Digital Transformation Principles

Driving Journeys Toward Educational Resilience

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Southern Alberta Institute of Technology
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A Snapshot of Our Session

(1) Innovation, Change and Transformation
   A Practitioner and Scholarly Perspective

(2) Guiding Principles for Digital Transformation of Teaching, Learning & Assessment and Institutional Preparedness
   Lessons from the UK’s National Digital Transformation Programme

(3) Commitment and Motivation to Drive Educational Resilience
   A Strategy Perspective from a Senior Leader

Text-chat and Interactions via Mentimeter

(1) Session resources
(2) Text-chat
(3) Poll results
(4) Analysis and summary of discussions together with audience ideas & perspectives
(5) Audience feedback
Speaker Bio (1) – Ron Murch

• Retired educator from the Haskayne School of Business, University of Calgary
• Taught and directed B.Comm., MBA, EMBA and Executive Leadership Programs
• Visiting faculty in UK, New Zealand, Hong Kong
• Information Technology, Executive Leadership, Management of Technology and Innovation
• B.Math., MBA
• Received awards for teaching excellence
• Member of the CIO Association of Canada
Key member of multi-million £s UK Government investment in Digital Transformation working through educational agencies (Jisc, HEA, LFHE, HEFCE, HEFCW, QAA, Becta):

- **Roles**: Consultant, Critical Friend, Mentor, Evaluator, Benchmarking specialist
- **Working with** universities/colleges (academics, students, management, administrators), employers (inc SMEs) and employer bodies
- **Specialisms**: technology-enhanced learning, digital innovation & change management, student employability, employer engagement, students as change agents / entrepreneurs, HE-FE-industry partnerships, flexible curriculum, digital literacy

**Independent Consultant – Digital Innovation & Transformation**

- Visiting Professor - University of Hertfordshire (Blended Learning Unit)
- Founder / board member of the (virtual) Automotive College
- Consultant to the European Commission
- Associate Consultant - Atkins Management Consultants

**Business communications:**
- Rethinking your professional practice for the post-digital age (co-author)
  - Routledge
- Technology for Employability Toolkit
  - Jisc
- Technology for Employability: Study into the role of technology in developing student employability
  - Jisc

**Digital 3.0 in Higher Education**
- IT Departments at the vanguard of digital leadership and disruptive innovation
  - Atkins Management Consultants

**QAA Flexible Curriculum Toolkit**

**QAA (Quality Assurance Agency)**

**Eight lessons from the private sector for universities investing in technology-enhanced learning**

**Industry 4.0: Implications, Issues and Opportunities for Higher Education**

**HE Efficiency Exchange**

**Financial Times Management Report:** Information Management in the Oil and Gas Industry: A New Vision for Productivity and Safety

**Financial Times Business Information**

**How World Events are Changing Education**
- Chapter: The Rise and Rise of Digital Learning in Higher Education
  - Brill

**The challenge of adoption of new technologies in higher education**

**Centre for Management Consulting Excellence**

**CMCE Consulting Research Conference**
Speaker Bio (3) – Michael Barr

• 28 years of experience as an IT practitioner
  • 16 years of that as Director and CIO
  • Five years of that in K-12, Eight in HE
• Leading digital transformation (DT) initiatives for 19 years
• Doctoral candidate – University of Bath, UK in Higher Education Management
  • Area of research: DT; Teaching practices; Motivation
• Memberships and board involvement in CIO and HEI consortiums at the provincial and federal level
Innovation, Change and Transformation

A Practitioner and Scholarly Perspective

Ron Murch
Senior Instructor Emeritus, Haskayne School of Business, University of Calgary, Canada
You can’t get there from here!

Start with Institutional values, culture, and strategy.
What are we really talking about?

• Conference theme? (DT and Educational Resilience)
• Do we need definitions? (probably a few key ones)
  • Resilience
  • Transformation
  • Innovation
• I’ll know it when I see it!
  • If I hadn’t believed it, I wouldn’t have seen it.
• The digital strategy and the institutional strategy must be co-aligned and will co-evolve.
Digital Transformation (DT) is a process or journey.

