Digital Transformation: Reading the Signals

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Malcolm Brown, Director, Learning Initiatives
Brian Kelly, Director, Cybersecurity Program
Kathe Pelletier, Director, Student Success Programs
Betsy Reinitz, Director, Enterprise IT Programs
Karen Wetzel, Director, Communities and Working Groups

Agenda

- Setting the stage
- Dx Signals in EDUCAUSE Communities
  - Teaching and Learning
  - Student Success
  - Enterprise IT
  - Cybersecurity
  - Community and Working Groups
- Discussion and Q&A
Dx: Impact and Strategy

Susan Grajek

Poll: What is Digital Transformation? (check one)

- Converting analog to digital
- Automation
- Information anywhere all the time
- 21st century technology in higher ed
- Using tech differently to further institutional objectives
Digital Transformation in Higher Education

The process of optimizing and **transforming** the institution’s operations, strategic directions, and value proposition through deep and coordinated shifts in culture, workforce, and technology.

Digital Transformation in context

**Digitization**
The process of changing from analog or physical (such as paper records and texts, in-person lectures, physical models, ID cards, and more), to digital form.

1. **Digitize information**
2. **Organize information**
3. **Automate processes**
4. **Streamline processes**
5. **Transform the Institution**
6. **Digital Transformation**

Digital transformation
The process of optimizing and transforming the institution’s operations, strategic directions, and value proposition through deep and coordinated shifts in culture, workforce, and technology.
Digital Transformation in context

1. Digitize information
   - Digitize paper records for archiving and retrieval

2. Automate processes
   - Extract metadata to be managed in a central repository

3. Streamline processes
   - Digitalize processes via electronic forms to improve accuracy and accountability

4. Transform the Institution
   - Increase operational transparency and efficiency of cross-functional processes
   - Develop an enterprise digital strategy using analytics, AI, mobile etc. to drive and scale innovation aligned with business goals

Digitization

Drivers
- Funding cuts
- Technology advances
- Changing student expectations

Components
- Culture
- Technology
- Workforce

Outcomes
- Teaching and learning innovations
- Improved student outcomes
- New business models
- New research capabilities

Digital Transformation
Getting Ready for Digital Transformation: Change Your Culture, Workforce, and Technology

by Susan Grajek and Betsy Reinitz  Monday, July 8, 2019  Editors’ Pick

Is Your Institution Driving to Digital Transformation?

Digital Transformation Signals: Is Your Institution on the Journey?

by Malcolm Brown, Betsy Reinitz and Karen Wetzel  Wednesday, October 9, 2019  Enterprise Connections

Technology Shifts

- If leaders must adopt innovative practices and create digital environments that provide unprecedented agility and flexibility, at the same time, they must also manage inaccurate and ever-changing technology ecosystems in a way that enables the institution and its academic and business units to quickly and efficiently achieve its strategic aims. New technologies do not by themselves bring about DX. Institutional DX initiatives can succeed only through the strategic application of a changing set of technologies in support of our institutional missions.

Culture Shifts

- DX requires a new approach to how campus leaders interact with each other—an approach that ensures a clear focus on progress toward institutional goals, a clear emphasis on change management, and an increase in institutional agility and flexibility to more readily changing needs.

Are there evidences of these shifts in culture?

- Focus on institutional goals
- Focus on mission-driven differentiation
- Strategic innovation aligned with key institutional ambitions
- Focus on learning and faculty success
- Leaders willing to consider new strategic directions
- Balanced on data and analytics to adjust institutional courses
- Staff focus on delivering to key management
- Institutional thinking and agility

Workforce Shifts

- Changes related to the IT workforce are having an increasingly impact on the day-to-day work of higher education professionals but also creating a need for new skills and competencies across the institutional community. These changes are creating new opportunities and threats and demanding a redefinition of human resource management.

- Three evidences of these shifts in workforce?

