The Relationship of Student Satisfaction to Key Indicators for Colleges and Universities

By Julie Bryant and Scott Bodfish

**How does student satisfaction vary across key institutional indicators of graduation rates, tuition levels, and enrollment size?**

Student satisfaction is an indicator of institutional performance. By asking students how satisfied they are with their educational experience in areas such as instructional effectiveness, academic advising, registration, and campus climate, an institution can identify the areas that are performing well and those that need to be a priority for improvement. The responses to a satisfaction survey allow students to have a voice in their college or university's decision making.

Traditionally, student satisfaction scores have been analyzed and compared across institution types, including four-year privates, four-year publics, community colleges, and career schools. Typically there are distinct differences in the satisfaction levels at these four institution types—students at one campus type may exhibit significant differences in satisfaction compared to those at a different type of institution. Why is this?

This study addresses that question by comparing student satisfaction levels to three key indicators across institution types:

- Graduation rates
- Tuition levels
- Enrollment size

How does the institutional environment influence student satisfaction? This analysis will provide a context for understanding how student satisfaction levels are tied to institutional characteristics.
What do we currently know about satisfaction and institutional characteristics?

A 2003 study by Richard Miller found that schools with higher satisfaction also enjoyed higher graduation rates, lower loan default rates, and higher alumni giving rates. This study concluded that student satisfaction was an integral part of institutional success.

Graduation rates by satisfaction level

Richard Miller’s 2003 study showed that students who were more satisfied graduated at substantially higher rates than students who were less satisfied with their college experience.

A 2009 research study by Dr. Laurie Schreiner, *Linking Student Satisfaction and Retention*, documented that student satisfaction accounted for 17 percent of the variation in student retention and that satisfaction indicators doubled the ability to predict student retention beyond demographic and institutional characteristics. Dr. Schreiner concluded that student satisfaction was an area an institution could possibly influence and focus on in order to improve student success. She also indicated that campus climate was strongly linked to students’ overall satisfaction and should be an area of emphasis for institutions. (Note that this study focused on four-year institutions.)

Linking student satisfaction and retention

Dr. Laurie Schreiner’s study found student satisfaction played a much more significant role in student retention than demographics or institutional features.
How to read the following results

This study looks at student satisfaction data from the Noel-Levitz Student Satisfaction Inventory™ (SSI) and appended data from the Integrated Postsecondary Education Data System (IPEDS) for each school. The results include responses from more than 600,000 students at 757 institutions from fall 2009 to spring 2012.

For the IPEDS data, the institutions were grouped into three main categories, shown in the colored bars on the graphs for Findings 1, 2, and 3 on the pages that follow:

- Low—bottom 25 percent of schools
- Medium—middle 50 percent of schools
- High—top 25 percent of schools

The percentage of students who reported being satisfied or very satisfied with their overall college experience was then calculated for the schools in each of the three main categories.

In addition to asking for an overall satisfaction rating, the SSI has students indicate their satisfaction on dozens of key items related to academics and campus environment. This study also looks at notable observations on these individual items that may have factored into the larger findings.

For a complete description of the survey methodology, please see the Appendix on page 11.

Consider these points about satisfaction, key indicators, and actionable data

While this study examines student satisfaction and three key institutional indicators, the study does not necessarily imply causation. It does not present a “causal” model of student satisfaction at the institutional level. However, these results suggest that there are measurable differences in student satisfaction that are related to characteristics of the institutions such as enrollment size and tuition level.

Furthermore, as you review these results, consider where your own institution fits within these IPEDS categories and what your institution could do with this type of information from your own student population. Which items are actionable? What items do you have potential control over to improve satisfaction, and which items are ones you may want to simply be aware of? How could you increase satisfaction through better communication with students?

Finding 1

Graduation rates and student satisfaction

Graduation rate ranking

Low

Medium

High
Key finding
The percentage of students who were satisfied with their college experience tended to rise with institutional graduation rates for all groups except four-year public institutions.

Key observations
- **Four-year privates:** Satisfaction levels increased as graduation rates improved.
- **Four-year publics:** This group bucked the trend of the other institutional types, as satisfaction levels peaked for institutions in the medium graduation rate group, while there was almost no difference in satisfaction among the low and high graduation rate groups.
- **Community colleges:** Satisfaction levels had a slight increase as graduation levels rose.
- **Career schools:** Satisfaction levels increased sharply as graduation rates improved, especially between the low and medium graduation rate groups.

