An Introduction to Dashboards in Higher Education: Graphic Representation of Key Performance Indicators

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Transforming Higher Education webinar series. zogotech.com/webinars
What is a Dashboard in Higher Education?

- A brief document that graphically displays critical institutional information in a succinct, easily understood, visually appealing format
- A tool to communicate the current health of the organization and its progress toward its strategic objectives
Purposes of Dashboards

• To communicate current information about major indices of organizational performance to primary stakeholders
• To provide information to assist in evaluation of organizational performance
• To provide a comprehensive analysis of how the organization’s achievement of its strategic objectives leads to effectively carrying out its mission and vision
• To provide information about organizational performance compared to appropriate benchmarks
• Institutional leadership has a responsibility to be accountable to both internal and external stakeholders
• Stakeholders want/need accurate, concise, easy-to-understand, up-to-date data & information about organizational performance
• Traditional communication sources in higher ed. (e.g., annual reports) are usually obsolete by the time they reach stakeholders and typically fail to provide necessary/sufficient detail about organizational performance
Components of Dashboards

- A limited set of measures—usually referred to as “Key Performance Indicators” (or KPIs)
- An integrated data structure for that set of measures
- A source of comparative benchmarks for the measures
- Graphics for displaying the measures
Characteristics of an Effective Dashboard

- Operationally focused—tied to the institution’s mission and strategic plan
- Timely
- Accurate
- Easy to understand
- Represents the current state of the organization
- Provides a straightforward summary of organizational performance
KPIs — What Are They?

Data elements that:

– Measure core inputs, outputs, and outcomes
– Reflect the institution’s strategic plan and core business
– Measure high priority operations of the institution
– Measure institutional characteristics that are important and meaningful to stakeholders
– Measure institutional performance in areas in which it must be successful to survive and be competitive
Examples of KPIs

- **Enrollment**
  - Fall headcount enrollment
  - Percent of area high school grads enrolling subsequent fall
- **Student progress**
  - Fall-to-fall persistence
  - Term-to-term persistence
- **Student success**
  - Graduation rate
  - Transfer rate
  - Workforce placement rate
Sources of KPIs

• Institution mission statement and strategic plan
• For community colleges—”Core Indicators of Effectiveness for Community Colleges” (Alfred, Shults, & Seybert), published by AACC
  – Identifies and describes 16 core indicators in six major categories:
    • Student progress
    • General education
    • Outreach
    • Workforce development
    • Contribution to the public good
    • Transfer preparation
Identification of KPIs—Who’s involved

• Effort usually led by a Dashboard Development Team
  – Representative of senior leadership
  – Representative of IR
  – Representatives of key constituencies
    • Faculty
    • Student affairs
    • Others

• Team solicits input from affected work groups and administrators

• Senior leadership (president’s cabinet?) makes final determination of which measures reflect key functions and are included in the dashboard
How KPIs are Identified

• They are an outgrowth of strategic planning
  – Important and meaningful to stakeholders
  – Viewed as important to the organization
  – Linked to strategic plan and organizational priorities
  – Help determine the extent to which the organization is progressing toward its stated goals

• Team can begin with a large number of potential KPIs and then whittle down to the vital few—no more than 15-20
Process also requires establishing benchmarks and target values

- Benchmarks
  - What are reasonable values for measures
    - Upper and lower limits
    - What is “good” and “bad” for a given measure

- Targets
  - How do we know where we want to be?
  - Based on both benchmarks and past performance
  - Must be reasonable and achievable
    - Can (should?) be “stretch objectives”
  - Possible Sources: NCCBP

Achieving the Dream Database
IPEDS Peer Analysis System
A Valuable Source for Community College Benchmarks: The NCCBP

- A national community college data collection/reporting consortium
- Collects and reports on over 120 benchmarks covering all areas of interest to community colleges:
  - Institutional characteristics
  - Student characteristics
  - Student learning outcomes
  - Community outreach
  - Faculty and staff data
- 210 colleges participated in 2009
- www.nccbp.org
Performance Indicator (PI 22): Transfer Rate

Definition: The percent of Fall, transfer-intent, first-time SCC enrolled students who also enter a degree program at a four-year institution within three years (9 terms).

How the PI is measured: To be eligible for the cohort, students had to have the following characteristics:
1. Were enrolled at SCC for the first time in a Fall cohort term.
2. Were 18-22 years old.
3. Were enrolled full time in a Fall cohort term (i.e., taking 12 or more hours).
4. Cumulated at least 12 SCC credit hours three years after their first Fall cohort term at SCC.
5. Specified a transfer intent on their SCC application.