**There is no end! If you get it right, this is both the biggest benefit and the biggest challenge.**

The result of DT in HEI is a behavioural transformation that embeds a capacity for continuous, positive innovation enabled by digital technologies and collaboration throughout the institution.

There are helpful, proven dynamics from the worlds of business and behavioural psychology to encourage the success of innovation adoption and diffusion.
It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new system. For the initiator has the enmity of all who would profit by the preservation of the old institution and merely lukewarm defenders in those who would gain by the new ones.

Machiavelli, “The Prince”, 1513
FUBINI’S LAW

• People initially use a new technology to do what they are already doing – only better.

• Then, they gradually begin to use the technology to do new things.

• These new things change the ways we live and work.

➢ The new lifestyles and workstyles change society and eventually change technology.
Single-loop and Double-loop Learning

- **Variable**
- **Action**
- **Result**

**Learn “Why”**

**Learn “What”**

**Single-Loop**

**Double-Loop**
Change Isn’t Easy

- Change
- Intention
- To change
- Perceived Value
- Perceived Ease
- Intention To change
- Change

Individual Differences
- System Characteristics
- Social Influence
- Facilitating Conditions

Adapted from Viswanath Venkatesh and Hillol Bala, “Technology Acceptance Model 3 and a Research Agenda on Interventions,” Decision Sciences (2008), 39(2), 276
Guiding Principles
for
Digital Transformation of Teaching, Learning & Assessment
and Institutional Preparedness

Lessons from the UK’s National Digital Transformation Programme

Dr Peter Chatterton
Independent Consultant – Digital Innovation & Transformation, UK
Institutional Digital Transformation – a focus on 2 key elements

- Digital transformation of teaching, learning & assessment
- Institutional “Preparedness”
Key Lessons Learnt from UK’s multi-£m Investment in Digital Transformation of HE

- Problems of complexity, uncertainty and rapid change (external & internal)
- Too much innovation and insufficient embedding / scaling-up
- Complex challenges not addressed
- Insufficient programme performance goals (sector, institutional and staff)
- Insufficient leadership commitment
Key Lessons Learnt from UK Covid-lockdown

- Balance between “stick” and “carrot” change approaches needs to be better defined long-term
- “Slow adopters” need help with visualising & experiencing good digital learning
- Need for leadership to anticipate, address and resource challenges
- Support for Digital Learning needs to embrace faculty goals and plans
- Need to embrace QER "Quality", "Efficiency" & "Responsiveness"
Challenges in the Adoption of Digital Learning in HE

**Organisational issues**
- Insufficient resourcing for academics
- Insufficient academic reward and recognition for teaching and learning
- Need to redefine institutional processes in order to integrate and embed digital innovation and change
- Lack of ownership/strategic direction/performance goals at the local level
- Over-reliance on multiple educational agencies

**Digital TL&A challenges**
- Difficulties of achieving “personalisation” with industrial-scale learning
- Pace of change, complexity and too much of everything
- Rethinking teaching, learning and assessment models - evolution or revolution?
- Rethinking staff roles and capabilities
- Bad (digital) things happening
- Lack of student and academic preparedness for self-driven digital learning
- Specific & complex challenges associated with advanced technologies
- Difficulties in digitising practice-based learning

**People issues**
- Overwhelmed and often fail to appreciate the need for change
- Varying digital enthusiasm and capabilities
- Variation in motivation to “visualise” and experience digital learning in practice
- Autonomous academic cultures and ways of working
- Mixed feelings on changing tutoring roles
- Demands for flexibility & “consistency” of digital experience
- Demands for wider cultural/community experiences (non-digital)
- Lack of preparedness for HE study/learning models
- Variation in understanding of scope of digital literacy
- Too remote from the coalface and the “digital experience” (non-practitioners)
- Under-appreciation of the strategic importance of digital technologies
- Digital learning can be a “poisoned chalice” for management careers
- Faculty/School management (local level) fail to embed digital learning in business plans/processes (and are not mandated to)
- “Not invented here” syndrome
- Low aspirations for digital literacy by universities, educational agencies and employers
- Universities need to rethink what support to academics is provided and how to scale this up
- Support services need to address faculty & institutional strategic goals, plans and operations
- Support staff roles and capabilities need to evolve to address innovation, change and embedding

