ENTERING

STUDENT SURVEY

Importance, Opportunities, and Challenges

Southern Association for Institutional Research

October 10, 2011
UCF OVERVIEW

• 2nd largest university in U.S. with 56,337 students
• Part of Florida State University System
• 12 colleges, including a medical college
• 216 degree programs (91 bachelor’s, 92 master’s, 3 Specialist, 29 doctoral, 1 professional)
• 10 regional campuses and numerous other instructional sites
• Basic Carnegie classification: Research Universities
  (very high research activity)
PURPOSE OF THIS DISCUSSION

• **Importance**: of administering an Entering Student Survey

• **Survey**: background and the challenges faced in administering the Entering Student Survey and some unique approaches that have worked at UCF

• **Results reporting**: need to report results in a timely manner to improve operational efficiency and effectiveness

• **Further analyses**: conduct statistical analyses to find association between various student-specific factors that contribute to student success at UCF

• **Building partnerships**: continuing the conversation with important stakeholders
FACTORS INFLUENCING ACADEMIC SUCCESS

- Student academic success is usually reported using institutional-level metrics such as graduation rates, retention rates, academic probation etc.

- Many researchers have concluded that, apart from institutional influence, various other student specific factors* are equally important in determining the student’s success:
  - Prior academic history
  - Psychosocial factors
  - Demographic
  - Situation factors

RELATIONSHIP BETWEEN FACTORS AND OUTCOMES

**STUDENT SPECIFIC FACTORS**

- **Prior Academic History**
  - Incoming GPA, Prior Institution, SAT/ACT scores etc.

- **Psychosocial**
  - Resiliency, Engagement, Self-efficacy, Self-confidence etc.

- **Demographic**
  - Gender, Ethnicity, Age, etc.

- **Situational**
  - Current work-load, Financial situation, student residence etc.

**INSTITUTION**

**OUTCOMES**
- Retention rates,
  - Graduation rates,
  - Academic Probation etc.
STUDENT SPECIFIC FACTORS

• Student Specific Factors*: attributes and abilities which are a measure of how a student’s experiences have shaped their development as individuals

  • learning styles
  • perception about self-abilities and understanding of the importance of the factors essential to succeed in higher education
  • likelihood or demonstrated willingness to seek resources to face the challenges of higher education
  • potential risk factors
  • socio-economic factors

ENTERING STUDENT SURVEY AT UCF

• Many institutions administer Beginning College Survey of Student Engagement (BCSEE) or a “home-grown” survey to profile their entering class of FTIC or transfer students

• Entering Student Survey has been administered at UCF for the past 7 Years

• Major drawback:
  
  • low response rate – less than 10%
  
  • emphasis on long-term analyses and lack of immediate utility of the data to any university stakeholders

• We knew we had to revise our approach
SURVEY ADMINISTRATION: THINGS TO CONSIDER

• Operational Excellence and Assessment Support (OEAS) partnered with First Year Experience (FYE) and Transfer and Transition Services (TTS) to administer the Entering Student Survey during student orientation
  • All incoming students have to attend an orientation session
  • There was an existing survey administered to evaluate the orientation sessions
  • Survey is confidential but not anonymous – higher likelihood of getting correct student identifier entered during orientation
  • Ensure that survey could be completed in a reasonable time duration
SURVEY INSTRUMENT: THINGS TO CONSIDER

• The Entering Student Survey instrument was revised to include questions that were meaningful for long term research as well as immediate feedback
  • Identify constructs that would be meaningful for long term research on student success (OEAS)
  • Identify questions that are generic for a vast and diverse student population
  • Identify measures that provide quick feedback to UCF constituents (FYE, TTS)
  • Identify scales for questions that would encourage meaningful responses
2010-11 SURVEY INSTRUMENT

• All three participating offices drafted an extensive list of survey items to be included in the instrument, totaling 134 items grouped into various categories

• To avoid a survey too long to complete for students, final items were allocated among three versions
  • Some categories were common to all three versions
  • Some categories were common to only two of the three versions
  • Some categories were unique to a particular version

• JavaScript was used to randomize among the three survey versions
2010-11 SURVEY ADMINISTRATION

• Close to 30 orientation sessions take place in 2010-2011 academic year at UCF
  • ~ 6,000 FTIC students
  • ~ 8,000 transfer students
• Students complete the survey in a computer lab right before course registration during orientation
• One of three versions of the Entering Student Survey are provided to a student through a “Begin Survey” link displayed on the computer screen
• JavaScript used to monitor the time it took for a respondent to complete the survey
SURVEY RESULTS AND ANALYSES

