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This study sought to check the value of the junior college GPA and other possible factors in predicting success for the disadvantaged at Missouri University. The investigation was confined to 53 of the 61 students who had received an Economic Opportunity grant or help from the Work-Study program. As these aids were not available before 1965, the students were those in the fall 1965, all three 1966, and winter 1967 terms. Data for the study came from the University Admissions Office, the Financial Aids Office, and the Records Department. Junior College GPA's and high school rank were correlated with first- and second semester university grades and the cumulative GPA at the end of the second semester. No significant difference was found between junior college grades and high school rank as predictor of success after transfer. It was also noted that (1) these students had a high degree of persistence, (2) the expected first-semester drop in GPA was partly recovered in the second SEMESTER, (3) the recovered GPA was not as high as the junior college GPA, (4) the 30% from the large city colleges had a lower GPA than those from other colleges, (5) those from small high school graduating classes did better than those from large ones, and (6) those who transferred the most credit hours did better than those who transferred fewer. As the small number of students receiving aid made the predictive values uncertain, further study should be done after more of them become available for investigation. (HH)
SOME FACTORS EFFECTING ACADEMIC SUCCESS
OF ECONOMICALLY DISADVANTAGED JUNIOR
COLLEGE TRANSFER STUDENTS
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Students eligible for financial aids as economically disadvantaged junior college transfer students are presently selected in order of their probability of success at the University of Missouri. The prediction of this success is now based on the students' junior college grade point average. While studies such as Knoell and Medsker (1965) have found junior college grade point average to be a good predictor of four year college success, they also caution that particular situations must be carefully evaluated.

The purpose of this study is to check the validity of the junior college grade point average as a predictor of success for Missouri junior college transfer students at the University of Missouri and to identify other characteristics which may be predictive of university success for these students. It is a further purpose of the study to evaluate characteristics readily available to admissions and financial aids officers.

Knoell and Medsker (1965) found that the junior college transfer student cumulative averages at the four year colleges were generally
lower than the junior college averages but reflected steady improvement following the first term loss immediately after transfer. This seems to indicate that cumulative scholastic averages at the junior college are predictive of success at the four year college. Knoell and Medsker (1965), however, found the success of students who transfer after two years in junior college to be remarkably greater than the success of students who transferred after only one year, or less than two years. They also found that most students will suffer some drop in grades in their first semester after transfer, but the size of the drop and the degree of improvement afterward varies with the institution. A particular junior college will probably have a near zero differential with some institutions and a fairly sizable negative differential with others, all within the same state. Significant positive differentials will be fairly rare and might be viewed with some concern as possible indications of overly tough junior college grading standards. This caution that grade point average must be carefully reviewed is further substantiated by Lunneborg and Lunneborg (1967). They found that the most widely used index for admission of transfer students, grade point average at prior college, was minimally correlated with subsequent grades. They also noted that high school grade point average was far more useful than prior grade point average, and the best predictions of transfer student performance was afforded by the use of aptitude tests as well. Wellingham (1963, p. 260) found that "a poor relationship exists between previous college performance
and performance of transfer students at Georgia Tech."

Low-income students show personal characteristics similar to those which have appeared in studies of college dropouts. One semester of college accentuated these characteristics. Nonetheless, the low income group had as good or better college performance as measured by grade point average at the end of one semester and possessed levels of aspiration equal to other college students, (Bradfield, 1967). This may also indicate that college success is best predicted by characteristics other than junior college grade point average.

For the purpose of this study the following questions were formulated.

1. Is there a significant difference between junior college grade point average and high school rank as a predictor of university grade point averages?

2. What is the junior college grade point average and average high school rank in class of these students as they are divided into (a) those that have not persisted at the university and have dropped out before graduation, and (b) those who have persisted (through April, 1968) or have graduated?

3. What is the university grade point average and junior college grade point average for these students as they are divided into (a) those who attended junior colleges in metropolitan areas, and (b) those that attended other junior colleges?

4. What is the university grade point average and high school
rank for these students grouped by the size of their high school graduating class?

5. What is the university grade point average of these students grouped by (a) those transferring less than 34 semester hours to the university, (b) those transferring 35 to 59 semester hours, and (c) those transferring 60 or more hours of credit?