Key items with the strongest relation between satisfaction and graduation rates
These individual items on the SSI showed the greatest variation among the low, medium, and high graduation rate groups.

<table>
<thead>
<tr>
<th>Four-year privates</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range*</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a commitment to academic excellence.</td>
<td>58%</td>
<td>66%</td>
<td>74%</td>
<td>16</td>
</tr>
<tr>
<td>I am able to experience intellectual growth here.</td>
<td>62%</td>
<td>70%</td>
<td>78%</td>
<td>16</td>
</tr>
<tr>
<td>It is an enjoyable experience to be a student on this campus.</td>
<td>56%</td>
<td>63%</td>
<td>70%</td>
<td>14</td>
</tr>
<tr>
<td>This institution has a good reputation within the community.</td>
<td>62%</td>
<td>72%</td>
<td>75%</td>
<td>13</td>
</tr>
<tr>
<td>Nearly all faculty are knowledgeable in their fields.</td>
<td>69%</td>
<td>76%</td>
<td>81%</td>
<td>12</td>
</tr>
<tr>
<td>Faculty are usually available after class and during office hours.</td>
<td>65%</td>
<td>70%</td>
<td>76%</td>
<td>11</td>
</tr>
<tr>
<td>There are adequate services to help me decide upon a career.</td>
<td>47%</td>
<td>54%</td>
<td>58%</td>
<td>11</td>
</tr>
</tbody>
</table>

* Range is the high percentage minus the low percentage.

At four-year privates, there were strong ties between the academic experiences, how students felt on campus, their overall student satisfaction, and the institutional graduation rates. These findings confirm Dr. Schreiner’s work in *Linking Student Satisfaction and Retention*, as noted earlier. Focusing on how students feel and what they are experiencing in the classroom are the priorities for four-year privates.
For four-year public institutions, academic factors did not impact the results. Instead, access items such as registering for classes and parking showed higher satisfaction for schools with lower graduation rates. This may indicate that limited personnel and/or space constraints contribute to student attrition at four-year public institutions.

At community colleges, it is all about advising. Schools with higher graduation rates also had higher satisfaction scores for the approachability of advisors and their knowledge about program requirements. These colleges, which may also have a greater focus on individual students, are assisting students through the academic experiences and seeing the benefits with higher graduation rates.

For career schools, students emphasized facilities as well as a feeling of security. From these data points, the conclusion is that career schools with better facilities—including computers, library, and general maintenance in secure locations—are more likely to have higher student satisfaction and higher graduation rates.
Finding 2

Tuition rates and student satisfaction

<table>
<thead>
<tr>
<th>Four-year privates</th>
<th>Four-year publics</th>
<th>Community colleges</th>
<th>Career schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>61% 61% 63%</td>
<td>54% 60% 51%</td>
<td>63% 62% 62%</td>
<td>58% 49% 42%</td>
</tr>
</tbody>
</table>

Key finding

Higher tuition had a negative influence on satisfaction at career schools and at four-year public institutions.

Key observations

- **Four-year privates**: Satisfaction levels were steady across all three tuition groups.
- **Four-year publics**: While satisfaction levels actually rose from the low to medium tuition groups, they fell considerably for the high tuition level group.
- **Community colleges**: Satisfaction levels were comparable across all three tuition levels.
- **Career schools**: Satisfaction levels declined as tuition rates increased.

Key items with the strongest relation between satisfaction and tuition

<table>
<thead>
<tr>
<th>Four-year privates</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aid counselors are helpful.</td>
<td>58%</td>
<td>50%</td>
<td>46%</td>
<td>-12</td>
</tr>
<tr>
<td>I am able to register for classes with few conflicts.</td>
<td>60%</td>
<td>55%</td>
<td>49%</td>
<td>-11</td>
</tr>
<tr>
<td>Tuition paid is a worthwhile investment.</td>
<td>54%</td>
<td>46%</td>
<td>44%</td>
<td>-10</td>
</tr>
<tr>
<td>The business office is open during hours that are convenient for most students.</td>
<td>60%</td>
<td>54%</td>
<td>50%</td>
<td>-10</td>
</tr>
<tr>
<td>Billing policies are reasonable.</td>
<td>47%</td>
<td>39%</td>
<td>37%</td>
<td>-10</td>
</tr>
</tbody>
</table>

