IMPACT OF SPECIFIC VARIABLES ON
SELECTED A.A. STUDENTS' SUCCESS ON THE CLAST

Introduction

Educational research has focused on numerous student demographic factors that might be related to academic achievement in school. Gender, ethnicity, economic status and household (i.e., family structure) have been found to be associated with academic success. The relationship between family disruption and lower academic achievement and/or fewer years of schooling is an issue that educational leaders must address in order to improve student performance in school. A first step in developing programs to improve academic success would be to identify those milestone experiences upon which completion of various educational levels depend. In Florida community colleges, passing the College Level Academic Skills Test (CLAST) is such a milestone.

Much of the available information about CLAST has focused on the impact of the rising standards and on summary data comparing test results of colleges or ethnic subgroups. However, this information does not answer questions about the success, or lack of success, for some students or the factors that may be related to passing CLAST. To answer these questions, St. Petersburg Junior College (SPJC) conducted a study to determine whether selected student demographic and academic variables and/or home and work environments could be used to explain and/or predict success on CLAST.

Description of the Study

CLAST must be passed by two groups of college students, those who enter a state university as freshman and those who transfer to a university from a state community college with an Associate of Arts (A.A.) degree. The four CLAST subtests (and the October 1991 minimum passing scores) are: Reading (295), English Language Skills (295), Mathematics (295), and Essay (5 on 6 point scale). SPJC follows state law in requiring a student to have completed 18 semester hours before attempting CLAST.

Native students (all coursework at SPJC) who took CLAST for the first time in October 1991 and who were pursuing the A.A. degree became the study population. Demographic variables examined were gender, ethnicity, and age. Students 25 years or older were excluded from the study based on the presumption that they would be less influenced by their family background and more often living away from home for a number of years.

Academic variables examined were cumulative college level credit hours completed and cumulative grade point average (GPA) at the time the student sat for CLAST, achievement in courses completed in English, reading, and mathematics, and CLAST review class attendance. Data for demographic and academic variables came from student records. Environmental variables were student employment, educational level of parents, and whether the student had lived in an intact or non-intact family. This data was obtained directly from a student survey.

Descriptive statistics were calculated and reported on two groups of students, the first who passed all subtests and the second who failed at least one subtest. Means of selected demographic variables were tested using t-tests. Multiple regressions, a statistical analysis used to determine whether two or more of the variables can be combined to produce a predictions model, was also used.

Student Demographics

Of the 1278 students taking the CLAST in October 1991, approximately 760 students were first-time examinees (the CLAST study group). Of this number, 366 students or 28.6% (48.2% of first-time examinees) met the study criteria (the CLAST survey group). Surveys were mailed to the 366 students. Following a telephone follow-up, the total CLAST survey respondents (group) numbered 162, a return rate of 44.3%.

The CLAST study and CLAST survey groups were older than the general population of all A.A. degree students. Black and American Indian students were underrepresented; white, Asian and Hispanic students were overrepresented in the CLAST study and CLAST survey groups. The respondents to the survey matched the overall gender distribution of students, but the percent of males was higher for the study group. Also, the CLAST study students had a cumulative GPA

of 2.78 and were taking an average course load of 12.24 credit hours compared to an average of GPA of 2.83 and course load of 12.17 for CLAST survey students. Overall, however, the groups were sufficiently similar to conclude that findings true for the study students would be true for the SPJC A.A. degree student population.

Conclusions

1. Generally, CLAST study and survey students had lower passing rates on all subtests of the CLAST than all first time examinees, but the mean scores were not significantly different. The CLAST study group had passing rates and mean scores below those of all first-time in all subtests expect the Essay and the mean score on the mathematics subtest where passing rates and mean scores were equal. The CLAST study group on average passed 3.2 subtests; 78.1% passed 3 or more subtests. The CLAST survey group had higher passing rates than those for the CLAST study group except for the English Language Skills subtest. The subtest mean scores of the survey versus study students were not significantly different nor were the means of these groups significantly different from each of the subtest means for all first-time examinees.

2. The higher a student's cumulative GPA before the CLAST is taken, the better the chance that the student will pass all subtests of CLAST. Students with a total of 24 credit hours or more completed prior to taking the CLAST had a much higher passing rate than students with less than 24 credit hours.

3. With the exceptions of the English and mathematics subtests, there was very little difference in passing rates within each demographic group. For the English subtest, the passing rate declined rapidly after age eighteen (18). For the mathematics subtest, students 18-20 years of age, whites, Asians, American Indians and males had higher passing rates than students in other age, ethnic or gender categories. GPAs in mathematics courses completed prior to the exam did not explain why these groups had higher passing rates, nor did age and ethnicity explain the gender difference.

4. Students had a higher probability of passing the reading subtest if their GPA in reading courses was greater than 2.50 and of passing the CLAST if it was greater than 3.50. The probability of passing the English subtest exceeded 50 percent when the English GPA was greater than 2.50. When the mathematics GPA was greater than 2.50, the passing rate for the mathematics subtest greatly improved. To achieve a comparable passing rate for the CLAST required a mathematics GPA of over 3.50.

5. 89.5% of the CLAST survey group worked an average of 28.1 hours per week in addition to attending school. While having a job alone did not appear to influence passing rates on CLAST, students who both worked full time and had full course loads had higher passing rates than those students who did not work or were taking few credit hours.

6. Higher education levels of a student's parents generally implied higher passing rates on CLAST.

7. Students who had ever lived in a single-parent or in a parent-stepparent household had the highest passing rates of all types of households identified. Students from other types of households needed over a 3.0 GPA to achieve the same passing rates as these students with greater than a 2.5 GPA. The majority of students in the single-parent and parent-stepparent households worked 40 hours or more, and 37 percent of students, who passed the CLAST and had lived with a single-parent, had mothers with a college degree.

8. When explaining the reason they passed or failed CLAST, students most often felt it was something they did (16.2%) or did not do (16.2%). Blame was assigned to some element of the test (12.7%), or praise was given for the CLAST review materials (14.8%) or specific teachers or courses (14.1%).

Recommendations

1. Students should take CLAST as young as possible but not before completing at least 24 semester hours.

2. The college should increase efforts to help students pass the mathematics subtest. The overall passing rate on the CLAST is lowered by failure in this area, especially for students 21-24 years of age, women and certain ethnic groups. A study that identifies courses completed by students who failed compared to students who pass is underway to determine if there is validity in recommending the completion of a key course or courses before the student takes the CLAST.

3. Since there appears to be little evidence of students from a "typical" single-parent household in these AA degree students, similar survey data might be collected for a sample of all AS degree students to try to determine the possible influence household structure has on college performance. It may be that students from what is often thought of as a "typical" single-parent home do not enroll in AA degree programs (or even at a community college).

4. Academic variables such as GPA did not fully account for all differences in CLAST performance. The impact of the economic status of the family and/or of the student has not been considered. The largest number of student comments referred to motivation (or lack of motivation) as being the primary reason the student passed or failed CLAST. It may be appropriate to study the factors which motivate students in future projects.