• Two primary objectives in processing the survey data

  • Provide timely results to the partner offices in an easy to access format – feedback to improve the effectiveness and efficiency of the orientation process

  • Higher order analyses – to find association between student specific factors and outcomes
REPORTING SURVEY RESULTS QUICKLY

- Online data collection and the use of SAS and VB .NET allows for quick reporting – data can be processed and made available to stakeholders the day after each orientation session

- A macro was written in Base SAS for quick data preparation – SAS Base®

- An interactive Web Application displays survey results online – SAS/IntrNet®

- User authentication and verification using VB .NET and JavaScript ensure internal availability only
Did you know that according to 2009-2010 graduates...

89% of graduate students agreed that UCF had a positive contribution in their ability to write effectively

93% of seniors agreed that UCF had a positive contribution in their ability to write effectively

Source: Graduating Student Survey
operational excellence & assessment support
strategy, marketing, communications & admissions

entering transfer student survey results

please select an academic year, survey category and level of analysis to access the entering student survey results for transfer students.

year

level of analysis

entering student questions  orientation questions  responses rates  survey instruments

this site is being maintained by the office of operational excellence and assessment support.
please contact uday har or rachel stanley for any questions pertaining to this site.
last modified: 06/07/11
Select a Survey Category

Student Resiliency
Student Likelihood
Student Engagement
Self Evaluation of Abilities
Importance of Abilities
Importance of Academic Advising
Comfort with Academic Advising
Campus Resources
Degree Requirements
Student Expectations
Alcohol, Drugs and Health
Miscellaneous Questions
College Expenses
Demographics and Student Characteristics

Entering Student Survey items are displayed by category for easy navigation of results
Orientation item responses can be filtered by session date
### Univariate Results

Each survey question is displayed in a one-way table with frequencies and percentages.

<table>
<thead>
<tr>
<th>27.e. Make at least a 'B' average</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Likely</td>
<td>876</td>
<td>53.9%</td>
</tr>
<tr>
<td>Likely</td>
<td>644</td>
<td>39.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,520</td>
<td>93.6%</td>
</tr>
<tr>
<td><strong>Neutral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat likely/Somewhat unlikely</td>
<td>87</td>
<td>5.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>87</td>
<td>5.3%</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlikely</td>
<td>10</td>
<td>0.6%</td>
</tr>
<tr>
<td>Very Unlikely</td>
<td>6</td>
<td>0.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,623</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
# Results by College

Each survey question is displayed for those in the college selected by user against the rest of the incoming cohort.

## 27.e. Make at least a 'B' average

<table>
<thead>
<tr>
<th></th>
<th>Engineering and Computer Sciences</th>
<th>All other Colleges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>count</td>
<td>column %</td>
<td>count</td>
</tr>
<tr>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Likely</td>
<td>108</td>
<td>46.1%</td>
<td>768</td>
</tr>
<tr>
<td>Likely</td>
<td>100</td>
<td>42.7%</td>
<td>544</td>
</tr>
<tr>
<td>Total</td>
<td>208</td>
<td>88.8%</td>
<td>1,312</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat likely/Somewhat unlikely</td>
<td>19</td>
<td>8.1%</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>8.1%</td>
<td>68</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlikely</td>
<td>5</td>
<td>2.1%</td>
<td>5</td>
</tr>
<tr>
<td>Very Unlikely</td>
<td>2</td>
<td>0.8%</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>2.9%</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100.0%</td>
<td>1,389</td>
</tr>
</tbody>
</table>
STUDENTS “AT-RISK” FOR ACADEMIC PROBATION

• The entering student survey data collected from the 2010-2011 Transfer entering class was used to construct predictive models.

• Goals of the analysis:
  
  • Identify factors associated with academic probation.
  
  • Build a regression model that can be used to identify students “at-risk” for academic probation.
  
  • Develop a process with appropriate university constituents so that primary prevention can be implemented.
BUILDING A MODEL

- 2X2 contingency tables were constructed and $\chi^2$ tests of independence were performed to identify significant factors associated with academic probation.