Not surprisingly, the items that varied for four-year privates were the financially related ones. As tuition levels rose, students became more critical of the financial aid staff, the billing policies, the business office, and the value they received for tuition paid. They also had lower satisfaction with access to classes because they likely want to be able to get their requirements completed in a timely fashion to avoid paying additional tuition fees. Higher tuition may mean that students expect more, and four-year privates with higher tuition may frustrate students when financial services are less responsive than they expect.
As with privates, financially-related items varied at four-year publics, with the addition of student activity fees being a concern. The sense of student belonging also dropped as tuition increased. Again, four-year publics with higher tuition may want to target improvements in financial services.

<table>
<thead>
<tr>
<th>Four-year publics</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate financial aid is available for most students.</td>
<td>47%</td>
<td>48%</td>
<td>39%</td>
<td>-8</td>
</tr>
<tr>
<td>Tuition paid is a worthwhile investment.</td>
<td>55%</td>
<td>54%</td>
<td>47%</td>
<td>-8</td>
</tr>
<tr>
<td>Student activities fees are put to good use.</td>
<td>40%</td>
<td>39%</td>
<td>33%</td>
<td>-7</td>
</tr>
<tr>
<td>Billing policies are reasonable.</td>
<td>43%</td>
<td>45%</td>
<td>36%</td>
<td>-7</td>
</tr>
<tr>
<td>Most students feel a sense of belonging here.</td>
<td>49%</td>
<td>51%</td>
<td>43%</td>
<td>-6</td>
</tr>
<tr>
<td>I am able to register for classes with few conflicts.</td>
<td>50%</td>
<td>53%</td>
<td>44%</td>
<td>-6</td>
</tr>
</tbody>
</table>

For community colleges, the two items that showed improving satisfaction as tuition increased may be tied to an institution’s greater access to resources to better inform their students and train advisors. It is concerning to see that the perception of the quality of instruction in most classes went down as tuition increased, since one would assume that there would be access to better instructors if more resources were available. This is an area of opportunity for more expensive community colleges to improve.

<table>
<thead>
<tr>
<th>Community colleges</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>I generally know what is happening on campus.</td>
<td>45%</td>
<td>47%</td>
<td>50%</td>
<td>5</td>
</tr>
<tr>
<td>Academic advisor is knowledgeable about program requirements.</td>
<td>60%</td>
<td>61%</td>
<td>65%</td>
<td>5</td>
</tr>
<tr>
<td>Classes are scheduled at convenient times.</td>
<td>62%</td>
<td>60%</td>
<td>59%</td>
<td>-3</td>
</tr>
<tr>
<td>The quality of instruction in most classes is excellent.</td>
<td>65%</td>
<td>62%</td>
<td>62%</td>
<td>-3</td>
</tr>
</tbody>
</table>

For career schools, the variations based on tuition were most pronounced at career schools where students became much more dissatisfied with their experience as the tuition amounts increased. This is especially true for areas that could benefit from increased resources such as computer accessibility, library resources, lab facilities, and general school maintenance.

<table>
<thead>
<tr>
<th>Career schools</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer labs are adequate and accessible.</td>
<td>54%</td>
<td>30%</td>
<td>23%</td>
<td>-31</td>
</tr>
<tr>
<td>Library resources and services are adequate.</td>
<td>50%</td>
<td>33%</td>
<td>25%</td>
<td>-25</td>
</tr>
<tr>
<td>Tutoring services are readily available.</td>
<td>51%</td>
<td>37%</td>
<td>31%</td>
<td>-20</td>
</tr>
<tr>
<td>People at this school respect and are supportive of each other.</td>
<td>50%</td>
<td>36%</td>
<td>30%</td>
<td>-20</td>
</tr>
<tr>
<td>Internships or practical experiences are provided in my program.</td>
<td>63%</td>
<td>51%</td>
<td>44%</td>
<td>-19</td>
</tr>
<tr>
<td>On the whole, the school is well-maintained.</td>
<td>59%</td>
<td>49%</td>
<td>41%</td>
<td>-18</td>
</tr>
<tr>
<td>The equipment in the lab facilities is kept up to date.</td>
<td>54%</td>
<td>46%</td>
<td>36%</td>
<td>-18</td>
</tr>
</tbody>
</table>

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Finding 3

Enrollment size and student satisfaction

Key finding
Satisfaction declined at community colleges but increased at career schools as the enrollment size increased.

