Xavier University of Louisiana
College of Pharmacy

Assessment Report

Predictors of Academic Success and Difficulty in the Doctor of Pharmacy Program

Goal(s): The goal of this assessment is to determine which student characteristics (variables) will serve as predictors of success or difficulty in the Doctor of Pharmacy program.

Stakeholders: Administrators, faculty, students, alumni, and employers

Assessment Procedures:

Source: Student records will be obtained from Banner Web and the Brio Web reporting tool.

Sampling strategy: All first-year students who were enrolled in the College of Pharmacy during the fall 2003 and fall 2004 semester will be included in the study.

Analysis: Various statistical tests and models will be used to provide correlations among the student variables for the four key questions. The analysis was performed by Dr. Carroll Diaz (XULA Math Department).

COP Program and/or Courses Potentially Affected: The entire COP program.
Assessment Results:

Total number of students in both classes - 331  
Total number of students eligible for inclusion - 237(72%)

Key Questions

1. What single characteristics of students such as age or gender correlate well with academic success or difficulty in the program?
2. What single academic facts about students at university admission and during enrollment in the pre-pharmacy program correlate well with academic success or difficulty?
3. What single academic facts about students at admission and during enrollment in the professional program correlate well with academic success or difficulty?
4. Are there combinations of factors from items 1-3 that provide better correlations with academic success or difficulty in the program than the single factors?

Academic Success - graduation without delay

Academic Difficulty - delayed graduation, dismissal

Student Variables

Demographic Data
- Age at admission to the COP
- Gender
- Previous degree
- Transfer or Internal student

Pre-Pharmacy and Admission
- Total number of unsatisfactory grades - D and F
- Math/science GPA
- Pre-pharmacy GPA

Professional Pharmacy Program
- Total number of unsatisfactory grades - D and F
- Pharmacy GPA
- Graduation - on time or delayed
**Analysis of Student Variables**

1. Is there a significant difference in the average AGE of students who graduate on time and those whose graduation is delayed? The mean AGE of students who graduated on time is 22.51 and the mean AGE of students whose graduation was delayed is 22.60. The p-value of the Independent t-Test of the mean difference in AGE between these two groups is 0.910 and we can assume there is no significant difference.

2. Is there a significant difference in the average Math/Science GPA between students who graduate on time and those whose graduation is delayed? The mean Math/Science GPA of students who graduated on time is 3.267 and the mean Math/Science GPA of students whose graduation was delayed is 2.835. The p-value of the Independent t-Test of the mean difference between these two groups is approximately 0 and we can conclude that there is a significant difference in mean Math/Science GPA between these two groups with a 95% confidence interval for the difference being 0.254 to 0.608.

3. Is there a significant difference in the average Pre-Pharmacy GPA between students who graduate on time and those whose graduation is delayed? The mean Pre-Pharmacy GPA of students who graduated on time is 3.310 and the mean Pre-Pharmacy GPA of students whose graduation was delayed is 2.944. The p-value of the Independent t-Test of the mean difference between these two groups is approximately 0 and we can conclude that there is a significant difference in mean Pre-Pharmacy GPA between these two groups with a 95% confidence interval for the difference being 0.222 to 0.511.

4. Is there a significant difference in the average Professional Pharmacy GPA between students who graduate on time and those whose graduation is delayed? The mean Professional Pharmacy GPA of students who graduate on time is 3.147 and the mean Professional Pharmacy GPA of students whose graduation is delayed is 2.683. The p-value of the Independent t-Test of the mean difference between these two groups is approximately 0 and we can conclude that there is a significant difference in mean Professional Pharmacy GPA between these two groups with a 95% confidence interval for the difference being 0.298 to 0.630.
5. For GENDER, ETHNICITY, PREVIOUS DEGREE, and INTERNAL STUDENT, the following table shows the proportion of students who graduated on time compared to the proportion of students whose graduation was delayed.

<table>
<thead>
<tr>
<th>Gender</th>
<th>% Graduate on Time</th>
<th>% Graduation Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n=180)</td>
<td>87.8%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Male (n=57)</td>
<td>86%</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>% Graduate on Time</th>
<th>% Graduation Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (n=35)</td>
<td>94.3%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Other Minority (n=13)</td>
<td>93.3%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Asian Pacific Islander (n=40)</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Black (n=133)</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Asian American (n=16)</td>
<td>81.3%</td>
<td>18.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous Degree</th>
<th>% Graduate on Time</th>
<th>% Graduation Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (n=42)</td>
<td>90.5%</td>
<td>9.5%</td>
</tr>
<tr>
<td>No (n=195)</td>
<td>86.7%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal Student</th>
<th>% Graduate on Time</th>
<th>% Graduation Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>No (n=71)</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Yes (n=166)</td>
<td>84.9%</td>
<td>15.1%</td>
</tr>
</tbody>
</table>
Recommendations:

a. The faculty will need more time to examine the data. A retreat should be scheduled so that the faculty can discuss at length the implications of the study results.

Decisions:

The faculty agreed to schedule a retreat after the self-study site visit to discuss the results of this study and the Class of 2008 NAPLEX study.