Digital Transformation: How to Know It When You See It

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Outcomes

● Learn: What are some characteristics of digital transformation?

● Understand:
  ○ Why is digital transformation (Dx) urgent for higher education?
  ○ You may already be working on Dx.

Digital Transformation Signals: Is Your Institution on the Journey?
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.

*Adapted from* [Getting Ready for Digital Transformation: Change Your Culture, Workforce, and Technology](https://www.educause.edu/cast/)
**Digitization**

The process of changing from analog to digital form

*Examples*: paper records and texts, in person lectures, ID cards, etc.

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**Digitalization**

The process of using digital technologies and information to transform individual institutional operations

*Examples*: admissions, course registration, research administration, payroll, procurement, etc.

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**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

*Examples*: new institutional strategic direction leading to data driven culture, new workforce roles, and more agile technology

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**Transform the Institution**

Digital Transformation

1. Digitize information
2. Organize information
3. Automate processes
4. Streamline processes
5. Transform the Institution
The IT Leader’s Role

“IT leaders can play a critical role by

1) helping their institutions understand the urgency and potential of Digital Transformation (Dx), and

2) designing the architecture and infrastructure that will enable it.”

Report from the 2018 EDUCAUSE Task Force on Digital Transformation
Changing landscapes

credit: dapixara
Where Did All the Students Go?

Five views on the great enrollment crash
College enrollment down 1.7% nationwide
Many institutions missed headcount goals
Moody’s negative credit outlook
Fewer high school graduates
Students with different needs and expectations
State funding challenges
Parents who can’t or won’t pay for college

Madeleine Rhyneer, EAB

“Instead of transformation, they tweaked at the margins”

Angel Pérez, Trinity College
Over the last 10 years, do you think that government funding for public colleges and universities has generally increased, decreased, or stayed the same?
APM Question 1

- Decreased: 29%
- The same: 34%
- Increased: 27%
- Don't know: 10%
APM question 1

- Decreased: 28%
- The same: 36%
- Increased: 24%
- Dunno: 2%
“It’s time college leaders think about college the way students do.”

Gail Mellow, president, LaGuardia Community College
2 Student Success
Serving as a trusted partner with other campus units to drive and achieve student success initiatives

4 Student-centered institution
Understanding and advancing technology’s role in optimizing the student experience
Student Success

Student-centered institution

Integrated student advising
Equity and inclusion
degree pathways
Support of swirl
NGDLE
Adaptive tech
Data & analytics
Student well-being
I need to know why moving our app to the cloud didn't automatically solve all our problems.

You wouldn't let me re-architect the app to be cloud-native. Just put it in containers.

You can't solve a problem just by saying techy things. Kubernetes.
An exploration of what Digital Transformation is all about....
What’s Driving Dx?

- Pervasive adoption of technology across colleges and universities
- Reduced public funding
- New expectations of technology from students
- Increased skepticism about higher education
- Technology changes
- Data as institutional strategic asset
- …and many other factors
It’s more than an “IT Thing”

- Institutional Leadership needs to understand and champion the changes
- Builds on the core values of higher education
- The changes represent a foundational shift: changes to the underlying business model and approach
- It’s not a “once-and-done” solution
- The changes are holistic in nature
- Enables an institution to differentiate itself
With Digital Transformation, the **WHAT** (usually) involves technology.

But successfully embracing Dx entails a series of deep and coordinated **culture, workforce, and technology shifts.**
Cultural Shifts

Dx requires a new approach to how campus leaders interact with each other—an approach that entails a laser focus on progress toward institutional goals, a broad emphasis on change management, and an increase in institutional agility and flexibility to meet rapidly changing needs.

- Leadership and Collaboration
- Strategy and Process
- Data and Analytics
Workforce Shifts

Many of the changes associated with Dx not only are having an inexorable impact on the day-to-day work of IT professionals but also are creating the need for new skills and competencies across the institutional community.

- New Roles and Jobs
- New Skills and Competencies
Technology Shifts

Technology will continue to change, with astonishing speed and with consequences that are difficult to predict, much less prepare for. These changes include the way technology is managed, what technologies are available, the power and speed of technology, and how technology is applied.

- Sourcing and Scaling
- Technology Management
- Personalization and Individualization
- Emerging Technologies
A Framework for thinking about Digital Transformation
Why is a framework important?

**Intentionality**
It is important to give intentional thought and care to each component in order to achieve the full impact of the transformational effort.

**Holistic**
Provides a way to broadly think about the components that are needed and their impact on the institution.

It’s not “just” an IT effort.
A Framework to Describe Digital Transformation (Dx)

STARTS WITH

The why for the institutional change you are seeking to achieve

CONTEXT / INPUTS / DRIVERS

Market Forces
- Big Data
- New Technologies
- Increased User Directed Experiences
- Revamped Business Processes
- Demographic Shifts
- Many others...

Partnerships

The what you are implementing to achieve the changes

The Catalyst

The requires shifts to

Technology

Workforce

Culture

Changes to the value proposition of the institution
Reducing the cost attendance / student affordability

- Increasing cost of higher education
- Increased cost of traditional course materials and library licenses
- Increase of quality and quantity of OER materials
- Traditional publishers shifting from print to adaptive mechanisms - the textbook is becoming an application
- Competitive necessity (College X does this why don’t you?)
- Faculty control over course content and materials
- Emergence of rich Immersive course materials (360/AR/VR/XR)
- Marketplace of 3rd party providers of OER materials
- Increase in tools to collect and augment materials in LMS
- Accessibility requirements
- Decrease in profitability of textbooks in the campus store
Digital Transformation Example 1 – Implementing Open Educational Resources (OER)

THE WHAT

Having xx% of courses use Open Educational Resources instead of traditional textbooks.

