Benchmarking Student Success: Understanding Student Success Metrics

Kim Reid | Principal Analyst
Eduventures Research
Today’s Agenda

• Benchmarking Student Success

• Student Success Ratings
  o Start with philosophy
  o Get wonky with some methodology
  o Bring it back down to earth to identify best practice
  o What we’ve learned from best practice institutions
Benchmarks that Drive Improvement in Student Success

- Efforts to improve student success among the most complex an institution can make
- The absolute top performers may be “starting on third base”
- Difficult to identify true best practice institutions
- Requires a more nuanced look at the metrics of student success to find benchmarks and aspirant institutions that can help your institution improve
Student Success Ratings
## Eduventures Student Success Ratings

<table>
<thead>
<tr>
<th>Institution</th>
<th>Student Success Rating</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
<th>Predicted</th>
<th>Actual</th>
<th>% Against Headroom</th>
<th>Retention Change</th>
<th>Graduation Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of California-Riverside, CA</td>
<td>80.9</td>
<td>100.0</td>
<td>96.3</td>
<td>66.7</td>
<td>60.7</td>
<td>133.6</td>
<td>164.0</td>
<td>45.8</td>
<td>5.0</td>
<td>9.0</td>
</tr>
<tr>
<td>California State University-Fullerton, CA</td>
<td>79.1</td>
<td>71.9</td>
<td>82.8</td>
<td>86.7</td>
<td>75.0</td>
<td>137.6</td>
<td>151.0</td>
<td>21.5</td>
<td>11.0</td>
<td>13.0</td>
</tr>
<tr>
<td>SUNY College of Environmental Science and Forestry, NY</td>
<td>77.1</td>
<td>76.2</td>
<td>87.3</td>
<td>73.3</td>
<td>71.4</td>
<td>146.0</td>
<td>162.0</td>
<td>29.7</td>
<td>7.0</td>
<td>12.0</td>
</tr>
<tr>
<td>University of South Florida-Main Campus, FL</td>
<td>76.9</td>
<td>58.1</td>
<td>76.8</td>
<td>80.0</td>
<td>92.9</td>
<td>151.9</td>
<td>157.0</td>
<td>10.7</td>
<td>9.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>
Our Philosophy - Ratings (not Rankings)

A STARTING POINT FOR INSTITUTIONAL SELF-MANAGEMENT ON STUDENT SUCCESS

• Purpose: To identify true best practice institutions

• Institutions measure themselves against themselves within the context of their peers
  • How are we doing?
  • How are our peers doing?
  • What can we learn from true best practice institutions?

• True best practice institutions know their students, organize themselves well, and focus on the right student success activities—this is not usually an externally driven activity

• Strike the balance of knowledge of self with appropriate peer groups and identification of true best practice
Two Fundamental Parts – Four Scores

Student Success Rating

Performance Model
- Performance against predicted
- Percent of Headroom

Evidence of Success
- Retention Trend
- Graduation Trend
Theoretical Underpinnings of the Model

BUILT ON PUBLICLY AVAILABLE NATIONAL CENTER FOR EDUCATIONAL STATISTICS DATA

Financial Issues

Instructional Factors

Academic Integration

Social Integration

*The data-year for 2018 ratings is 2016 due to the lag in data collection
The Model is a Very Strong Predictor Performance

Predicted vs. Actual Student Success Outcomes

Institution Level:
- Doctoral
- Masters
- Baccalaureate

Public

Private

$R^2$ Linear = 0.716

$R^2$ Linear = 0.783
Slow, if Any, Progress on Key Metrics as a Whole

Retention and Graduation Trends Underlying Student Success Ratings

First-Year Retention

- Public Research: 78% (2006), 81% (2016)
- Public Masters: 70% (2006), 73% (2016)
- Public Baccalaureate: 66% (2006), 70% (2016)
- Private Research: 84% (2006), 87% (2016)
- Private Masters: 73% (2006), 74% (2016)
- Private Baccalaureate: 73% (2006), 72% (2016)

Six-Year Graduation

- Public Research: 54% (2006), 59% (2016)
- Public Masters: 43% (2006), 46% (2016)
- Public Baccalaureate: 39% (2006), 38% (2016)
- Private Research: 69% (2006), 73% (2016)
- Private Masters: 53% (2006), 54% (2016)
- Private Baccalaureate: 55% (2006), 54% (2016)
No Institution is Perfect; Some are Better than Others

DISTRIBUTION OF STUDENT SUCCESS RATINGS BY INSTITUTION TYPE

Public Research: Minimum 23, Median 56, Maximum 81
Public Masters: Minimum 12, Median 47, Maximum 74
Public Baccalaureate: Minimum 25, Median 63, Maximum 88
Private Research: Minimum 32, Median 57, Maximum 86
Private Masters: Minimum 21, Median 53, Maximum 95
Private Baccalaureate: Minimum 22, Median 58, Maximum 81
A Way of Looking Across all Institutional Categories

