

## Attributes of Organizational Ability Related to Writing Ability

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The present study investigated the relationship between writing ability and a reconstruction test requiring anagram solving, word reordering, sentence reordering, and paragraph assembly. The results of a canonical correlation corroborated earlier findings that this test is a good predictor of writing ability. © 1988 Academic Press, Inc.

Recent findings have revealed that skilled writers outperform less skilled writers on tests requiring reconstruction of prose material (Benton, 1983; Benton, Kraft, Glover & Plake, 1984). Although performance on such tests is related to holistic writing ability, the importance of that relationship is somewhat tainted by the unreliable nature of writing samples. Because writing samples are often unreliable (Breland, 1977), more objective assessments of writing, such as the Test of Standard Written English (TSWE), have often been used because they provide a more reliable measurement of some aspects of writing ability. Consequently, Breland (1977) has recommended that writing samples be used concurrently with multiple-choice tests in order to obtain both valid and reliable assessments of writing ability.

The purpose of the current study is to examine the relationship between writing ability (measured by both writing samples and the TSWE) and a reconstruction test involving anagram solving, word reordering, sentence reordering, and paragraph assembly. This relationship is examined while also considering measures of general intellectual ability.

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## METHOD

A sample of 105 undergraduate students enrolled in an educational psychology course volunteered to participate in three activities across 2 days. On Day 1, the participants wrote two essays, each within 10 min, on the following topics: "Describe an event that has had an impact on your development" and "If you had your adolescence to live over again, what would you change?" All essays were scored by two independent raters using the 6-point holistic scoring scale developed by Breland and Gaynor (1979). The interrater reliability of scoring (Pearson  $r$ ) was 0.83. Parallel forms estimate of the measurement of writing ability—correlation over examinees of their two essay scores—was 0.80. On the second day, two days after the first, the students returned and first completed the Test of Standard Written English (TSWE) of the College Board (1983) in the required 30 min and then completed the reconstruction test. See Benton *et al.* (1984) for a complete description of these materials and procedures.

Examinee responses to the anagram solving and paragraph assembly test sections were scored correct or incorrect. Scores on the word reordering and sentence reordering sections were the total number of relative position errors, i.e., the total number of misplaced words or sentences across all six word reordering or sentence reordering items. The TSWE was scored according to the formula number of correct answers minus one-fourth the number of incorrect answers.

## RESULTS

The American College Testing (ACT) Program's composite score, English usage subtest score, and students' grade point average (GPA) were available for 73 participants. All data were analyzed using canonical correlation with the criterion measures being the TSWE and the average holistic score on the writing samples. Predictor variables included the ACT scores, GPA, and the composite score on the four reconstruction sections.

The criterion measures were moderately correlated,  $r = .47$ . The multivariate test for the overall relationship between the set of independent and dependent variables was significant, global  $F(8,134) = 11.92$ ,  $p < .001$ . Univariate  $F$  tests revealed that both the writing sample score,  $F(4,68) = 9.32$ ,  $p < .001$ , and the TSWE,  $F(4,68) = 22.48$ ,  $p < .001$ , were significantly related to the set of predictors.

The standardized canonical correlation coefficient for the TSWE (.84) was high for the first canonical function relative to the writing sample score (.26). The coefficients for the predictor variables on this function revealed a low loading for the ACT composite score ( $-.07$ ) and moderate loadings for the ACT English usage subtest (.47), GPA (.38), and the composite reconstruction test score ( $-.43$ ). These loadings indicate that those who scored high on the TSWE also performed well on the ACT English subtest scores and had moderately high GPAs. In addition, these individuals made relatively few errors on the reconstruction test.

The writing sample score loaded heavily on the second canonical function (1.11) relative to the TSWE ( $-.76$ ). Standardized coefficients for the predictors on this function showed moderate loadings for the ACT En-

glish subtest (.39) and for GPA ( $-.27$ ), and a high loading for the reconstruction test ( $-1.14$ ). The ACT composite score had a high inversely related loading ( $-1.26$ ). The coefficients indicate that those who performed well on the writing samples made few errors on the reconstruction test but scored low on the ACT composite test score.

### DISCUSSION

The results of the current study reveal, first, that writing samples and the TSWE measured somewhat different aspects of writing ability as noted by the differential loadings on the canonical functions. Second, the set of predictors was significantly related to the set of criterion measures. Third, the TSWE was moderately related to general academic ability and to scores on correct English usage and the reconstruction test. Finally, the writing samples were marginally related to general academic ability, moderately related to scores on correct English usage, and highly related to scores on the reconstruction test.

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