Georgia Tech

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Dean
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Georgia Tech Context

- Professional Education (annually)
  - 13,500 individuals from half world’s countries
  - 3,000 companies
  - $28.5M revenue (~50% back to GT)

- Coursera
  - ~750,000 enrollments in 2 years
  - 20+ courses, ~10/year created
  - Past year has seen many flipped classes

- Online Master Science Computer Science
  - With Udacity and AT&T
  - Fall 2014: 1,200 students; Spring 2015: 2,000 students
  - Non-credit courses also available
Higher Education: Changing Context

• Public pressure on higher education
  – Student loan debt exceeds consumer credit debt
  – No longer just great graduates; must be employable
  – No longer initial job; interact for lifetime career
  – No longer just world class research; create companies/jobs and move research findings to industry faster
  – No longer just local impact; influence global activities
  – Qualities of graduates: innovative/creative problem solvers

• Changing federal/state/endowment budget landscapes

• Partnerships benefitting local economies and their workforce, global implications

• Compliance/governance more complex

• More emphasis on bottom line ROI
Global Influences

• Technology rapidly influencing jobs
• Technology enhancing learning
  – Online around for some time, as has cognitive aids
  – New abilities, for residential and online
• Power of the human network
  – Circa 2010, Global ‘think tank’ at Aalto University
    • A new sociology of learning & work
    • Not only personal, but for network gain
    • Not random encounters, but meaningful networks
• Return on investment
  – Internal: recover costs before next technology
  – External: recover education cost through impacts
Concrete Next Steps

If faculty interested:

• Consider focused/measurable partnerships
  – External, augment capabilities
  – Internal, seek out potential expertise

• Seek industry support
  – Changing workforce & corporate strategies
  – Alternative to federal research programs

• Provide student services for online (campus partner)
  – Adult learners have different needs
  – Showcase relevancy
  – Course/program completion may not be right metric
Stanford ONLINE

John Mitchell
Vice Provost for Online Learning
Pivotal moment in higher education

- Educational demands of an info-based society
- Rapidly improving digital technology
- Vibrant public debate about the cost, means and ends of higher education
Distance learning is decades old

Stanford Instructional Television Network

“Largest single university provider of live graduate courses in the world” (1993)

http://news.stanford.edu/pr/93/931129Arc3033.html
The Open Learning Initiative offers online courses to anyone who wants to learn or teach. Our aim is to combine open, high-quality courses, continuous feedback, and research to improve learning and transform higher education. Learn More →
Change takes time

Apple Newton, 1987

Palm Pilot, 1997

iPhone, 2007
CS has much to offer

• Forward-looking interdisciplinary field, open to new frontiers, new applications
• Know how to manage teams, address scale
• Our technology is everywhere

As academics we can
• Help advance learning for our institutions, broadly
• Improve teaching and learning of CS
Advance the understanding and use of new technologies and pedagogical methods, for Stanford students and faculty and in service to higher education and lifelong learning.
Development process

Instructional design → Production → Platform

- OpenEdX
- NovoEd
- Coursera

Public → Lifelong → Reuse → Data

Publication

Seed Grant

Dept., Schools

Centers

Lifelong Learning

Campus
Lessons learned

- Promising technology supporting innovation
- Value and excitement of large audiences
- Tremendous research opportunity
We are Progressing Along Two Curves

Hype Cycle
We are Progressing Along Two Curves

Disruptive Innovation

- Most demanding use
- High quality use
- Disruptive Technology
- Medium quality use
- Low quality use
Directions for future

• Research-based teaching
• Teaching-based research
• Online tools, resources, programs
• Experiential learning
Information available on our websites

online.stanford.edu
lytics.stanford.edu
vpol.stanford.edu
MOOCs and Online Education: The Evolving Big Picture

Marian Petre
The Open University

OERs vs Education
about the Open University

teaching and research

250,000 students per year

open to people, places, ideas

ˈsupported open learning’
making educational resources ubiquitous is cool, eh?

MOOCs / OERs

teachers, formative dialogues

online & distance education

but... education is MORE than educational resources
What is our role as educators in the 21st century?

And what’s the value proposition of education?
value proposition of traditional education:

- access to information
- selection and structuring of significant information
- interpretation and personal tutoring
- feedback and forcing functions
- liberal education
- network of profs, peers, and opportunities
- credentials

in collaboration with Mary Shaw
entering distance ed:

- visibility, profile, marketing
- scale and reach
- excluding the competition
- learning analytics
- teaching as a means of recruitment
- market testing
- extension learning

in collaboration with Mary Shaw
What about ‘education proper’ … developing informed, critical minds?

- resources: on-demand access to high-quality material
- dialogues
- community

in collaboration with Mary Shaw
Goodbye to all this?

The worlds of publishing, music, shopping, and journalism have been revolutionised by the Internet. Next in line? Education. Academics at leading US institutions are using the web to offer world-class tuition — free — to anyone who can log on, anywhere in the world. Is this the end of campus life?

BY CAROLE CADWALLAD DR.
Your students need YOU

(and you need them)
credentials
sustainability
respect for IP
attrition

90% +

OU experience:
Entry is easy;
exit with a degree is difficult.

Undergraduate education
has different needs from
extension learning.
TECHNOLOGY IS THE AGENT OF CHANGE IN EDUCATION

debunking the myth

The agent of change is teachers, not technology.
Concrete recommendations:

- **There are no MOOCs without teachers.** Technology is the servant.
- **Learn about the difference between OERs and distance education.**
- **Be honest about your goals.**
- **How will you support the crucial educational dialogues?**
- **How will you provide credentials?**
- **Good distance education isn’t cheap.** Make a realistic business case. Do a realistic cost-benefit analysis.
- **Plan for sustainability:** Think not just about initial production, but ongoing presentation and update costs.
- **How will you ensure quality?**