Key observations
- **Four-year privates**: Satisfaction levels held steady, although there was a slight increase among the largest institutions.
- **Four-year publics**: Satisfaction levels were comparable for low and high levels, with a slight dip for medium-sized campuses.
- **Community colleges**: Satisfaction levels dropped as enrollment size increased, especially for the largest institutions.
- **Career schools**: Satisfaction levels rose sharply with enrollment size, with a very large gap in satisfaction between the smallest and largest institutions.

Key items with the strongest relation between satisfaction and enrollment size

<table>
<thead>
<tr>
<th>Four-year privates</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the whole, the campus is well-maintained.</td>
<td>64%</td>
<td>69%</td>
<td>73%</td>
<td>9</td>
</tr>
<tr>
<td>There is a good variety of courses provided on this campus.</td>
<td>52%</td>
<td>56%</td>
<td>61%</td>
<td>9</td>
</tr>
<tr>
<td>Financial aid counselors are helpful.</td>
<td>56%</td>
<td>51%</td>
<td>48%</td>
<td>-8</td>
</tr>
<tr>
<td>Library staff are helpful and approachable.</td>
<td>69%</td>
<td>64%</td>
<td>62%</td>
<td>-7</td>
</tr>
<tr>
<td>Academic advisor is concerned about success as an individual.</td>
<td>66%</td>
<td>64%</td>
<td>60%</td>
<td>-6</td>
</tr>
</tbody>
</table>

Students at larger four-year privates were more satisfied with the variety of courses available to them. This finding fits with the perception that larger institutions can offer more classes and options. However, students at these larger schools also voiced lower satisfaction with individualized staff support in financial aid, the library, and academic advising. Even with increased enrollment size, students still tend to maintain high expectations for individual attention.
Four-year public students had similar increases in satisfaction at larger schools when it came to variety of courses, but they also saw drops in satisfaction for individualized attention from campus staff, administrators, faculty, and advisors. The perception of tuition paid being worthwhile also decreased as the size increased. These are all opportunities for improvement at larger four-year public institutions.

At community colleges, all of the highlighted variations skewed negative as enrollment size increased, especially advising (which was noted as a key variable for graduation rates). Larger community colleges may need to increase their investment in advising services to improve satisfaction and graduation rates for their students.

For students at career schools, their satisfaction increased as the institution size increased on some of the same items that we have observed in the last two categories: computer labs and library resources. Smaller career schools do not appear to be able to keep up with these academic support areas the same way larger schools can.
Conclusions and takeaways: What can you do on your own campus?

These results do not necessarily show causation between student satisfaction and graduation rates, tuition levels, and enrollment size. But given the data, campuses should consider taking action and uncovering opportunities for improving student satisfaction.

Consider these examples:

• If your campus has a low or average graduation rate, could that be because of low student satisfaction? Students who are not satisfied have less incentive to persist with their education. They may feel that college is not enjoyable or worth it. Improving satisfaction should go hand in hand with efforts to improve student completion.

• For public campuses (four-year and two-year), tuition can certainly impact satisfaction. Students who enroll at public campuses may be more price-sensitive or unable to afford an expensive college education. If your campus does tip toward the higher end of the cost spectrum, it’s important to convey value to students so that they understand the worth of their educational investment.

• Larger campuses can face satisfaction issues due to the challenge of providing personal service to a large student body. At the same time, smaller campuses (especially in the career sector) can face satisfaction challenges because students may feel they do not have the resources of a larger institution. This is another opportunity where communication can make a large impact on satisfaction.

These issues also highlight the importance of student satisfaction assessment. Regular, systematic assessment can help you answer key questions such as: Do you know how satisfied students are at your institution? What actions are you taking to improve student success and graduation rates? Have you taken specific steps to improve your students’ perception of the tuition they are paying as a worthwhile investment? Based on your enrollment size, what opportunities do you have for improvement?

