Achieving the Dream

Data and Analytics Summit

Analytics Inspire Action

#ATDSAS17
Analytics Inspire Action

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#ATDSAS17 | @AchieveTheDream
Data & Analytics Summit 2017

- 240+ attendees
- 83 colleges & systems
- 2 funding organizations
- 10 national associations
- 13 companies
- 29 states
- 2 countries
Reading List: Summer 2017

Janesville: An American Story

Commonwealth
Ann Patchett

The Captain Class: The Hidden Force That Creates the World's Greatest Teams
Sam Walker

Option B: Facing Adversity, Building Resilience, and Finding Joy
Sheryl Sandberg and Adam Grant

Paying the Price
Sara Goldrick-Rab

The Distracted Mind: Ancient Brains in a High-Tech World
Adam Gazzaley and Larry D. Rosen

The Wisdom of Not Knowing
Estelle Frankel

The Givers
David Callahan

Coach
Michael Lewis

Big Data

Achieving the Dream
Achieving the Dream
National Network

• To improve student success on a substantial scale, colleges need to engage in bold and holistic institutional change.
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• What we know: We need to move from this, to...
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• Intentionally designed student experience
Achieving the Dream

Three Pillars

1. **INNOVATE** to successfully implement, align, and scale cutting edge reforms that increase student success, close achievement gaps, and generate economic benefit for communities.

2. **COACH** colleges to build institutional capacity, lead whole-college reform, and sustain continuous improvement.

3. **CONNECT** to a network to foster innovation and peer learning.
ATD Funded Learning Initiatives

- Open Educational Resources Degree
- Integrated Planning and Advising for Student Success
- Working Students Success Network
- Engaging Adjunct Faculty in the Student Success Movement
- Community College Advanced Manufacturing Career Pathways
- Northeast Resiliency Consortium
- Inspark Teaching Network
- Student Financial Empowerment Project
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https://www.youtube.com/watch?v=EQ-JunyVFTc
“We hope to draw multiple...student success efforts into a college-wide, cohesive, data informed, well communicated approach to student success.”

“...We hope participation in Achieving the Dream will enable us to focus on and invest resources in large scale strategies that effectively promote opportunity and equitable student success.”

“We seek to grow organizationally in our capacity to ask the right questions, explore the data for insights and apply analytics to steer our efforts to improve student success.”
Achieving the Dream
Institutional Capacity Framework

Student-Focused Culture

TEACHING & LEARNING
ENGAGEMENT & COMMUNICATION
EQUITY
STRATEGY & PLANNING
DATA & TECHNOLOGY
POLICIES & PRACTICES
LEADERSHIP & VISION
Connecting Pathways to the Institutional Capacity Framework

 Clarify paths to student end goals

 Ensure that students are learning

 Help students choose and enter a pathway

 Help students stay on a path

 Student-Focused Culture

 TEACHING & LEARNING

 ENGAGEMENT & COMMUNICATION

 EQUITY

 STRATEGY & PLANNING

 DATA & TECHNOLOGY

 POLICIES & PRACTICES

 LEADERSHIP & VISION

 Achieving the Dream™
Pierce College video story
ADVANCING STUDENT SUCCESS THROUGH ACHIEVING THE DREAM’S ICAT

https://youtu.be/BRooWgAZ-n0
# 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>
<tr>
<td>Item</td>
<td>Valid N</td>
<td>% L3 + L4</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
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<td>-----------</td>
</tr>
<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>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>-----</td>
</tr>
<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>
</tbody>
</table>
“Data is so widely available and so strategically important that the scarce thing is the knowledge to extract wisdom from it. That is why statisticians, and database managers are going to be in a fantastic position.”

Hal Varian
Chief Economist, Google
The Supply-Demand Challenge

23% of educators say all graduates will have data science and analytics skills.

69% of employers say they will prefer job candidates with these skills over ones without.

Source: Gallup and BHEF, Data Science and Analytics Higher Education Survey (December 2016).
Transactional

College
Engagement

College

[Diagram showing various components related to college engagement]
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Lessons Learned

Importance of Institutional Research and Information Technology to collaborate as strategic partners, reduce redundancies, gain efficiencies and combine to lead in building integrated business and data processes and systems.
Lessons Learned

Need for data quality and data governance.

“Only 3% of companies’ data meets basic quality standards.”
HBR, 2017
Lessons Learned

Need to collect (and organize) data that spans the entire student experience from inquiry through transitions (employment and transfer) and into continuing education and development (alumni giving and reengagement with the college).

“All our data is valuable. Even the rawest mundane pieces.”