Source:
- National Student Loan Clearing House data
- STACS

PI Standard:
- Exceeding Expectation: > 60%
- Meeting Expectation: 50% - 60%
- Needs Improvement: 40% to 49.9%
- Alarm Bells: <40%
### Sample NCCBP Benchmark

**Percentile ranks are the percents of benchmark values that fall below the institution's values.**

Johnson County Community College

<table>
<thead>
<tr>
<th>Institution</th>
<th>NCCBP Percentiles</th>
<th>% Rank</th>
<th>Report Value</th>
<th>10th</th>
<th>25th</th>
<th>Mdn</th>
<th>75th</th>
<th>90th</th>
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<td>N</td>
<td></td>
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</table>

#### FORM 2: Proportions of Students That

% Completed in Three Years (Col 3)

<table>
<thead>
<tr>
<th></th>
<th>Full-time, First-time in Fall, 2005</th>
<th>19.12%</th>
<th>55%</th>
<th>210</th>
<th>8.34%</th>
<th>12.28%</th>
<th>18.18%</th>
<th>25.65%</th>
<th>34.50%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Part-time, First-time in Fall, 2005</td>
<td>20.75%</td>
<td>91%</td>
<td>172</td>
<td>2.18%</td>
<td>3.25%</td>
<td>6.57%</td>
<td>11.49%</td>
<td>20.41%</td>
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</tbody>
</table>

% Transferred in Three Years (Col 5)

<table>
<thead>
<tr>
<th></th>
<th>Full-time, First-time in Fall, 2005</th>
<th>29.43%</th>
<th>89%</th>
<th>192</th>
<th>8.60%</th>
<th>13.15%</th>
<th>18.12%</th>
<th>22.43%</th>
<th>29.90%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Part-time, First-time in Fall, 2005</td>
<td>13.97%</td>
<td>77%</td>
<td>139</td>
<td>2.96%</td>
<td>4.90%</td>
<td>9.17%</td>
<td>13.64%</td>
<td>23.33%</td>
</tr>
</tbody>
</table>

% Compl. or Transl. in Three Years (Col 6)

<table>
<thead>
<tr>
<th></th>
<th>Full-time, First-time in Fall, 2005</th>
<th>48.55%</th>
<th>84%</th>
<th>192</th>
<th>22.99%</th>
<th>27.85%</th>
<th>37.73%</th>
<th>44.42%</th>
<th>53.03%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Part-time, First-time in Fall, 2005</td>
<td>34.72%</td>
<td>89%</td>
<td>139</td>
<td>7.83%</td>
<td>11.11%</td>
<td>16.03%</td>
<td>25.00%</td>
<td>37.03%</td>
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#### FORM 3: Student Performance at Transfer Institutions (Most Recent AY)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Full-time, First-time in Fall, 2005</th>
<th>48.55%</th>
<th>84%</th>
<th>192</th>
<th>22.99%</th>
<th>27.85%</th>
<th>37.73%</th>
<th>44.42%</th>
<th>53.03%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative First-year GPA (Col 2)</td>
<td>--</td>
<td>--</td>
<td>67</td>
<td>2.62</td>
<td>2.79</td>
<td>2.89</td>
<td>2.98</td>
<td>3.07</td>
<td></td>
</tr>
<tr>
<td>Average First-year Credit Hours (Col 4)</td>
<td>--</td>
<td>--</td>
<td>55</td>
<td>15.36</td>
<td>18.09</td>
<td>20.66</td>
<td>23.50</td>
<td>25.32</td>
<td></td>
</tr>
<tr>
<td>Percent Enrolled Next Year (Col 5)</td>
<td>--</td>
<td>--</td>
<td>55</td>
<td>63.90</td>
<td>71.50</td>
<td>76.77</td>
<td>82.61</td>
<td>86.91</td>
<td></td>
</tr>
</tbody>
</table>

#### FORM 4: Fall 2007 Credit Students Who Enrolled Next Term and Next Fall

<table>
<thead>
<tr>
<th>Metric</th>
<th>Full-time, First-time in Fall, 2005</th>
<th>48.55%</th>
<th>84%</th>
<th>192</th>
<th>22.99%</th>
<th>27.85%</th>
<th>37.73%</th>
<th>44.42%</th>
<th>53.03%</th>
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</thead>
<tbody>
<tr>
<td>Next-term Persistence Rate (Col 4)</td>
<td>63.45%</td>
<td>24%</td>
<td>206</td>
<td>57.93%</td>
<td>63.47%</td>
<td>68.61%</td>
<td>71.70%</td>
<td>74.62%</td>
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</tr>
<tr>
<td>Cumulative Persistence Rate (Col 6)</td>
<td>63.45%</td>
<td>24%</td>
<td>206</td>
<td>57.93%</td>
<td>63.47%</td>
<td>68.61%</td>
<td>71.70%</td>
<td>74.62%</td>
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</table>
### ZogoTech’s Dashboard / Scorecard

