grade point averages in excess of 2.25 |
| Technical Report Writing | Composed of students who had previously taken Composition and Rhetoric. |

The scores were correlated using the BMD03D program, correlation with item deletion, developed by the Health Sciences Computing Facility of UCLA, with revisions made when necessary to accommodate the data.*

Correlations were made among five variables: test score, high school grade point average, Otis I.Q. score, college grade point average, and grade in the current English course. The number of students tested in 1975 was 400; in 1976, 376 were tested.

*The program was chosen by Marc Goldstein of Charles County Community College, Institutional Research Department.

In predicting the English course grade, the level of correlation was not as high for the test as for any of the other four. Over-all college grade point average was the best predictor; but of course, entering freshman have no college grade point average, which makes that correlation meaningless for practical application in determing placement. However, the test score was far less reliable than the high school grade point average. There was, however, a correlation between I.Q. and the test scores that was fairly close--.45407.

Table I

| VARIABLE | MEAN | STANDARD DEVIATION | NUMBER OF ITEMS | |
|---|---|---|---|---|
| 1 | 23.4258 | 34.6223 | 310 | Test |
| 2 | 2.7343 | 0.6084 | 134 | High School G.P.A. |
| 3 | 109.0726 | 11.8585 | 179 | I.Q. |
| 4 | 2.5502 | 0.8857 | 262 | College G.P.A. |
| 5 | 2.5729 | 0.8896 | 199 | Course Grade |

CORRELATION MATRIX
(SAMPLE SIZES IN PARENTHESES)

| VARIABLE NO. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | 1.00000 ( 310) | 0.30446 ( 134) | 0.45407 ( 179) | 0.17110 ( 262) | 0.15547 ( 199) |
| 2 | 0.30446 ( 134) | 1.00000 ( 134) | 0.52441 ( 133) | 0.38483 ( 125) | 0.43196 ( 97) |
| 3 | 0.45407 ( 179) | 0.52441 ( 133) | 1.00000 ( 179) | 0.29493 ( 163) | 0.28473 ( 128) |
| 4 | 0.17110 ( 262) | 0.38483 ( 125) | 0.29493 ( 163) | 1.00000 ( 262) | 0.65862 ( 199) |
| 5 | 0.15547 ( 199) | 0.43196 ( 97) | 0.28473 ( 128) | 0.65862 ( 199) | 1.00000 ( 199) |

From these data certain conclusions may be drawn. Success in English courses is best correlated to high school grade point averages. In cases where such an average is not available, the test may be a better instrument than the I.Q. score because of its quickness of administration insofar as the results are roughly comparable.

The researchers then refined the study population to include only Composition and Rhetoric students--entering freshmen with grade point averages above 2.25 who attained A, B, and C grades in the course. Those who withdrew or received an F grade were deleted to focus as much as possible on academic achievement as apart from factors such as lack of attendance. Among this group, the test score displayed by far the lowest correlation to achievement of a grade in the freshman English course. High school GPA was again the highest correlative. Among this group, in fact, the test score was not significant at the .05 level of significance at .06847.

Table II

| VARIABLE | MEAN | STANDARD DEVIATION | NUMBER OF ITEMS | |
|---|---|---|---|---|
| 1 | 32.3151 | 33.0118 | 165 | Test |
| 2 | 2.9417 | 0.5393 | 86 | High School G.P.A. |
| 3 | 113.4862 | 9.9126 | 109 | I.Q. |
| 4 | 2.7726 | 0.7133 | 157 | College G.P.A. |
| 5 | 2.6959 | 0.7158 | 148 | Course Grade |

CORRELATION MATRIX
(SAMPLE SIZES IN PARENTHESES)

| VARIABLE NO. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | 1.00000 ( 165) | 0.23626 ( 86) | 0.27819 ( 109) | -0.03132 ( 157) | 0.06847 ( 148) |
| 2 | 0.23626 ( 86) | 1.00000 ( 86) | 0.44142 ( 86) | 0.48750 ( 82) | 0.47427 ( 76) |
| 3 | 0.27819 ( 109) | -0.44142 ( 86) | 1.00000 ( 109) | 0.28831 ( 102) | 0.40852 ( 95) |
| 4 | -0.03132 ( 157) | 0.48750 ( 82) | 0.28831 ( 102) | 1.00000 ( 157) | 0.65832 ( 148) |
| 5 | 0.06847 ( 148) | 0.47427 ( 76) | 0.40852 ( 95) | 0.65832 ( 148) | 1.00000 ( 148) |

These data suggest that factors other than the ability to write sentences were important to student achievement--knowledge gained in high school, and intelligence, as measured by the Otis Test being more significant. It is curious, however, to note that while the test correlates with the G.P.A., the test does not correlate with achievement in the writing course, while G.P.A. does.