---pg. 104, Big Data
Lessons Learned

Need to set up systems to collect and organize leading indicators vs. lagging indicators.
Lessons Learned

Need for unwavering attention and discipline in disaggregating data to identify and consistently monitor equity gaps.
Lessons Learned

Need to get data into the hands of decision-makers.
Lessons Learned

Need for strong data visualization and strong stories woven into a compelling narrative to demonstrate the need for action.
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Rethink the Metrics

“After using certain statistics for so long, it can be easy to forget why they are used, how they came to be and what goes into them.”

_Smart Baseball, Keith Law_
“Why has baseball as an industry, including the media covering it and the fans who follow it stuck with outdated statistics for so long? The answer is largely a giant appeal to tradition, a common type fallacious argument that says we should keep doing it this way because we have always done it this way. Baseball has always suffered from a sort of inertia. A game with a century and a half’s worth of history has a hard time escaping the gravitational pull of the past.”

Smart Baseball
Keith Law
Completion becomes an important milestone

Harper College three-year graduation rate

- Completion will remain an essential milestone to demonstrate progress toward family-sustaining wages
- Our leading colleges already show consistent improvements in completion
- For example, in just four years, Harper College saw a ~70 percent improvement in completion, and all but closed the gap for Latino students

Degree-seeking student cohort

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>White</th>
<th>Hispanic/Latin</th>
<th>Asian</th>
<th>African-American</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>24%</td>
<td>16%</td>
<td>11%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>2011</td>
<td>16%</td>
<td>14%</td>
<td>11%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>2012</td>
<td>18%</td>
<td>14%</td>
<td>11%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>2013</td>
<td>20%</td>
<td>14%</td>
<td>11%</td>
<td>20%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Equity remains central
Relative odds of six-year completion, compared to white students, Fall 2010 cohort

Going forward, we will also track completion for low-income students (e.g., Pell Grant recipients) and other underserved groups, for whom current data are spotty.

New metrics will better capture diverse student goals

Students succeed if they transfer and complete a bachelors or if they complete a credential and earn a family-sustaining wage (e.g., $25,000)

Enrollers (estimated six-year outcomes)

Sources: These estimates use data and assumptions from the National Longitudinal Survey of Youth (1997), NSC data for the Fall 2010 report, NSC data on undergraduate degree earners, and research from Center for Analysis of Postsecondary Education and Employment (CAPSEE) on transfer outcomes.
And over time, we will consider even broader impact

Examples

**Community benefits, such as:**

- Greater economic productivity
- Higher voting rates
- Improved health
- Greater tax revenue
- Reduced SNAP or Medicaid expenditures
- Lower incarceration rates

**Non-completion success, such as:**

- Credit accumulation leading to wage gains
- Skill attainment leading to wage gains
Analytics Inspire Action
Make Equity Central

• Go beyond access and completion gaps and move to looking at program access and completion gaps and labor market value and bachelor’s degree completion gaps. Drive design of new efforts like pathways with an understanding of these gaps.
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Digitize and Datafy

• Be intentional in quantifying our world to unleash the value of our data.

• Three ways to unleash value:
  • Reuse
  • Merge data sets
  • Find twofers
Analytics Inspire Action
Build the Analytical Futures of Your Students

“The successful schools, analysts say, will increasingly be ones that expand their programs to suit the changing needs of employers. Some have already added courses like data science, artificial intelligence, digital marketing and project management. Other steps include tailoring courses for corporations, which need to update the skills of their workers, or develop online courses.”

*As Coding Boot Camps Close, the Field Faces a Reality Check, New York Times, Aug. 24, 2017*
Analytics Inspire Action
Develop and Enable Data-Informed Leaders on Your Campus

“Leaders who transform institutions into versions of their better selves are true artists.

.... they must be able to see [the institution] within the confines of what already exists---they must be also be able to see ‘what is not’---to look beyond the obvious, beyond what is known, beyond the reality of the present to the potential of the future.”

The Art of Visionary Leadership,
John and Suanne Roueche
Analytics Inspire Action
A Word of Caution

“ We are more susceptible than we think to the ‘dictatorship of data’---that is, to letting the data govern us in ways that may do as much harm as good. The threat is that we will let ourselves be mindlessly bound by the output of our analyses even when we have reasonable grounds for suspecting something is amiss. Or that we will become obsessed with collecting facts and figures for data’s sake.”
Closing Thought

“The data can reveal secrets to those with the humility, the willingness, and the tools to listen.”

*Big Data*

Viktor Mayer-Schönberger and Kenneth Cukier
Thank You!

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