Achieving the Dream

Data and Analytics Summit

Mind the Data Gap

#ATDDataSummit #ATDAalytics
Offense, Defense, or Special Teams: What’s Your Data Strategy?

Dr. Karen A. Stout
President & CEO, Achieving the Dream

@DrKASout

#ATDDataSummit #ATDAnalytics | @AchieveTheDream
Reading List: Summer 2018

- *Astroball: The New Way to Win It All* by Ben Reiter
- *Robot-Proof: Higher Education in an Era of Artificial Intelligence* by Joseph F. Four
- *The Mind of the Leader* by Jacqueline Carter
- *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* by Virginia Eubanks
- *New Power* by Jeremy Heimans and Henry Timms
- *The Promise and the Dream* by Ta-Nehisi Coates
- *The Beautiful Struggle* by David Margolick
- *Embers: Our Nation’s Igniters* by Richard Wagamese
- *Demographics and the Demand for Higher Education* by Nathan D. Grawe
- *Illuminate* by Nancy Duarte and Patti Sanchez
Impact

ODESSA COLLEGE

EVIDENCE OF EXCELLENCE

5 Year FALL Enrollment Growth perspective 2012-2017
Texas Public Higher Education Almanac 2018

3 year Graduation Rates for Fall Cohorts 2012-2014
Texas Public Higher Education Almanac 2018

TEXAS AREA
-07% 1.7%

PERSI STENCE

16 WEEK SEMESTERS
16 WEEK TERMS

FALL 2013 FALL 2014

All 65% 74%
Male 61% 68%
Female 67% 79%
Hispanic 66% 74%
White 61% 73%
Other 65% 76%
Pell 73% 90%

60x30TI
Impact

Recent LMA Awardee three-year graduation rate

![Bar chart showing Pierce College Three-Year Graduation Rate]

- 22% to 31% increase overall
- 1st generation students showing similar improvement
Impact

Recent LMA Awardee three-year graduation rate

Our leading colleges already show consistent improvements in completion.

For example, in just four years, this college saw a ~70 percent improvement in completion, and all but closed the gap for Latino students.
Impact

Recent LMA Awardee three-year graduation rate

21% rise in 3-year graduation rate over 5 years

<table>
<thead>
<tr>
<th>TC IPEDS 3-Year Graduation Rate (150%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort Year</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Percentage</td>
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<tr>
<td>N Value</td>
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</tbody>
</table>
Our Institutional Capacity Framework helps us integrate and align 7 essential capacities at all colleges to support a student-centered culture that promotes student success.
ICAT Stats

- Administered by over 160 Network colleges since September 2016
- Nearly 22,000 individual responses
- Highest capacity area: Leadership & Vision
- Lowest capacity area: Data & Technology
- LMA winners have higher average capacity levels than the Network average in all seven areas
Network Results

- Network
- 3.1 Leadership & Vision
- 3.0 Strategy & Planning
- 3.0 Policies & Practices
- 2.9 Engagement & Communication
- 2.9 Teaching & Learning
- 2.8 Equity
- 2.7 Data & Technology
- 0.4 Range Difference: High to Low
ICAT Data & Technical Questions

<table>
<thead>
<tr>
<th>Item</th>
<th>Valid N</th>
<th>% L3 + L4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the college evaluate student success initiatives to inform decision-making?</td>
<td>7,747</td>
<td>73%</td>
</tr>
<tr>
<td>Does reliable data exist to inform decisions?</td>
<td>7,729</td>
<td>72%</td>
</tr>
<tr>
<td>Does relevant data exist to inform decision-making?</td>
<td>8,432</td>
<td>68%</td>
</tr>
<tr>
<td>Does the college use benchmarking to identify strategies for improvement and innovation?</td>
<td>6,978</td>
<td>66%</td>
</tr>
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ICAT Data & Technical Questions

<table>
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</thead>
<tbody>
<tr>
<td>Do the Information Technology (IT) and Institutional Research (IR) staff collaborate to optimize processes for data use?</td>
<td>5,449</td>
<td>62%</td>
</tr>
<tr>
<td>Does the college use data to examine and improve student outcomes?</td>
<td>8,324</td>
<td>61%</td>
</tr>
<tr>
<td>Are measures of student success defined, documented and used?</td>
<td>7,668</td>
<td>60%</td>
</tr>
</tbody>
</table>
ICAT Data & Technical Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have student success technologies been adopted to improve student outcomes?</td>
<td>8,348</td>
<td>58%</td>
</tr>
<tr>
<td>Are data collected along the student experience continuum?</td>
<td>7,714</td>
<td>55%</td>
</tr>
<tr>
<td>Do data analyses yield insights about the past and future?</td>
<td>7,505</td>
<td>52%</td>
</tr>
<tr>
<td>Are data readily accessible to those who need it?</td>
<td>8,159</td>
<td>52%</td>
</tr>
<tr>
<td>Are student success data translated into meaningful information?</td>
<td>8,133</td>
<td>49%</td>
</tr>
<tr>
<td>5. Are data collected at various points along the student experience continuum?</td>
<td></td>
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</tbody>
</table>
| **The college does not have the data it needs to answer important questions about any phase of the student experience.**  
Example: The college spends most of its time on things like overall graduation rates, which reveal little about the student experience, the college struggles to comprehend the barriers their students encounter due to limited data. | **The college has the data it needs about some phases of the student experience from interest to application, college entry, all points of progression, to completion and beyond.**  
Example: There is a commonly used set of indicators (e.g. course completion rates, persistence rates, credit milestones, and graduation rates) plus regular administration of standardized surveys (e.g. CCSSE) but the college has not drilled down to understand the student experience in its entirety. | **The college has the data it needs to answer important questions about most phases of the student experience.**  
Example: There is a robust set of data that is disaggregated by student group and at various levels (institutional, program, course levels), but the college is working on some important research questions (e.g. what happens to students post college graduation?) to fully understand the student experience. | **Do Not Know**  
Example: There is a depth of knowledge about why students attend, who attends and does not attend, who is at risk of failure, what prevents students from timely progression and completion, circumstances at point of graduation (excess credits and overall cost to students) and quality/value of the credential earned like time-to-completion at transfer institution or labor market value of graduates; the college uses data to inform program and service redesign and eliminate barriers throughout the student experience. |
From ICAT...

