Does Student Satisfaction Predict Student Performance?

Cypress College
Michelle Oja, Research Analyst
What can the Noel-Levitz Student Satisfaction Inventory (NL) tell you?

- Student satisfaction in specific areas relevant for colleges and universities.
  - Item-level
  - Scale-level
- Performance gap between satisfaction ratings and ratings of importance.
- NL also provides a listing of items that are strengths or challenges.
- Comparisons
  - National college ratings
  - Your institution’s previous survey
Noel-Levitz Student Satisfaction Inventory

The items were analyzed statistically and conceptually by NL to create scales:

- Academic Advising and Counseling Effectiveness
- Academic Services
- Campus Climate
- Campus Support Services
- Concern for the Individual
- Instructional Effectiveness
- Admissions and Financial Aid Effectiveness
- Registration Effectiveness
- Responsiveness to Diverse Populations
- Safety and Security
- Service Excellence
- Student Centeredness
Campus Items

- Items
  - The online process for applying to the college is easy to use.
  - The online process for registering for classes is easy to use.
  - Classes are offered frequently enough for me to complete my educational program in a reasonable amount of time.
  - Opportunities to participate in campus clubs or other extracurricular activities are adequate.
  - Campus restrooms are clean and sanitary.
  - Campus signs help me find the places and services I need.
  - Students are made to feel welcome at [the college] regardless of their sexual orientation.
  - Students know the process to follow to report incidents of discrimination.
  - This campus is physically accessible to people with disabilities.

- Performance gaps were created and analyzed for all scales, including a “scale” created with the campus items.
Previous Satisfaction Research with Student Performance

- Schools with higher satisfaction ratings also have higher graduation rates (NL).
- Satisfaction is related to first-year persistence rates (NL).
- GPA and interacting with faculty/professor performance were related to satisfaction (Charleston-Lyons’ 1999 dissertation; Grayson, 2004).
- Positive relationship between grades and satisfaction (Grayson, 2004; Einarson & Matier, 2005).
- The current analyses supported most of these relationships.
NL Sample

- N=1,286
  - 13% response rate
  - Methodology
- The majority of respondents were:
  - women (827, 65%)
  - 24 years old or younger
    - 9% were 18 or under
    - 40% were 19-24
    - 26% were 25-34
- Ethnicity
  - 1/3 = White (35%)
  - 1/3 = Asian or Pacific Islander (34%)
  - 1/5 = Hispanic (20%)
## NL at Cypress College - Fall 2007

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Satisfaction Mean</th>
<th>Importance Mean</th>
<th>Calculated Performance Gap</th>
<th>Reliability (SAT/IMP)</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Centeredness</td>
<td>30.4</td>
<td>35.0</td>
<td>4.7</td>
<td>.90/.83</td>
<td>6</td>
</tr>
<tr>
<td>Instructional Effectiveness</td>
<td>72.2</td>
<td>84.3</td>
<td>12.2</td>
<td>.95/.94</td>
<td>14</td>
</tr>
<tr>
<td>Campus Support Services</td>
<td>20.3</td>
<td>26.7</td>
<td>6.8</td>
<td>.90/.84</td>
<td>7</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>21.0</td>
<td>28.9</td>
<td>8.0</td>
<td>.80/.82</td>
<td>5</td>
</tr>
<tr>
<td>Academic Advising/Counseling</td>
<td>31.1</td>
<td>39.9</td>
<td>9.2</td>
<td>.94/.89</td>
<td>7</td>
</tr>
<tr>
<td>Admission &amp; Financial Aid</td>
<td>22.8</td>
<td>30.1</td>
<td>7.7</td>
<td>.88/.87</td>
<td>6</td>
</tr>
<tr>
<td>Academic Services</td>
<td>32.8</td>
<td>39.3</td>
<td>6.6</td>
<td>.89/.89</td>
<td>7</td>
</tr>
<tr>
<td>Registration Effectiveness</td>
<td>46.0</td>
<td>53.6</td>
<td>7.7</td>
<td>.88/.91</td>
<td>9</td>
</tr>
<tr>
<td>Service Excellence</td>
<td>41.6</td>
<td>50.5</td>
<td>9.0</td>
<td>.90/.89</td>
<td>9</td>
</tr>
<tr>
<td>Concern for the Individual</td>
<td>23.9</td>
<td>29.3</td>
<td>5.4</td>
<td>.87/.83</td>
<td>5</td>
</tr>
<tr>
<td>Campus Climate</td>
<td>71.7</td>
<td>85.3</td>
<td>13.7</td>
<td>.95/.93</td>
<td>15</td>
</tr>
<tr>
<td>Campus Items</td>
<td>42.6</td>
<td>51.9</td>
<td>9.4</td>
<td>.90/.90 (!)</td>
<td>9</td>
</tr>
</tbody>
</table>
Analyses were conducted on the performance gap for each scale.

