EDUCAUSE: Connectivism

Know Where: Learning in a Complex, Adaptive Age
Gates on education...

“By obsolete, I mean that our high schools—even when they’re working exactly as designed—cannot teach our kids what they need to know today.

Training the workforce of tomorrow with the high schools of today is like trying to teach kids about today's computers on a 50-year-old mainframe. It's the wrong tool for the times.”

"Mass education designed for the industrial age meets the needs of neither the pre-industrial village nor the post-industrial future...indeed, all education - has to be totally reconceptualized."

-Alvin Toffler "Revolutionary Wealth"
What’s happening?

- Networks
- Technology
- Decentralization
- Knowledge growth
- Globalization
- Control shift
- Blurring Realities (physical and virtual)
STRUCTURES

Hierarchy
(static)

Network
(dynamic)
SPACES

CLASSROOM
LMS
(built)

ECOLOGY
(nurtured)
Half Life of Knowledge

Content Delivered as Courses, Programs

Line of Progressive Revision

Currency Gap

Half Life of Knowledge

1980 →

Timeline
Distributed Knowledge Representation

Network is the learning
FILTERING... THROUGH THE PROCESS, NOT IN ADVANCE.

CONTRIVED

Narrated before hand

DYNAMIC

Generated by the knowledge space

PROCESS
Where does knowledge reside?

• Vygotsky, Wittgenstein, Spivey
• Landauer & Dumais – more than should be revealed
  (http://lsa.colorado.edu/papers/plato/plato.annote.html)
• The network is the learning
Learning is:

"Network Formation: adding new nodes, creating new neural paths"
Pattern Recognition

What does it mean?
LEARNING IN SYNCH WITH LIFE

LIFE → LEARNING

LIFE ❤ LEARNING

LIFE ❤ LEARNING
Centering

“Things fall apart; the center cannot hold; Mere anarchy is loosed upon the world”

- W.B. Yeats
INTEGRATING

Television

Internet

Print Media

Radio

CENTERING

Dialogue

Pulling Together needed elements
Creating whole with pieces

• Achieving a clear aim in a distributed, decentralized model
• See nuanced, multi-dimensional elements of learning
• Move away from mono-chromatic views – don’t force one model
Ecologies, not courses

• **Courses**
  - Static
  - Structured
  - Centralized
  - Controlled
  - Created
  - Pre-filtered
  - Mono-chromatic
  - Out of synch with life

• **Ecologies**
  - Dynamic
  - Complex
  - Adaptive
  - Networks
  - Personalized
  - Fostered
  - Filtered by peers
  - Integrated
Learning Ecology

Connectivism: Process of creating network
Networks: Micro and Macro

What happens in our head is a micro model of what happens in an external network
How should our learning be adaptive?

• To the content?
• To the participants?
• Space, structure and content should change as circumstances change
  - Game environments
All of us

• Doing it together, while apart
• “Next market transition is collaboration”

- John Chambers
How do we need to change our structures?

Value point: potential for connections
Content vs. Conversations

• It’s the pipe that counts
• Knowing where is entry point
• Aggregating is key skill
• Incorporation of diversity (“wisdom of crowds”) is key
• Recognizing meaning of aggregated image is critical
What about content?

- Is it required in advance of the learning?
- Is it a by-product of learning?
See the whole, function in the part

- Each learning task requires a different approach
- Need drives selection (not selection driving options)
- Learning type determined by need, context, resources
What are required skills?

• Navigating information landscape
• Evaluation/authentication
• Creating personal learning network
• Critical and creative thinking
• Pattern recognition
• Acceptance of uncertainty (moving forward on “best image” of situation)
Are our educational spaces and structures ready?

- Comprehension of changes is missing
- Vision is lacking
- Need innovation, conceptualization
- Rebuild, not retool, education
Next Steps?