- HR roles and titles (e.g., chief data officer, chief innovation officer, senior management, business relationship management)
- Increasingly, roles and titles with the “business” of higher education
- Increasingly, roles that align with institutional strategy
- Roles that cross boundaries (e.g., partners residing in academic departments with responsibilities in the IT organization)
- Agility reaching new and shifting competencies across many roles
## Drive to Dx: Related Trends’ Influence on IT Strategy

<table>
<thead>
<tr>
<th>Trend</th>
<th>Influence</th>
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</thead>
<tbody>
<tr>
<td>IT as an agent of institutional transformation and innovation</td>
<td>52%</td>
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<tr>
<td>Digital transformation</td>
<td>48%</td>
</tr>
<tr>
<td>Higher education’s reputation and relevance</td>
<td>44%</td>
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<tr>
<td>Institutional innovation strategy</td>
<td>42%</td>
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<tr>
<td>Blending of roles and blurring of boundaries between IT &amp; the business</td>
<td>41%</td>
</tr>
<tr>
<td>Financial uncertainty for the institution</td>
<td>41%</td>
</tr>
<tr>
<td>New business models for higher education</td>
<td>34%</td>
</tr>
</tbody>
</table>

- **New business models for higher education**
- **Teaching and learning innovations**
- **Outcomes**
- **Improved student outcomes**
- **New business models**
- **New research capabilities**
How will you achieve your Dx outcomes?

Improved student outcomes

Teaching and learning innovations

New business models

New research capabilities

Outcomes

Do you have a Grand Strategy?
Why You Need a Grand Strategy for Dx

- Higher education must address its Grand Challenges
- A Grand Strategy approach can help
  - Integrate interests, threats, resources, and policies.
  - Provide a grand principle to guide the institution seeking a way forward in a complex and changing ecosystem
  - Provide a long-term vision that treats institutional resources holistically and focuses on the most consequential priorities
- Start with a Grand Principle that best fits ends and means: Simplification or Innovation are good choices
- Digital transformation can supply a set of Grand Plans and Behaviors to fuel your Grand Strategy

Grand Strategy is long-term

Grand strategy is anchored in long-term institutional mission and vision rather than any particular’s year’s or short term’s strategic plan
Grand Strategy is a guiding intellectual framework

An ecological worldview formed from a mix of different influences — experience, study, values, ideology

Helps leaders make sense of complexity and bring resources and commitments into alignment

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Grand Strategy can guide strategic planning

Lean into difficult trade-offs

Make priorities explicit

Translate objectives into clear implementation guidance and budgetary requirements
Grand Challenges for Higher Education

**FINANCIAL HEALTH**
- Persistence, retention, completion
- Engagement
- Outcomes

**STUDENT SUCCESS**
- Enrollment
- Costs
- Funding
- Natural disasters

**REPUTATION**
- Affordability
- Political climate
- Teaching
- Academic programs
- Research

**EXTERNAL COMPETITION**
- Alternative credentials
- Employer-based learning
- Talent
- Global HE

**GRAND PRINCIPLE:** SIMPLIFICATION
- Do less: reduce redundancy, outsource commodity operations
- Sharper focus on institutional and student outcomes and a seamless student experience
- Digital strategies to simplify operations and the user experience

**GRAND PLANS**
- Greater emphasis on coordination, collaboration, and shared goals
GRAND CHALLENGES

ENROLLMENT  STUDENT SUCCESS  COMPETITION  REPUTATION

GRAND PRINCIPLE: INNOVATION

GRAND PLANS

New strategic directions to meet 21st-century challenges, ambitions, and opportunities

Greater emphasis on flexibility, agility, anticipation and responding to ongoing change

New creative strategies inspired by new technologies & greater use of data

More emphasis on change and risk management, less on risk aversion.