**Leadership**
- Varying digital enthusiasm and capabilities
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Guiding Principles for Digital Transformation of TL&A

Build on and evolve established and evidence-based pedagogic models

- Balance synchronous and asynchronous approaches
- Adopt high levels of communications, engagement and community-building
- Adopt "assessment for learning" approaches
- Adopt DIY approaches to content creation
- Adopt longitudinal approaches to student academic, personal and professional development
- Focus on QER (course Quality, Efficiency and Responsiveness)

+++ radical innovation??
Guiding Principles for Institutional “Preparedness”

- Visioning and scenario planning
- Recognise, anticipate and address challenges and barriers
- Consider new business models, partnerships, services etc
- Co-align and co-evolve digital and institutional strategy
- Evolve ethics, values and behaviours
- Evolve roles, capabilities and employment models for ALL
- Embrace (& balance) QER (Quality, Efficiency, Responsiveness)
- Define appropriate performance goals
- Learn from the external environment
- People issues
- Organisational issues
- Digital TL&A challenges
Commitment and Motivation to Drive Educational Resilience

*A Strategy Perspective from a Senior Leader*

Michael Barr

Chief Information Officer at Southern Alberta Institute of Technology (SAIT), Canada
Leadership and Motivation Enable Resilience

• Don’t get too focused on technology as the solution: Keep in mind that 80% of any solution is people and process, it’s typically 20% that’s the technology

• How do you view DT? Journey; Outcome; Relationship
  • The way in which you view it, influences how you respond, i.e., your actions or utterances

• Bottom-up change is desirable but requires senior leadership support and sponsorship if it is to have a chance of succeeding

• Teaching faculty motivation is critical to the success of DT initiatives

• Motivation can be analyzed through questions:
  • Is the task or thing I have to do understood?
  • Can I do it?
  • Am I set up for success?
Leadership and Motivation Enable Resilience

- Forces outside of the DT initiative (IV) that impact on teaching faculty (DV)
- Management (MedV) and IT governance (MedV’) as a mediating force between the two
  - Management as a mediating force between the two
  - IT governance as a mediating force between the two
  - Strategic planning as a mediating force between the two
- The phenomenon I am researching: DT-motivation-affective forces (see diagram)
- Do significant or interesting relationships exist within the phenomenon?
- Can we develop an instrument to assist with strategic planning with a specific focus of addressing motivation issues that might impact the implementation of DT change initiatives such as changes to teaching practices? This is a key component of a successful strategic plan.
DT-Motivation-Affect Phenomenon

- Motivation
- Affect Phenomenon

External or Internal Affective Force

Affective Force

- Independent Variable (IV)

Mediation Actions

- Mediation Variable (MedV)

IV : MedV

IV : DV

MedV : DV

Feelings of Motivation

- Dependent Variable (DV)

DT Change Event

Faculty Member

Motivation Feelings

Management
In Summary

• Student and faculty requirements are increasingly complex
  • **Student support** processes, and the underlying technology, must continue to evolve to ensure continued relevancy
  • Increasing pressure to embed student supports into **teaching practices** – support this via AI?

• Digital transformation change initiatives are complex
• The leadership skills you have used in the past might not get you to the future
• Are you being honest about your institutional change capabilities?
• Be aware of:
  • **Underestimating** the complexities involved
  • **Overestimating** your management skills
Discussion

Comments?

Questions?

Perspectives?

Ideas?
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Bibliography and Reference Materials


Complexity Theory: https://organisationdevelopment.org/five-core-theories-complexity-theory-organisation-development/ (Applied to managing change in organizations - especially complex and chaotic ones)


Definition of “entropy” - https://www.merriam-webster.com/dictionary/entropy