Method

All Missouri junior college transfer students who have received either an Economic Opportunity Grant or assistance through the Work Study Program at the University of Missouri and who registered at the university during, the Fall 1965, the Winter 1966, the Summer 1966, the Fall 1966, and the Winter 1967 are included in this study. These time periods were selected because there were very few students under either the Economic Opportunity Grant program or the Work Study Program prior to 1965 and every student included in this time period would have had at least one summer following registration at the university to face the problem of whether to continue in the university or drop out.

Information for the study was collected from the Admissions Office, the Financial Aids Office and the Records Department of the University of Missouri.

Junior college grade point average is compared with first semester university grades, second semester university grades and cumulative grade point average at the end of the second semester. High
school rank is also compared with first semester university grades, second semester university grades and cumulative grade point average at the end of the second semester. The high school ranks were converted to T-scores. All grade point averages are reported on the scale $A = 4.00$. The product-moment coefficient of correlation was used. The significance of each correlation is reported at the .05 level and the .01 level. A test of the significance of the difference between two correlation coefficients for correlated samples was used to test the significance of difference between junior college grade point average and high school rank, as a predictor of university grades.

The grade point and high school ranks were averaged according to the number in each category of the questions posed. The number in each category is listed to give a clear description of the size of the category.

Results

The results of the comparisons of junior college grade point averages and high school rank with university grade point averages are summarized in Table 1. The test of significance of the difference between junior college grade point average and high school rank revealed no significant differences in predicting first, second or cumulative (first and second) Semester university grade point averages.

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Insert Table 1 about here

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Table 1 includes 53 students. Of the total original group, which included 61 students, 8 were not included in Table 1. These 8 include, 2 who did not complete a regular high school graduation and were not ranked in a senior class, 5 who withdrew during their second university semester and 1 student who died during the second university semester. These 8 students had an average cumulative university grade point average of 1.78, a cumulative junior college grade point average of 2.56 and a high school rank of 54.6 (in T-scores for 6 of the 8 students).

Information regarding the persistence of these students, the location of their junior college (metropolitan or other), the size of their high school graduating class and the number of hours they transferred to the university is described according to junior college grade point averages, high school rank and University of Missouri cumulative grade point averages in Table 2.

Discussion

From the above results it is clear that for this group of economically disadvantaged junior college transfer students there is no significant difference between the use of junior college grades and high school rank as a predictor of University of Missouri grade point averages. This disagrees with the study by Lunneborg and Lunneborg (1967). They found high school success to be a better predictor than prior
college grade point average. Further research is needed to determine the extent to which a combination of junior college grade point average and high school rank might improve the prediction of university grades.

It is evident that these students have a high percentage of persistors. The 82 percent persistence of these students may be higher than the average persistence of junior college transfer students, however, further research is needed to substantiate this.

The drop in grade point average for these students the first semester after transfer from the junior college is similar to the drop experienced by most junior college transfer students as reported by Knoell and Medsker (1965). It is also clear that these students recover a part of their grade point average loss the second semester after transfer, though by the end of the second semester their grade point average was not as high as their junior college grade point average.

It may be observed that a relatively small, 30 percent, of these students came from the large metropolitan junior colleges. Though the numbers are small, the metropolitan junior college transfer students in this group had considerably lower grade point averages and high school ranks than other Missouri junior college transfer students.

Again, though the numbers are small, it is interesting to observe that the university grades earned by graduates of small and medium size high school graduating classes are considerably higher than the
grades earned by students graduating with large high school classes.

The much higher university grade point averages earned by students in the study who transferred more than 60 hours of credit substantiates the findings of Knoell and Medsker (1965) when they found remarkably greater success on the part of students who transferred after two years or more in the junior college.

While this study is exploratory and descriptive it is evident that a need for further research exists in dealing with economically disadvantaged junior college transfer students. The small number of students in the program to date makes it difficult to draw highly predictive conclusions at this time. The number of these students is growing each year and within another year a more predictive study should be possible.