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<table>
<thead>
<tr>
<th>Major Potential Benefit of Digital Transformation</th>
<th>Student success</th>
<th>Financial</th>
<th>Reputation</th>
<th>Competition</th>
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</thead>
<tbody>
<tr>
<td>Improving the student experience</td>
<td>84%</td>
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<td>Improving faculty teaching and advising</td>
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<td>Decreasing student dropout rate or improving retention</td>
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<td>Improving student course-level performance</td>
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Dx is real and predicted to grow in importance for higher education’s success

Two years from now
- Less important: 3%
- Just as important: 22%
- More important: 75%

Compared to two years ago
- Less important: 2%
- Just as important: 30%
- More important: 67%

Few are engaging in Dx but many are preparing to

Remembering that digital transformation is a series of deep and coordinated culture, workforce, and technology shifts that enable new educational and operating models and transform an institution’s operations, strategic directions, and value proposition, would you say your institution is engaging in digital transformation today?

<table>
<thead>
<tr>
<th>No</th>
<th>Not yet but we are exploring it</th>
<th>We are in the process of developing a Dx strategy</th>
<th>Yes</th>
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<td>16%</td>
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## Grand Challenges

**Financial Health**
- Greater emphasis on coordination, collaboration, and shared goals

**Student Success**
- Digital strategies to simplify operations and the user experience

**Reputation**
- Sharper focus on institutional and student outcomes and a seamless student experience

**Grand Principle:** Simplification

Today’s Dx pioneers are focused on simplification

**Grand Plans**
- Do less: reduce redundancy, outsource commodity operations

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**Dx IS addressing Grand Challenges**

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Recommendations

A Grand Strategy can facilitate the kind of coordinated action that today’s Grand Challenges require

A focus on grand strategy can help leaders think, plan, and act in an integrative and collaborative way

53% of CIOs describe insufficient cross-institutional planning or coordination as a major barrier to Dx
Most institutions will want to start with Simplification

Simplification paves the way for innovation

- **Digitization**: Changing from analog or physical to digital form
  - 30% - 60% may be here to some extent

- **Organize information**: 2

- **Automate processes**: 3

- **Streamline processes**: 4

- **Transform the Institution**: 5

**Digitalization**
Using digital technologies and information to transform individual institutional operations
- 45% - 80% may be here to some extent

**Digital Transformation**
The process of optimizing and transforming the institution’s operations, strategic directions, and value proposition through deep and coordinated shifts in culture, workforce, and technology

"This effort simplified the company’s systems and processes to reduce costs and risks. Without a powerful operational backbone, Philips' leaders would be consumed with executing and maintaining core processes instead of imaging, developing, and commercialized digital offering that help people live healthier lives."

You’ve got to be very careful if you don’t know where you are going, because you might not get there.

Yogi Berra
Ecosystem Elements by Access
Access spheres plotted by number of technologies
Categorized by color: Assessment, Authoring, Communication, Computing, Learning/Content Management, Media, Portal, Storage
Slack - course basecamp
Slack Integrations
  Zoom - for video calls as needed
  Polly - for class polls and brainstorms
  Donut - for class study-buddies & social learning
  Google Docs - for shared notes, syllabi, etc.
  Google Calendar - for tracking deets
WordPress - content repository
YouTube - video lectures if needed
Airtable - gradebook & content repository
Dx and Student Success

Kathe Pelletier
Student Success is a grand challenge

Consider the student success context...

1. Digitize information
   - Digitize paper records for archiving and retrieval

2. Organize information
   - Extract metadata to be managed in a central repository

3. Automate processes
   - Digitalize processes via electronic forms to improve accuracy and accountability

4. Streamline processes
   - Increase operational transparency and efficiency of cross-functional processes

5. Transform the Institution
   - Develop an enterprise digital strategy using analytics, AI, mobile etc. to drive and scale innovation aligned with business goals

Digitalization

Transform the Institution
Student Success: Maturity Index (2018)

Leadership support 3.9

Collaboration and culture 3.8

Technology 3.6

Process and decision-making 3.7

Defined outcomes 4.2

Student Success Technologies: Deployment Index (2018)

**Universal**
- Degree auditing
- Advising center management
- Education plan creation/tracking system
- Academic early-alert system
- Credit transfer/articulation system/dual enrollment
- 81-100% Deployed institution-wide in 81-100% of institutions