- Data was split into Training and Validation sets to utilize the large amount of survey data.
  - Achieved by stratified sampling using probation, gender and college enrollment.
  - 2,500 observations in each set.
### FACTORS ASSOCIATED WITH ACADEMIC PROBATION

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethnicity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSYCHOSOCIAL</th>
<th>Likelihood of seeking out campus resources for conflict resolution skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make at least a “B” average</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SELF EXPECTATIONS</th>
<th>Meet other students on campus for discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use learning centers to improve study habits</td>
</tr>
<tr>
<td></td>
<td>Use campus recreational services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACADEMIC PREPARATION</th>
<th>UCF college enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prior institution (community college)</td>
</tr>
</tbody>
</table>
MODEL DIAGNOSTICS

Many multivariate logistic models were built but only ten were used as candidates for final model comparison

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosmer – Lemeshow</td>
<td>Goodness-of-fit test that will detect incorrect model specification or missing predictors <em>(ideally want a larger p-value to reject the test)</em></td>
</tr>
<tr>
<td>Akaike Information Criterion (AIC)</td>
<td>Relative Goodness-of-fit measure that can be used to assess a handful of candidate models <em>(the smaller the better)</em></td>
</tr>
<tr>
<td>C-statistic</td>
<td>Area under the ROC curve measuring model discrimination or the ability to distinguish students on academic probation and those who are not <em>(the closer to 1 the better)</em></td>
</tr>
</tbody>
</table>
## MODEL ASSESSMENT

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables</th>
<th>AIC</th>
<th>C-statistic</th>
<th>Hosmer-Lemeshow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>college; ethnicity</td>
<td>1644.037</td>
<td>0.675</td>
<td>0.2992</td>
</tr>
<tr>
<td>2</td>
<td>college; cnfctrsrclvl</td>
<td>1505.704</td>
<td>0.66</td>
<td>0.9854</td>
</tr>
<tr>
<td>3</td>
<td>college; cnfctrsrclvl; ethnic_coll</td>
<td>1590.997</td>
<td>0.686</td>
<td>0.6384</td>
</tr>
<tr>
<td>4</td>
<td>gender; cnfctrsrclvl</td>
<td>1673.337</td>
<td>0.568</td>
<td>0.3548</td>
</tr>
<tr>
<td>5</td>
<td>gender; ethnic_coll; priorinst</td>
<td>1677.303</td>
<td>0.604</td>
<td>0.865</td>
</tr>
<tr>
<td>6</td>
<td>college; priorinst; ethnic_coll</td>
<td>1460.946</td>
<td>0.683</td>
<td>0.3197</td>
</tr>
<tr>
<td>7</td>
<td>cba; gender; underrep; priorinst; cnfctrsrclvl</td>
<td>1515.287</td>
<td>0.648</td>
<td>0.4652</td>
</tr>
<tr>
<td>8</td>
<td>college; cnfctrsrclvl; afamr; bcc</td>
<td>2998.909</td>
<td>0.675</td>
<td>0.3398</td>
</tr>
<tr>
<td>9</td>
<td>college; bcc; ethnic_coll</td>
<td>1569.959</td>
<td>0.669</td>
<td>0.5863</td>
</tr>
<tr>
<td>10</td>
<td>college; cnfctrsrclvl; gender; bcc; mtpplfreq_coll</td>
<td>945.126</td>
<td>0.703</td>
<td>0.9736</td>
</tr>
</tbody>
</table>
### CLASSIFICATION TABLE FOR MODEL 10

<table>
<thead>
<tr>
<th>ACTUAL</th>
<th>PREDICTED</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not on Probation</td>
<td>1,480 (67%)</td>
<td>1,934</td>
</tr>
<tr>
<td>On Probation</td>
<td>454 (21%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>166 (8%)</td>
<td>272</td>
</tr>
<tr>
<td></td>
<td>106 (5%)</td>
<td></td>
</tr>
</tbody>
</table>

- 77% (1,480/1,934) of transfer students not placed on probation were accurately predicted.
- 39% (106/272) of transfer students placed on probation were accurately predicted.
“FINAL” MODEL SELECTED

- The final prediction model included the following variables:
  - Gender
  - UCF College in which the transfer student is enrolled
  - Whether the student transferred from one particular Florida community college (binary – yes or no)
  - Likelihood of a student to use conflict resolution services from the university
  - Expectation to meet other students at some campus location for a discussion
FUTURE WORK

• Share findings with various important stakeholders at UCF
  • Vice-President of Student Development and Enrollment Services
  • Academic advising council
  • Academic advising enhancement program – a Provost funded initiative at UCF
  • Conversations with the community college partners – Direct connect

• Refine the analysis based on input from important stakeholders

• Coordinate with various office to apply the findings from analysis – work group

• Look into other factors once enough data is collected (major)
CONTINUE
THE DIALOGUE

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Presentation will be posted on:
http://oeas.ucf.edu