<table>
<thead>
<tr>
<th>Details</th>
<th>Score</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Score (weighted average)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>1. Student Access and Success (30%)</td>
<td>92</td>
<td>↑</td>
</tr>
<tr>
<td>2. Financial and Administrative Stability (20%)</td>
<td>63</td>
<td>↑</td>
</tr>
<tr>
<td>3. Economic Responsiveness (15%)</td>
<td>91</td>
<td>↓</td>
</tr>
<tr>
<td>4. Community Engagement (15%)</td>
<td>96</td>
<td>↓</td>
</tr>
<tr>
<td>5. Diversity and Cultural Competency (10%)</td>
<td>63</td>
<td>↑</td>
</tr>
<tr>
<td>6. Operational Strength (10%)</td>
<td>94</td>
<td>↑</td>
</tr>
</tbody>
</table>

Note: this is randomized data
### Richland College Monthly Key Performance Index Score

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Prev. Month Score</th>
<th>End of Year 07/08 Score</th>
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</thead>
<tbody>
<tr>
<td>Richland College</td>
<td>9.6</td>
<td>9.6</td>
<td>9.4</td>
</tr>
</tbody>
</table>

### Strategic Priorities for Student Learning

<table>
<thead>
<tr>
<th>Key Performance Indices (Weighting Factors)</th>
<th>Monthly Score</th>
<th>Prev. Month Score</th>
<th>End of Year 07/08 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and Meet Community Educational Needs (20%)</td>
<td>9.7</td>
<td>9.4</td>
<td>9.5</td>
</tr>
<tr>
<td>Enable All Students to Succeed (35%)</td>
<td>9.7</td>
<td>9.6</td>
<td>9.3</td>
</tr>
<tr>
<td>Enable All Employees to Succeed (20%)</td>
<td>8.9</td>
<td>9.4</td>
<td>9.8</td>
</tr>
<tr>
<td>Ensure Institutional Effectiveness (25%)</td>
<td>9.8</td>
<td>9.8</td>
<td>9.2</td>
</tr>
</tbody>
</table>

All scores based on a scale of 10. **Green** = Within target range, **Yellow** = 89.99% - 85.00% of target range, **Red** = Less than 85% of target range.
SCC PI Report: Executive Dashboard Summary

Student Success
1. Persistence Rate Fall To Fall
2. Occupational-Technical Degree Satisfaction
3. Transfer-Degree Satisfaction

Career Preparation
4. Licensure Pass Rate
5. Placement Rate In Workforce

Student Satisfaction
6. Overall Student Satisfaction
7. Student Services
8. Academic Services
9. Administrative Services
10. Non-Academic Facilities
11. Academic Facilities

Best Educational Practices
14. Active And Collaborative Learning
15. Student Effort
16. Academic Challenge
17. Student-Faculty Interaction
18. Support For Learners

Transfer Success
22. Transfer Rate
23. Academic Success After Transfer
24. Persistence After Transfer

Student Self-Assessment Of General Education Gains
19. Personal/Social Gains
20. General Education Gains
21. Practical Competencies

Developmental Education
12. Math
13. English

PI Standard
- Exceptional performance
- Above Benchmark
- Below Benchmark
- Alarm Bells
Dashboards – Strengths

- Relatively straightforward way to monitor current institutional performance
- Provide metrics on KPIs that represent core institutional goals, issues, and operations
- Easy to understand
- Engaging presentation format to communicate important information
- Can be used at all levels of the institution (institution as a whole, division, department)
Dashboards – Challenges

• Design and implementation require a comprehensive understanding of complex data definitions, sources, appropriate analyses, and sources of appropriate benchmarks
  — Requires appropriate expertise (internal or external)

• Don’t provide an in-depth understanding of underlying data that drive the KPIs
  --Limited in scope and somewhat simplistic
  --Lack of detail makes it difficult to understand the “whys” of institutional performance

• Provide no information regarding what should be done—no guidance for institutional action

• To be optimally effective need to be supported by formal underlying data structure with drill-down capabilities—a balanced scorecard
Contact

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