Knowledge and learning habits are clearly more contributory to achievement than fluid ability with language, at least as measured by the test. It should be noted here that Composition and Rhetoric is a course in which the student writes ten or more 500-700 word essays which are graded according to mechanics and content; the course is taught by ten different instructors. It was possible that the grades reflected skills specifically taught by these instructors, none of whom emphasized, specifically, sentence writing. Indeed a check of all course syllabi proved that sentence writing per se was not a main component of the course.

Finally, a significant correlation was found using only students in the Introduction to Composition class--those with below a 2.25 high school G.P.A. Startlingly, the test had by far the greatest correlation to grade achievement in the course-- .51046. No other variable correlated to this degree of significance in the entire correlation matrix. Like most remedial composition courses, Introduction to Composition does focus on sentence writing, through drill upon drill, with only limited attention to essay writing. Clearly, the test measured the ability to manipulate sentence structures--the basic composition skill and the skill being taught in the course. In effect then, the test did measure what the course taught and measured the students ability to work with sentence parts.

Table III

| VARIABLE | MEAN | STANDARD DEVIATION | NUMBER OF ITEMS | |
|---|---|---|---|---|
| 1 | 8.3256 | 26. 2395 | 43 | Test |
| 2 | 2.2987 | 0.5029 | 16 | High School G.P.A. |
| 3 | 96.5000 | 9.5047 | 26 | I.Q. |
| 4 | 2.2250 | 1.0299 | 38 | College G.P.A. |
| 5 | 3.2222 | 0.6405 | 27 | Course Grade |

CORRELATION MATRIX
(SAMPLE SIZES IN PARENTHESES)

| VARIABLE NO. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | 1.00000 ( 43) | 0.17794 ( 16) | 0.32469 ( 26) | 0.31422 ( 38) | 0.51046 ( 27) |
| 2 | 0.17794 ( 16) | 1.00000 ( 16) | -0.08463 ( 16) | 0.04940 ( 15) | 0.41110 ( 8) |
| 3 | 0.32469 ( 26) | -0.08463 ( 16) | 1.00000 ( 26) | -0.17355 ( 23) | 0.05201 ( 14) |
| 4 | 0.31422 ( 38) | 0.04940 ( 15) | -0.17355 ( 23) | 1.00000 ( 38) | 0.42547 ( 27) |
| 5 | 0.51046 ( 27) | 0.41110 ( 8) | 0.05201 ( 14) | 0.42547 ( 27) | 1.00000 ( 27) |

The study was replicated the following year with only minor differences in the directions issued to students before the test was administered. Correlations followed the pattern described above--if anything the data revealed an intensification of that pattern. The correlation among Introduction to Composition grades and the test score was even high reaching .711. The low correlation between the other scores was indeed somewhat lower.

Table IV

| VARIABLE | MEAN | STANDARD DEVIATION | NUMBER OF ITEMS | |
|---|---|---|---|---|
| 1 | -49.0000 | 69.7178 | 8 | Test |
| 2 | 2.0033 | 0.1950 | 3 | High School G.P.A. |
| 3 | 93.8571 | 9.1001 | 7 | I.Q. |
| 4 | 2.3029 | 1.1921 | 7 | College G.P.A. |
| 5 | 2.6250 | 1.8468 | 8 | Course Grade |

CORRELATION MATRIX
(SAMPLE SIZES IN PARENTHESES)

| VARIABLE NO. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | 1.00000 ( 8) | 0.88024 ( 3) | -0.10038 ( 7) | 0.65590 ( 7) | 0.71120 ( 8) |
| 2 | 0.88024 ( 3) | 1.00000 ( 3) | 0.60687 ( 3) | 0.40185 ( 3) | -0.85854 ( 3) |
| 3 | -0.10038 ( 7) | 0.60687 ( 3) | 1.00000 ( 7) | -0.22487 ( 6) | -0.38451 ( 7) |
| 4 | 0.65590 ( 7) | 0.40185 ( 3) | -0.22487 ( 6) | 1.00000 ( 7) | 0.38790 ( 7) |
| 5 | 0.71120 ( 8) | -0.85854 ( 3) | -0.38451 ( 7) | 0.38790 ( 7) | 1.00000 ( 8) |

The significance of this study for English Departments in open admissions two-year colleges lies in the large number of students (776) included in the study as well as its results. While the quick, linguistics-based test did not predict as well as the researchers had hoped, it is a valid instrument within well-defined areas. It is fast, and extremely accurate when administered to low achieving high school graduates who might need remedial composition work.

With recent studies attacking two-year colleges as wasteful because of the lack of success in graduating poorly prepared students, this simple test is a means of determining what chance there is for the poorly prepared high school graduate to master basic English skills.