- Higher performance gaps = high importance but low satisfaction
  - High gap = 😞
- Low gaps indicate that the college is meeting student expectations.
  - Low gap = 😊

Summary satisfaction items were also analyzed.

Each satisfaction measure was analyzed with a variety of indicators:

- Demographic groups (ethnicity, gender, age).
- Performance
  - Based on course enrollment so data is dependent/duplicated.
- Persistence
### Performance Gap Mean Differences by Student Characteristics

0 = ns  
+ = significant relationship

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Ethnicity</th>
<th>Gender</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Centeredness</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instructional Effectiveness</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Campus Support Services</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
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<td>+</td>
<td>0</td>
</tr>
<tr>
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<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Academic Services</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Registration Effectiveness</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Service Excellence</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Concern for the Individual</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Campus Climate</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Campus Items</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
</tbody>
</table>

**Conclusion**  
Asian students tended to have larger performance gaps, and Black students tended to have smaller gaps. Women tended to have larger performance gaps. Age rarely influenced performance gaps.
## Performance Indicators & NL

### Performance Gaps

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Retention</th>
<th>Success</th>
<th>Grades</th>
<th>Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Centeredness</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Instructional Effectiveness</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Campus Support Services</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Academic Advising/Counseling</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Admission &amp; Financial Aid</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Academic Services</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Registration Effectiveness</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>Service Excellence</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Concern for the Individual</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Campus Climate</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Campus Items</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = ns
+ = significant relationship in expected direction
- = significant relation in “wrong” direction

- Low satisfaction with many important areas of college services are related to lower rates of retention and success, and lower grades.
Performance Gap Summary - Student Characteristics

- Asian/Pacific Islander students tended to be less **satisfied** in the following areas that they found to be **important**.
  - Student Centeredness
  - Instructional Effectiveness
  - Academic Services
  - Campus Climate

- Black students tended to be less **satisfied** in the following areas that they found to be **important**.
  - Service Excellence
  - Concern for the Individual

- Female students tended to be less **satisfied** in the following areas that they found to be **important**.
  - Campus Support Services
  - Safety and Security
  - Academic Advising/Counseling
  - Admission & Financial Aid
  - Academic Services
  - Service Excellence
  - Campus Climate
  - “Scale” generated by the college
Performance Gap Summary - Performance Indicators

- Low **satisfaction** with the following **important** areas of college services are related to lower rates of retention and success, and lower grades.
  - Student Centeredness
  - Instructional Effectiveness
  - Academic Advising/Counseling
  - Registration Effectiveness
  - Service Excellence
  - Concern for the Individual
  - Campus Climate
Summary Satisfaction Items

- Three items measure overall satisfaction with the institution:
  - “So far, how has your college experience met your expectations?” (1 = much worse than expected; 7 = much better than expected)
  - “Rate your overall satisfaction with your experience here thus far.” (1 = not satisfied at all; 7 = very satisfied)
  - “All in all, if you had to do it over, would you enroll here again?” (1 = definitely not; 7 = definitely yes)

- An index was created by summing these items
  - Internal reliability (Cronbach’s alpha) = .84
Summary Item Mean Differences by Student Characteristics

- On average,
  - Student experiences were better than expected,
  - Students were satisfied,
  - Students would probably choose to enroll if they had the choice again.

- All three items and the index differed by:
  - Ethnicity
  - Gender
  - Age (except expectations question)
## Summary Items and Performance

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Retention</th>
<th>Success</th>
<th>Grades</th>
<th>Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>So far, how has your college experience met your expectations?</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Rate your overall satisfaction with your experience here thus far.</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>All in all, if you had to do it over, would you enroll here again?</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Index</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
</tbody>
</table>

### Conclusion

- **Higher satisfaction is related to higher retention rates.**
- **Success is related to student satisfaction in general, but GPA is a better predictor half of the time.**
- **Earning “A” grades is related to student satisfaction in general, but GPA is a better predictor half of the time.**
- **The summary satisfaction items were not related to persistence.**
Student demographic characteristics influence overall student satisfaction.

Overall satisfaction is related to retention, success, and earning an “A”.

- But GPA also influential for predicting success and grades.

Satisfaction is not related to persistence.
Limits

- Data integrity: Self-report demographic information often did not match information stored in our Banner database.
  - Banner data were “correct”.
- Performance gap calculation?
- NL mentions several demographic groups that tend to be more satisfied:
  - Older students
  - Women
  - White students
  - First-year students
  - Students in dorms
Conclusion

- **Student performance is statistically related to satisfaction (and importance) ratings of institutional areas.**
  - Using the information provided by the NL, administrators can craft policy to improve satisfaction in areas that are related to student success indicators.

- Future research may search for mediators of these relationships.
Questions?

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