<table>
<thead>
<tr>
<th>6. Are student success data translated into meaningful information?</th>
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<tbody>
<tr>
<td>Data are rarely disseminated in a format that is easily understood by others outside of Institutional Research (e.g., without graphic and/or narrative synthesis to help translate the data findings).</td>
</tr>
<tr>
<td>Data are occasionally disseminated in a format that is easily understood by others outside of IR. Example: Crisp bullet points are used with some graphic displays of data, but this is done primarily for data presentations to senior leadership.</td>
</tr>
<tr>
<td>Data are often disseminated in formats easily understood by lay staff through a variety of mediums to address different data synthesis styles. Example: The frequent use of score cards, highly visual data briefs, interactive dashboards, use of infographics, and other tools/techniques to help translate data into meaningful information.</td>
</tr>
<tr>
<td>Data are consistently presented and synthesized to tell a meaningful story and can readily be translated into action. Example: Consistent use of data visualization techniques; strong capacity within the college to organize data in effective ways; high expectations for quality presentation of data (e.g., low quality presentation is not accepted).</td>
</tr>
<tr>
<td><strong>Do Not Know</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Do data analyses yield insights about the past and future?</th>
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<tbody>
<tr>
<td>The college focuses data efforts primarily on answering informational questions related to “what happened” in the past with regard to student success.</td>
</tr>
<tr>
<td>The college uses qualitative data to answer “why it happened” or gain insight on what happened in the past with regard to student success. Example: Use of predictive data so that unproductive behaviors or practices can be prevented before students drop out, stop out, or fail.</td>
</tr>
<tr>
<td>The college uses predictive modeling to forecast “what will happen” or which students are likely to be successful or unsuccessful.</td>
</tr>
<tr>
<td>The college strategically leverages data to proactively answer “how we make it happen” with regard to student success outcomes. Example: Use of evidence-based practices, evaluation data, and other information that keeps the college grounded in what is or is not working; college uses data to inform scaling decisions and overall continuous improvement efforts.</td>
</tr>
<tr>
<td><strong>Do Not Know</strong></td>
</tr>
</tbody>
</table>
“Strategy can be viewed as a literary effort to craft a complete script and then hand it over to actors who enact it word by word. I prefer to think of it as resembling improvisational theater.”

---Rosabeth Moss Kanter
# The Elements of Data Strategy

<table>
<thead>
<tr>
<th></th>
<th>DEFENSE</th>
<th>OFFENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KEY OBJECTIVES</strong></td>
<td>Ensure data security, privacy, integrity, quality, regulatory compliance, and governance</td>
<td>Improve competitive position and profitability</td>
</tr>
<tr>
<td><strong>CORE ACTIVITIES</strong></td>
<td>Optimize data extraction, standardization, storage, and access</td>
<td>Optimize data analytics, modeling visualization, transformation, and enrichment</td>
</tr>
<tr>
<td><strong>DATA-MANAGEMENT ORIENTATION</strong></td>
<td>Control</td>
<td>Flexibility</td>
</tr>
<tr>
<td><strong>ENABLING ARCHITECTURE</strong></td>
<td>SSTO (Single source of truth)</td>
<td>MVOTs (Multiple versions of the truth)</td>
</tr>
</tbody>
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*DalleMulle and Davenport, HBR, May-June 2017*
The Data-Strategy Spectrum

- **Hospitals** operate in highly regulated environments where data quality and protection are paramount. They emphasize defense over offense.

- **Banks** are heavily regulated and require strong data defense, but they operate in dynamic markets and so typically devote equal attention to data offense.

- **Retailers** are less regulated, work with limited sensitive personal data, and must react rapidly to competition and market changes. They typically emphasize offense over defense.

*DalleMulle and Davenport, HBR, May-June 2017*
Assess Your Strategy Position

Data Defense

1. Reduce general operating expenses
2. Meet regulatory requirements
3. Prevent cyberattacks and data breaches
4. Mitigate operational risks such as poor access controls and data losses
5. Improve IT infrastructure and reduce data-related costs
6. Streamline back-office systems and processes
7. Improve data quality (completeness, accuracy, timeliness)
8. Rationalize multiple sources of data and information (consolidated and eliminate redundancy)

DalleMulle and Davenport, HBR, May-June 2017
Assess Your Strategy Position

Data Offense

1. Improve enrollment, fund raising, and revenue diversification
2. Create new products and services
3. Respond rapidly to competitors and market changes
4. Use sophisticated student analytics to drive student success results
5. Leverage new sources of internal and external data
6. Monetize company data (sell as a product or a service)
7. Optimize existing strong bench of power users, analysts and data scientists
8. Generate return on investments in big data an analytics infrastructure

DalleMulle and Davenport, HBR, May-June 2017
Networks (Leadership)

Innovative, adaptive and energetic
BUT
Chaotic

Well RUN and
innovative, adaptive, energetic

DOOMED

Well RUN but bureaucratic

Hierarchy (Management)

Kotter, *Accelerate* (page 64)
Thank You!

#ATDDataSummit #ATDAnalytics