If you do assess student satisfaction, it is crucial to analyze your own student satisfaction data, consider your campus environment, and work to improve the items that your students care most about. Use your data to highlight opportunities to improve the student experience and prioritize your challenges.
Appendix: The data set and methodology for this study

This data set reflects summarized data from the Student Satisfaction Inventory for 757 schools that administered the SSI to their 618,775 students between September 2009 and May 2012:

- Four-year privates: 326 schools, 585 distinct administrations, 254,499 survey records
- Four-year publics: 90 schools, 120 distinct administrations, 96,969 survey records
- Community colleges: 183 schools, 262 distinct administrations, 188,710 survey records
- Career schools: 158 schools, 458 distinct administrations, 78,597 survey records

The SSI asks students to rate their satisfaction and importance on a wide variety of campus issues, as well as their overall satisfaction with their college experience. This study lists students as “satisfied” if they responded that they were “very satisfied” or “satisfied” on the SSI. While this study does not delve into the importance rankings, all of the items discussed were ranked as important by students.

Because the majority of institutions administer the SSI on an every-other-year basis and this study covered a three-year period, some institutions occur more than once in the data.

Integrated Postsecondary Education Data System (IPEDS) data on each school was appended as follows:

Graduation rate: the most recent cohort graduation rate for 150 percent of completion (e.g., six years for four-year schools; three years for two year schools) as reported on the IPEDS Graduation Rate Survey (2012).

Tuition: Annual tuition and fees (full-time undergraduate) data for the year in which the survey was administered (2009-10; 2010-11; 2011-12) as reported on the IPEDS Institutional Characteristics survey. (For public institutions, the in-state tuition and fees were used.)

Enrollment: Total undergraduate enrollment at the institution (full- and part-time) as reported on the IPEDS Fall Enrollment Survey (Fall 2011).

The researchers reviewed the distribution of the set of schools which had SSI data on each of the IPEDS variables (graduation rate, full-time undergraduate tuition and fees, and fall undergraduate enrollment headcount) and determined the value for the top 25 percent and the bottom 25 percent of schools on each value. Those variables were used to classify schools into three categories based on the overall distribution:

- Low—bottom 25 percent of schools
- Medium—middle 50 percent of schools
- High—top 25 percent of schools

The average top two box scores for every SSI item for the three groups of schools defined by these categories (low, medium, and high values on the IPEDS variable) were calculated and tested (ANOVA) for statistically significant differences between the average values for the three categories. Among those where the differences were statistically significant, the items where there was the largest difference between the average top two box values for the schools in the lowest 23 percent (low category) and the average top two box value for the schools in the highest 23 percent (high category) were identified.

It should be noted that the SSI was designed for individual campuses to gather data for institutional improvement, but there is value at looking at national trends and characteristics.

References
Questions about this report?

Please email Noel-Levitz at ContactUs@noellevitz.com or call 1-800-876-1117 and ask to speak to our student satisfaction assessment specialists.

For more information and to see samples of the instrument used in this report, the Student Satisfaction Inventory, please visit www.noellevitz.com/SSI.

About the authors

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Julie L. Bryant has consulted with thousands of colleges and universities on student satisfaction assessment. She oversees the Noel-Levitz suite of satisfaction-priorities assessment instruments, including the Student Satisfaction Inventory™, the Institutional Priorities Survey™, the Adult Student Priorities Survey™, the Adult Learner Inventory™, the Priorities Survey of Online Learners™, and the Parent Satisfaction Inventory™. She also writes the annual national satisfaction reports based on these instruments.

Scott Bodfish

Scott Bodfish is a market research expert with many years of experience as a strategic planner and institutional researcher. He is responsible for maintaining and improving the effectiveness of Noel-Levitz research services and identifying additional data sources in order to enhance and customize institutional research approaches. He has also served as the director of institutional research at Wilkes University (PA) and Sweet Briar College (VA).

About Noel-Levitz

A trusted partner to higher education, Noel-Levitz helps systems and campuses reach and exceed their goals for enrollment, marketing, and student success. Over the past three decades, the higher education professionals at Noel-Levitz have consulted directly with more than 3,000 colleges and universities nationwide. The firm has developed an array of proven tools and services; diagnostic tools and instruments; and customized consultations, workshops, and national conferences. With the Satisfaction-Priorities Surveys, including the Student Satisfaction Inventory, it brings together its many years of research and campus-based experience to enable you to get to the heart of your campus agenda.

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