DISTRIBUTION OF STUDENT SUCCESS RATINGS - PERFORMANCE GROUPS

Over-performer 10%

Moderate Over-performer 20%

Average performer 40%

Moderate Under-performer 20%

Under-performer 10%
# Three-Years of Eduventures Ratings

**KEY METRICS OF PERFORMANCE GROUPS - PUBLIC**

<table>
<thead>
<tr>
<th>3YR AVG</th>
<th>Over-performer</th>
<th>Moderate Over-performer</th>
<th>Average Performer</th>
<th>Moderate Under-performer</th>
<th>Under-performer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eduventures Student Success Rating</strong></td>
<td>69</td>
<td>60</td>
<td>50</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Retention Rate</td>
<td>86</td>
<td>82</td>
<td>77</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>64</td>
<td>60</td>
<td>52</td>
<td>44</td>
<td>37</td>
</tr>
<tr>
<td>Retention Trend</td>
<td>+6</td>
<td>+4</td>
<td>+3</td>
<td>+1</td>
<td>-2</td>
</tr>
<tr>
<td>Graduation Trend</td>
<td>+12</td>
<td>+9</td>
<td>+4</td>
<td>+1</td>
<td>-2</td>
</tr>
<tr>
<td>Perf. Against Predicted</td>
<td>+18</td>
<td>+8</td>
<td>0</td>
<td>-9</td>
<td>-18</td>
</tr>
</tbody>
</table>

* For institutions with ratings in all three years.
### Three-Years of Eduventures Ratings (cont.)

#### KEY METRICS OF PERFORMANCE GROUPS - PRIVATE

<table>
<thead>
<tr>
<th>3YR AVG</th>
<th>Over-performer</th>
<th>Moderate Over-performer</th>
<th>Average Performer</th>
<th>Moderate Under-performer</th>
<th>Under-performer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eduventures Student Success Rating</td>
<td>70</td>
<td>62</td>
<td>54</td>
<td>45</td>
<td>34</td>
</tr>
<tr>
<td>Retention Rate</td>
<td>84</td>
<td>83</td>
<td>79</td>
<td>72</td>
<td>64</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>66</td>
<td>66</td>
<td>60</td>
<td>50</td>
<td>43</td>
</tr>
<tr>
<td>Retention Trend</td>
<td>+7</td>
<td>+4</td>
<td>+1</td>
<td>-1</td>
<td>-7</td>
</tr>
<tr>
<td>Graduation Trend</td>
<td>+9</td>
<td>+6</td>
<td>+2</td>
<td>-2</td>
<td>-6</td>
</tr>
<tr>
<td>Perf. Against Predicted</td>
<td>+18</td>
<td>+9</td>
<td>+1</td>
<td>-9</td>
<td>-20</td>
</tr>
</tbody>
</table>

* For institutions with ratings in all three years.
Using the Ratings
Different Profiles of Performance

FOUR CASE EXAMPLES AMONG 2018 PUBLIC DOCTORAL OVER PERFORMERS

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Over Performing Public Doctorals</td>
<td>74</td>
<td>75</td>
<td>86</td>
<td>68</td>
<td>67</td>
</tr>
<tr>
<td>University of South Florida</td>
<td>77</td>
<td>58</td>
<td>77</td>
<td>80</td>
<td>93</td>
</tr>
<tr>
<td>Georgia Tech</td>
<td>70</td>
<td>64</td>
<td>90</td>
<td>67</td>
<td>61</td>
</tr>
<tr>
<td>CSU - Fullerton</td>
<td>79</td>
<td>72</td>
<td>83</td>
<td>87</td>
<td>75</td>
</tr>
<tr>
<td>Rutgers Newark</td>
<td>69</td>
<td>93</td>
<td>90</td>
<td>33</td>
<td>61</td>
</tr>
</tbody>
</table>
University of South Florida

**PAYOFF OF YEARS OF WORK**

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of South Florida</td>
<td>77</td>
<td>58</td>
<td>77</td>
<td>80</td>
<td>93</td>
</tr>
</tbody>
</table>

All of the axes are set to the same scale on the charts for all the schools. We should make sure they stay that way.