Summary

The purpose of this study has been to check the validity of the junior college grade point average as a predictor of success for economically disadvantaged Missouri junior college transfer students at the University of Missouri, and to identify other characteristics which may be predictive of university success for these students. Junior college grades for these students was found to be a good predictor of university success. High school rank in class was found to be equally predictive. The small number (61) of these economically disadvantaged junior college transfer students has made prediction based on subcategories difficult. The study points to the need
for more research on this group of students after a greater number of students is available for study.
References


Table 1

Correlations Between Junior College Grade Point Averages and University Grade Point Averages, and Correlations Between High School Rank (in T-scores) and University Grade Point Averages

(Pearson product-moment)

<table>
<thead>
<tr>
<th>Groups</th>
<th>Junior College Grade Point Averages</th>
<th>High School Rank&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior College GPA</td>
<td>- - -</td>
<td>r = .62**</td>
</tr>
<tr>
<td>Mean = 2.79 Std. Dev. = .58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Rank&lt;sup&gt;a&lt;/sup&gt;</td>
<td>r = .62**</td>
<td>- - -</td>
</tr>
<tr>
<td>Mean = 60.43 Std. Dev. = 7.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Missouri GPA (1st Semester)</td>
<td>r = .36**</td>
<td>r = .35*</td>
</tr>
<tr>
<td>Mean = 2.39 Std. Dev. = .53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Missouri GPA (2nd Semester)</td>
<td>r = .50**</td>
<td>r = .35*</td>
</tr>
<tr>
<td>Mean = 2.59 Std. Dev. = .59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Missouri GPA (Cumulative Through 2nd Sem.)</td>
<td>r = .53**</td>
<td>r = .38**</td>
</tr>
<tr>
<td>Mean = 2.48 Std. Dev. = .62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Rank in T-scores

*Significant at the .05 level

**Significant at the .01 level
Table 2

Junior College Grade Point Averages, High School Rank (in T-scores) and University Grade Point Averages as they are Divided According to Persistence, Jr. College Location, H. S. Class Size, and Hours Transferred

<table>
<thead>
<tr>
<th>Subgroupings</th>
<th>Junior College GPA</th>
<th>High School Rank</th>
<th>University GPA**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students That Dropped</td>
<td>2.43 (N = 11)</td>
<td>53.93 (N = 10)</td>
<td>1.83 (N = 11)</td>
</tr>
<tr>
<td>Students That Persisted</td>
<td>2.84 (N = 50)</td>
<td>61.00 (N = 49)</td>
<td>2.56 (N = 50)</td>
</tr>
<tr>
<td>Students That Attended a Metropolitan Jr. College</td>
<td>2.53 (N = 18)</td>
<td>54.51 (N = 16)</td>
<td>2.20 (N = 18)</td>
</tr>
<tr>
<td>Students That Attended Other Missouri Junior Colleges</td>
<td>2.86 (N = 43)</td>
<td>61.77 (N = 43)</td>
<td>2.43 (N = 43)</td>
</tr>
<tr>
<td>Senior Classes With Less Than 100</td>
<td>2.61 (N = 14)</td>
<td>57.65 (N = 14)</td>
<td>2.51 (N = 14)</td>
</tr>
<tr>
<td>Senior Classes With 101 to 249</td>
<td>2.97 (N = 28)</td>
<td>61.65 (N = 28)</td>
<td>2.57 (N = 28)</td>
</tr>
<tr>
<td>Senior Classes With More Than 250</td>
<td>2.59 (N = 17)</td>
<td>58.51 (N = 17)</td>
<td>1.98 (N = 17)</td>
</tr>
<tr>
<td>Less Than 34 Hours Transferred</td>
<td>2.79 (N = 12)</td>
<td>61.35 (N = 12)</td>
<td>2.29 (N = 12)</td>
</tr>
<tr>
<td>35 to 59 Hours Transferred</td>
<td>2.60 (N = 23)</td>
<td>57.54 (N = 23)</td>
<td>2.19 (N = 23)</td>
</tr>
<tr>
<td>More Than 60 Hours Transferred</td>
<td>2.89 (N = 26)</td>
<td>61.06 (N = 26)</td>
<td>2.60 (N = 26)</td>
</tr>
</tbody>
</table>

*Rank in T-scores
**Cumulative GPA through 2nd Semester