Building Capacity in Data & Analytics With Limited Resources

2017 Data & Analytics Summit

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Problem and the Promise

• COE definition/capacity ATD Institutional Capacity Framework has a culture of evidence Model requires colleges to collect share, analyze and utilize significant quantities of data

• Daunting Task for Small IR Offices

• Many colleges have faced this same problem and have developed innovative approaches
What is the total number of employees in your IR office?
“The outcome of a deliberate strategy to make decisions through the analysis of data”

Campus Technology
COE in Each Capacity
Information resulting from the systematic analysis of data or statistics.
Types of Analytics

- Descriptive Analytics
  - What happened?

- Diagnostic Analytics
  - Why did it happen?

- Predictive Analytics
  - What will happen?

- Prescriptive Analytics
  - How can we make it happen?

Value vs. Difficulty:
- Information: Hindsight
- Insight: Optimization
- Foresight: Difficult
Question #2

Where is your college in terms of its use of analytics along the Gartner continuum?
Jim Davis’ Eight Levels of Analytics

- Standard Reports
- Ad Hoc Reports
- Query Drilldown (OLAP)
- Alerts

- Statistical Analysis
- Forecasting
- Predictive Modeling
- Optimization
Evolving Role of IR

- From Compliance Reporting to ......

- **Shared Vision** – Successful students and Institutions by using data to make smarter decisions and polices

- IR as Leading Change Agents
Integrated Strategy For Change

To Successfully Move from the Present to the Future Requires an Integrated Strategy for Change that:

• Incorporates a “Changing Role” for Institutional Research
• Builds Capacity and Increases Productivity
• Builds Partnerships and Promotes Internal Education
Promote a vision for the IR office and function as:

- Innovator
- Change Agent

Move Out of the Office:

- Transition from Data “Cruncher” and Gatekeeper
- To Data/Information Facilitator and Leader
Strategy: Changing Role for IR

Partner With and Utilize Input from Stakeholders to:

• Identify the Key Student Access and Success Metrics every member of the college should know
• Share Data and Information Broadly (Intranet)
• Map to Strategic Priorities: Manage Data Requests to Get out of Reaction Mode:
LEADING VS. LAGGING

Lagging Indicators
Rear facing and cannot be altered; the institution’s performance, actions, interventions that affected these metrics are in the past
• Total degrees awarded
• Graduation rates
• Expenditures

Leading Indicators
Forward facing and are both predictive and influencable
• Course success rates
• Term to term persistence
Strategy: Changing Role for IR

Build a Data Team:

• Start with strong Cooperation between IR and IT
• Incorporate Data Offices: Registrar's Office (NSC reporting), Financial Aid, and others.
• Recruit Faculty: Math Faculty, English Faculty, Social Science Faculty
• Identify and Bring In Others Who have Data/Research/Analytic Skills
Strategy: Increase Capacity & Productivity

Build Staff Capacity:
- Faculty release time to work in IR office
- Center for Applied Research
- Four-Year Partners
- Student Interns

Leverage Technology:
- Build Strong Relationships with Information Technology
Strategy: Partnerships and Education

Partnerships:
• Faculty release time to work in IR office
• Create a Center for Applied Research
• Four-Year Partners
• Students

Education:
• Utilize ATD Resources: Webinars & Data Discovery Guide
• Build skills through AIR Data and Decisions Academy
## College Ready FTIC Students

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<tr>
<th>Milestone/Momentum Point/On-Track Indicator</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<td>Completed College English Credits in First Two Years</td>
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<td>Earned General Education Credits in First Term</td>
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<tr>
<td>Earned General Education Credits in First Year</td>
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<td>GPA of 2.5 or Greater in First Year</td>
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<td>Pell Award Recipient in First Year</td>
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<td>Retained to 2nd Year</td>
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<td>Enrolled in Second Summer</td>
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<td>First Generation in College</td>
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<td>Average number of terms enrolled in First Year</td>
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DATA RICH, INSIGHT POOR
Fall 2013 FTIC Program Placement (n = 1,429)

For every 100 Students

Spring 2014: 75 Students Return
Fall 2014: 50 Students Return
Spring 2015: 42 Students Return
Fall 2015: 30 Students Return

56 leak out over the course of 2 years
Building Capacity Activity

Brainstorming (11 min total)
• Individual Reflection (2 min)
  – Each person will reflect and document challenges the college faces in building capacity in data and analytics
• Pair and Share (4 min)
  – Each person will spend 2 minutes sharing the challenges on their respective list and build a comprehensive list
• Table Discussion (5 min)
  – Each group will share out with the Table the list of challenges and build a comprehensive list
  – Table will document the challenges on a large post-it
Building Capacity Activity (cont.)

Gallery Walk (15 min Total)
• Round 1 (5 min)
  – Review challenges
  – Identify solutions
• Round 2 (5 min)
  – Review Challenges
  – Add Solutions not already included
• Round 3 (5 min)
  – Repeat 2 above
Building Capacity Activity (cont.)

Actionable Solutions (15 min total)

• Individual Reflection (2 min)
  – Quiet time review of challenges and solutions
  – Document which solutions you believe are actionable at your institution

• Table Discussion (13 min)
  – Share with your table a solution that you believe is actionable and why
  – Other members at your table will ask clarifying questions and offer suggestions
Building Capacity Activity (cont.)

• Large Group Discussion (15 min total)
  – Build consensus on one solution to be shared with large group (1 min)
  – Each table shares out one solution (1 min per table)
  – Open Discussion
Exit Ticket

3 Things I Learned

2 Questions I Still Have

1 Thing I Can Implement When I Return to Campus
Data Science & Analytics: Skills Matrix

RESOURCES

Achieving the Dream

- Data Discovery Guide
- Data & Technology Insight Webinar Series
- Interventions Showcase
- Knowledge Center
- Learning Events
  - DREAM 2018, February 21-24, Nashville, TN
- ATD Data Coach
Questions?