

## CORRELATIONS AMONG COLLEGE STUDENTS' GRADE POINT AVERAGES AND AMERICAN COLLEGE TEST SCORES<sup>1</sup>

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*Summary.*— This study examined whether students who did well in high school continued their success in college. For the 42 students who completed the survey, a significant correlation of .62 was found between 4-yr. high school GPA and college GPA and a significant correlation of .63 between American College Test scores and college GPA. Apparently, students who succeeded in high school continue to succeed in college.

The American College Testing Program is a nationwide test based on a 36-point scale. It was designed to measure use of English, mathematics, social studies reading, and natural sciences reading. The results of this test aid in making admissions and placement decisions for entering college students. Laing, Engen, and Maxey (1987) found that subjects who had taken more courses in relevant areas scored higher on the corresponding section of the American College Test. This relationship was strongest in mathematics and natural sciences. Noble and McNabb (1989) reported similar results, such that increased high school coursework, especially in mathematics and natural sciences, was related to higher American College Test performance. They also found that the type of high school curriculum in which students are enrolled affects their test scores. Subjects enrolled in college preparatory curricula typically received higher scores.

Reviews of the American College Test Assessment Program (Kifer, 1985) have indicated that correlations between Composite American College Test scores and college grade point averages (GPAs) generally fall between .40 and .50. The current study examined the relationships between high school GPA, college GPA, and American College Test scores in a sample of university students.

### METHOD

#### *Subjects*

A total of 78 students attending The Ohio State University at Marion were given the survey. Correlations were obtained for the 42 subjects who completed all of the relevant questions. The Ohio State University at Marion

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is on a quarter system and has an open admissions policy. Eighteen of the subjects were men and 24 were women, whose mean age was 20.6 yr. ( $SD=4.3$ , range=18 to 36 yr.). The majority were freshmen who entered the university in the autumn quarter, reporting college GPA based on two quarters of enrollment.

### Procedure

A 13-question survey of academic evaluation was designed for this study, including, for example, GPA, sex, age, class rank or year in school (e.g., freshman, junior), academic major, and American College Test score. Surveys were handed out to psychology classes, both introductory and advanced levels, during spring quarter. Subjects were assured that their responses would be treated anonymously and participation was not mandatory.

### RESULTS AND DISCUSSION

There was a significant correlation ( $r_{40}=.62$ ,  $p<.001$ ) between high school and college GPAs and a significant correlation ( $r_{40}=.63$ ,  $p<.001$ ) between American College Test scores and college GPAs. Also, a significant correlation ( $r_{40}=.41$ ,  $p<.01$ ) was found between high school GPAs and American College Test scores. A multiple correlation analysis of college GPA with high school GPA and American College Test scores gave a multiple correlation of .74. Multiple regression analysis showed this was significant ( $F_{2,39}=24.62$ ,  $p<.001$ ).

The significant correlations between students' American College Test scores and GPAs suggest that the American College Test is a good predictor of college success. The correlation between college GPA and American College Test scores was substantially higher than the correlation between high school GPA and American College Test scores (.63 versus .41). This suggests that high school grades are not quite as valuable in predicting success on the test. However, as the multiple correlation analysis shows, the American College Test scores and high school GPAs both provide useful information for understanding the success of students in college.

The mean grade point averages in college and high school were very similar. The mean high school GPA was 3.14 ( $SD=.54$ ) and the mean college GPA was 3.22 ( $SD=.55$ ). The difference between these two GPAs was not significant ( $t_{41}=1.40$ , ns).

The women had slightly higher GPAs in both high school and college. The mean high school GPA was 3.27 ( $SD=.41$ ) for the women and 2.96 ( $SD=.57$ ) for the men. In college, the mean GPA for women was 3.35 ( $SD=.48$ ) and for men it was 3.11 ( $SD=.54$ ). In both cases, the differences were nonsignificant.

Over-all, the mean composite American College Test score was 21.1

( $SD=4.0$ ) for the participants. The men's mean American College Test score was 22.3 ( $SD=4.3$ ) compared to the women's mean American College Test score of 20.7 ( $SD=4.1$ ). The difference was nonsignificant.

Scores on the American College Test should not replace high school grades in the prediction of college success. High school grades, as shown, are correlated with college grades as strongly as are American College Test scores, but the combination of test scores and high school GPAs improved the prediction of college achievement (from correlations of .62 and .63 to a multiple correlation of .74). These results suggest that high school academic performance is strongly related to college academic success and students who have done well in high school are most likely to continue their success in college.

#### REFERENCES

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