**Mainstream**
- Advising case management for student interaction tracking
- Course/program recommendation system
- Student extracurricular activities management system
- Student co-curricular activities management system
- Student success data warehouse/operational data store
- Application for students to access their data
- 61-80%

**Growing**
- Student self-service referral to social/community resources
- Student success analytics dashboards, Student success analytics system (i.e., predictive modeling)
- Consent platform for students to opt in/out of data collection/analytics
- 41-60%

**Emergent**
- 21-40%

**Experimental**
- 21%

EDUCAUSE Digital Capabilities 2018

Dx Signals in Student Success work

- Ensure that student success is part of the strategic plan AND central in the mindset of faculty and staff
- Visible, aligned leadership AND participation from front line staff in change initiatives
- Simplify operations across departments AND remove friction for students through student experience mapping
- Develop and support roles that cross boundaries; e.g., VP of Student Success working with Advising, Deans/Faculty, IT, IR
- Establish an enterprise strategy for student success tools and data architecture
- Work toward clear policies and process regarding student privacy and digital ethics

Dx and Enterprise IT

Betsy Reinitz
**Dx Signals: the Enterprise IT Role**

<table>
<thead>
<tr>
<th>Changes in Culture</th>
<th>Changes in Workforce</th>
<th>Changes in Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing focus on data and analytics</td>
<td>New and evolving roles</td>
<td>Increasing focus on flexibility and agility</td>
</tr>
<tr>
<td>Maturing data governance</td>
<td>Chief Data Officer</td>
<td>Aligning technology planning with institutional goals</td>
</tr>
<tr>
<td>Enhanced institutional role for IT leadership</td>
<td>Vendor relationship manager</td>
<td>Developing a data and analytics strategy</td>
</tr>
<tr>
<td>Moving from risk aversion to risk management</td>
<td>Technology architect</td>
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<td></td>
<td>Enterprise architect</td>
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<td></td>
<td>Liaison roles</td>
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<td>Expanding IT staff thinking</td>
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<td></td>
<td>- Role agility</td>
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<td></td>
<td>- Connection to institutional mission</td>
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</table>

**2019 Enterprise IT Resources**

- **Exploring the Role of Enterprise IT in Digital Transformation**
- Using data and analytics to assess progress on Dx initiatives (coming soon)

- **The role of IT governance in Dx**
- **Technology strategy**
- **Analytics and Business Intelligence**
- **The Role of Enterprise IT in Digital Transformation**
- **Business Processes**
- **Understanding Costs and Value**

- **Improving everyday stuff to help transform an institution**
- **Communication: key to understanding enterprise IT value in Dx**
- **Get your stakeholders on board**
Dx and Cybersecurity

Brian Kelly

Cybersecurity

- Cybersecurity professionals are on the DX journey
- Have you checked your logs for shifts within Cultural, Workforce and Technology
- Opportunity to engage with campus leaders to show/provide the value of cybersecurity in supporting DX
- We love checklists and frameworks
  - DIGITAL TRANSFORMATION SIGNALS
  - DX Journey map coming in 2020 and Checklist
- Dx session at Security Professionals Conference
Dx and the EDUCAUSE Community

Karen Wetzel

Community Groups and Working Groups

Why CGs and WGs?
- Brings the focus to where you are
- Lets you lead the conversation
- Flexible & agile

Community Groups
- Baseline discussions at community level
- Groups focusing on new/growing roles, Dx shifts

Working Groups
- Bring a Dx context to new work
- Highlight projects that focus on:
  - Dx drivers (e.g., data/data governance)
  - Dx shifts (workforce, technology, culture)
  - New Dx approaches
Coming Soon!

- Dx Case Studies
- Learn, Plan, and Do
- Dx Showcase
- Share
- Engage
- Be Recognized

What are yours? dx@educause.edu

Questions? Thoughts?
Contact us!

See more about digital transformation at:
www.educause.edu/dx

Do you want to get involved?
Email Betsy Reinitz at breinitz@educause.edu