**Student Success Composite**

- **Actual**
  - 2006: 81
  - 2016: 90
- **Predicted**
  - 2006: 49
  - 2016: 67
Georgia Tech

**GETTING TO ELITE**

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia Tech</td>
<td>70</td>
<td>64</td>
<td>90</td>
<td>67</td>
<td>61</td>
</tr>
</tbody>
</table>

**Student Success Composite**

- **Actual**
  - Predicted
  - 183
- **Predicted**
  - 174

<table>
<thead>
<tr>
<th></th>
<th>Retention</th>
<th>Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>92</td>
<td>77</td>
</tr>
<tr>
<td>2016</td>
<td>97</td>
<td>86</td>
</tr>
</tbody>
</table>
### Cal State Fullerton

#### ALL AROUND EFFORT

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSU - Fullerton</td>
<td>79</td>
<td>72</td>
<td>83</td>
<td>87</td>
<td>75</td>
</tr>
</tbody>
</table>

#### Retention and Graduation Trends

- **Actual** (2016): 89
- **Predicted** (2016): 78
- **2006 Retention:** 49
- **2016 Retention:** 62
- **2006 Graduation:** 151
- **2016 Graduation:** 138
Rutgers – Newark

BEATING THE ODDS, HARD WORK AHEAD

<table>
<thead>
<tr>
<th>Overall Score</th>
<th>Performance Against Predicted</th>
<th>Percent of Headroom</th>
<th>Retention Trend</th>
<th>Graduation Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rutgers Newark</td>
<td>69</td>
<td>93</td>
<td>90</td>
<td>33</td>
</tr>
</tbody>
</table>

Student Success Composite

<table>
<thead>
<tr>
<th>Actual</th>
<th>Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>149</td>
<td>123</td>
</tr>
</tbody>
</table>

Retention

<table>
<thead>
<tr>
<th>2006</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>83</td>
</tr>
</tbody>
</table>

Graduation

<table>
<thead>
<tr>
<th>2006</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>66</td>
</tr>
</tbody>
</table>
What Can the ModelIlluminate?

RUTGERS – NEWARK: KEY MODEL VARIABLES

<table>
<thead>
<tr>
<th>Selected Regression Variables</th>
<th>Influence in Model</th>
<th>All Public Doctoral</th>
<th>Over Performers</th>
<th>Rutgers Newark</th>
</tr>
</thead>
<tbody>
<tr>
<td>75th Percentile SAT/ACT Concordance</td>
<td>0.5</td>
<td>1224</td>
<td>1214</td>
<td>1100</td>
</tr>
<tr>
<td>Percent of first-time students receiving Pell grants</td>
<td>-0.3</td>
<td>34%</td>
<td>38%</td>
<td>53%</td>
</tr>
<tr>
<td>Expenses to Academic Support &amp; Instruction</td>
<td>0.1</td>
<td>52%</td>
<td>47%</td>
<td>69%</td>
</tr>
</tbody>
</table>
What Have We Learned From Best Practice Institutions?
What Have we Learned from Top Performers?

MOST IMPORTANT REASONS FOR YOUR INSTITUTION’S PERFORMANCE IN STUDENT SUCCESS

- Cross-functional collaboration: 75% (Public), 59% (Private)
- Leadership support: 59% (Public), 59% (Private)
- Strategic interventions: 45% (Public), 45% (Private)
- Defined institutional strategy: 53% (Public), 53% (Private)
- Faculty engagement: 29% (Public), 29% (Private)
- Understanding influences on student success: 40% (Public), 20% (Private)
- Transparent data analytics to identify risk: 18% (Public), 18% (Private)
- System of accountability: 20% (Public), 20% (Private)
- State support: 24% (Public), 24% (Private)
- Adequate budget resources: 12% (Public), 12% (Private)
- Technology support to enact interventions: 6% (Public), 6% (Private)

Source: Eduventures Insights Report *Improving Student Success: Is Your Institution Really Ready?*
Four Must Haves before You Get Going

PRE-CONDITIONS FOR SUCCESS

• Leadership Focus
• Collaborative Control
• Knowledge of Self
• Continuous Improvement Process

Source: Eduventures Insights Report *Improving Student Success: Is Your Institution Really Ready?*
Institutions Adopt Strategies that Fit their Situation

SEVEN STRATEGIES USED TO MANAGE STUDENT SUCCESS

• Provide needed financial support to students
• Focus on academic success
• Build community connections
• Actively manage individual student pathways
• Identify risk and do something about it
• Clear the roadblocks
• Help your most troubled student cohorts the most

Source: Eduventures Insights Report Improving Student Success: Is Your Institution Really Ready?
How Can You Use Eduventures Student Success to Benchmark?

• Check Eduventures Student Success rating
• Examine the big picture reasons for your rating
• Place yourself within your peer and competitor landscape
• Identify aspirant institutions from whom to learn best practices

Thank you.

ANY QUESTIONS?

Kim Reid
Principal Analyst

P: 617.532.6073
E: kim.reid@nrccua.org

ENCOURA.ORG