Requires Changes to....

Technology

- Universal Design
- Will need to ensure digital materials are accessible
- Integrations with adaptive technologies and XR
- LMS (LTI) integration
- Open assets (interactives, etc.) function within systems
- Ensure student data is not compromised or collected w/o consent

Workforce

- The role of faculty work needs to shift (ex: from adopting a textbook from a publisher, to researching and adapting open material - not trivial!)
- Need people skilled at assisting faculty with identifying open material in particular subject areas (taking the place of the traditional publisher’s role)
- Need people skilled at modifying open resources to fit a particular need
- Need an OER advocate, expert, or liaison to provide education/awareness adoption
Digital Transformation Example 1 – Implementing Open Educational Resources (OER)

Requires Changes to…

- Change in mindset on “open” materials, applications, and assets.
- Faculty tenure and promotion
- Focus on the student
- Increased emphasis on experiences, labs, faculty background/research interests, practice, authentic assessments, metacognition, etc.
- Generational shift in approach to educational materials – today’s student is used to using YouTube or “scan” a MOOC for instructional content.
- Supports the shift to more non-traditional students and learning methods - Better Equity and Inclusion
- Shift from ownership of Intellectual Property to sharing of IP
● Higher Education becomes more affordable and more accessible.
● The costs for course material becomes more predictable.
● Students can become part of the process - they can help generate additional OER material, which enhances active learning.
Digitally transform masters/professional business education: make programs broadly accessible to an online audience at an attractive price point.

- Demographics: declining population
- Increasing cost of professional/graduate education
- Competition from adjacent markets
- Competition from disintermediated education
- Workforce need for continual reskilling
- Opportunity to leverage and promote lifelong connections with alums
Offer masters/professional business education on-line at an attractive price point

Requires Changes to:

Technology

- LMS technologies
- Integrations with emerging technologies, e.g., in Adaptive Learning or Extended Reality (XR)
- Assessment technologies
- Cloud services

Workforce

- Support LMS at a large scale
- Mastery of new technologies including LMS and related tools
- Innovation
Overcome fear that traditional higher education values will be undermined by new approaches

Overcome fear that university rankings will be negatively impacted by new student body profile, new academic programs

Willingness to change:
- class format (Flipped classrooms? Lectures?)
- traditional syllabus to suit new delivery method
- methods of student assessment
- selection of supporting resources

Use Big Data to enhance student experiences
Expand the customer base for Masters / Professional education through Digital Transformation.
Streamline the introduction of new technologies, avoiding the chaos that can ensue from technical changes that come with digital transformation

- Partnerships and suppliers from both the higher education ecosystem and from adjacent industries
- Big Data
- Crowdsourcing, Crowdfunding
Digital Transformation Example 3 – Enterprise Architecture

THE WHAT

Establish an Enterprise Architecture practice

Requires Changes to:

Technology
- Collaboration software
- Knowledge Management software

Workforce
- Knowledge of Enterprise Architecture frameworks
- Knowledge of Service Management frameworks

Culture
- Collaborate with other teams in the organization in planning the technical landscape
- Be willing to conform to decisions made for the good of the enterprise
- Overcome fear that coordination will slow down technology development and deployment
Employing a coordinated strategy that consistently considers the enterprise’s technical landscape holistically, the organization is better positioned to move quickly to adopt new technologies, new data and new processes that promote Digital Transformation.
A Framework to Describe Digital Transformation (Dx)

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Starts with

Context / Inputs / Drivers

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- Many others...

Partnerships

Requires Shifts to

Technology

Workforce

Culture

Changes to the value proposition of the institution

The Catalyst

The what you are implementing to achieve the changes
Dx Aspirations

- Focus on institutional direction and value
- Address widespread challenges
- Take advantage of opportunities
- Outcome: Substantial, profound impact, tangible and fundamental change
- Evidence of shifts in culture, workforce, and/or technology
Dx in Action

- **Brigham Young University**: University Application Programming Interface allows the campus digital environment to quickly and efficiently introduce (and sunset) network services and applications, enabling the environment to evolve in an agile and responsive manner.

- **Davidson College**: Reorganized IT department structure facilitates deeper collaboration across the institution, adds new services, and takes an increasingly interdisciplinary approach to the future of its digital environment.

- **Big Ten Academic Alliance**: Camps for open educational resources (OER) permit participating institutions to rapidly move ahead with the adoption of OER and reduce of student costs.

- **Ivy Tech Community College**: Developed a “data democracy” to tackle the challenge of analytics opportunities lost due to siloed data. The data system lets users answer questions in seconds without having to engage IT or analytics staff.
It’s a Journey

- Not all Dx projects have to be huge/$$$/immediate transformations
- Efforts can have different stages in their lifecycle
- Are there projects that may be one of the first 2Ds that you can start thinking about differently?
What challenges at your institution could benefit from Dx?

➔ Go to sli.do
➔ Enter code
Questions?

See more about digital transformation at

www.educause.edu/dx
Contact us!

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Session Evaluations

There are two ways to access the session and presenter evaluations:

1. In the online agenda, click on the “Evaluate Session” link

2. From the mobile app, click on the session you want from the schedule > then scroll down or click on the associated resources > and the evaluation will pop up in the list