Looking to the edges: future perspectives

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Outline

• MOOCs - opportunities
• A bigger picture?
  • Key drivers & technologies
• Looking to the edges
  • Domains of disruption?
  • 3 case studies
• Questions & issues arising
MOOC opportunities

"The model makes freshman year relatively risk free and significantly less expensive than the typical first year of study on a college campus."

FORTUNE

Global Freshman Academy
Start your freshman year online
#CollegeMyWay
MOOC opportunities…

Innovative pedagogical practices

1 / Emotional intelligence
2 / Cross- and trans-disciplinary
3 / Open Educational Resources
4 / Meaningful activities
5 / Engaging assessment formats
6 / Formative assessment
7 / Recognition of informal & non-formal learning
8 / Learning by exploring
9 / Learning by creating
10 / Learning by playing
11 / Self-regulated learning
12 / Personalized learning
13 / Peer-to-peer collaboration
14 / Soft skills
15 / Individual strengths
16 / Multiple learning styles
17 / Multiple modes of thinking
18 / Innovating services
19 / Innovative timetables
20 / Monitoring quality
21 / Social inclusion & equity
22 / (Social) entrepreneurship
23 / Innovation management
24 / Learning events
25 / Social networks
26 / Networking with real-world
27 / Physical space
28 / ICT infrastructure
It’s not just about MOOCs – key drivers

Figure 1: Three challenges for the next decade

**ACCESS**
- Enrollment caps
- Course availability
- “Non-traditional” new normal

**QUALITY**
- Low completion rates
- Unclear learning outcomes

**COST**
- Tuition increasing 3% over inflation
- State budget cuts
- Limited student ability to pay
Demand for HE

TOTAL NUMBER OF STUDENTS IN HIGHER EDUCATION
- LARGER THAN THE POPULATION OF RUSSIA OR NIGERIA

28m 1970
164.7m 2009
262m 2025 [forecast]

SOURCE: OECD, EDUCATION AT A GLANCE 2011
Estimated value of global education provision

• 2\textsuperscript{nd} largest sector after healthcare

• Enrolments in tertiary education:
  • 1970 = 33m  2010 = 178m

• Estimates of 18-24 population:
  • 2015 = 830m  2020 = 827m

• Market size:
  • 2005 = $2.5\text{tr}$

• Global education expenditure
  • 2012 = $4.5\text{tr}$

(BIS, July 2013)
Heterogeneous Students & their choices

Student Type
- Full-Time Undergraduate
- Undergraduate requiring remedial help
- Part-time worker
- Job seeker
- High school student
- Overseas student
- Casual learner

Looking to Achieve...
- Honours degree
- Experience of attending a university
- College credit
- Informal certification
- New knowledge

Likely Provider
- Four-year college
- Community college
- For-profit institution
- Online university
- MOOC

Source: Outsell analysis
Unbundling

Content delivery
Online, students have access to more engaging and entertaining content and instructors with more authority and expertise.

Models of thinking and doing
Instructors can rely on demonstrations of thinking and doing put online by experts in their fields, freeing them to focus on the direct relationship with the student.

Content sequencing and pathways
Students will have easy access to more constructivist curriculum packages and have courses of study with a tighter alignment to the job market.

A transformative experience
Students starting college are seeking a space to grow as people. The internal transformation may be hard to achieve online, but may be possible through alternative in-person programs.

A supervised coming of age
What helps students come of age? Events and curriculum that build character, provide opportunities for leadership, and force students to interact with different cultures and ideas.

Feedback leading to mastery
While feedback on simple math or code problems is relatively easy to do at scale, feedback on speech, presentation, writing, and communication are markedly difficult to automate or scale.

Mentorship
Potential mentors generally lack the drive or time to find and filter new young people to mentor. Within the shared environment of academia, the "pay it forward" value of mentorship is more immediately apparent.

A signal to the job market
Traditionally, a degree is a signifier of motivation, socialization, and learning capability. The internet is introducing alternative signifiers for skills and proficiency.

A credential of estimated competency
Given the variation in content and quality across the education system, a diploma does not always correlate tightly to skill sets in demand.
Global HE Market Forecast (IT)

- Unbundling of the HE marketplace
  - HEIs outsourcing
  - 3rd party service providers help HEIs build & manage online services = $bn market
- HE market consists of:
  - Software solutions, content & collaboration, data security & compliance, campus technology, student & curriculum, performance management
- Growth predicted:
  - From $43.06bn in 2013 - $65.83bn in 2019
Technology drivers - Convergence & Integration
The digital age…
NMC Horizon Reports

2013

• 1 year or less
  • MOOCs
  • Tablet Computing

• 2-3 years
  • Games & Gamification
  • Learning Analytics

• 4-5 years
  • 3D printing
  • Wearable technology

2014

1-2 years

• Ubiquity of social media
• Integration of online, hybrid, collaborative

3-5 years

• Rise of data-driven learning & assessment
• Students: from consumers to creators

5+ years

• Agile approaches to change
• Evolution of online learning
Looking to the edges – new providers & services

3 ‘domains of disruption’? – 3 cases

• Assessment & credentialing – Open Badges
• Libraries & knowledge resources – Digitization
• Personalized student pathways – IBM’s ‘Exceptional Student Experience’
Open badges

“Digital badges can contain specific claims & detailed evidence supporting those claims. Open digital badges allow this information to circulate in digital social networks. Many are discovering that this makes open digital badges potentially transformative & routinely disruptive…”

(Daniel Hickey, 30.8.14, IU Centre for Research on Learning & Technology)
OPEN BADGES
ANATOMY

- Badge image
- Badge name
- Description
- Criteria
- Issuer
- Evidence
- Date issued
- Standards
- Tags
Open Badges

• Mozilla’s digital accreditation infrastructure
• Support for CBE at policy level (US DoE; Lumina Foundation, Bill & Melinda Gates Fdtn)
• Next generation learning management systems (Educause White Paper 2015)
  • Personalized & collaborative environment
  • Flexible, intuitive, driven by data to help learners
• Parallel developments – VALUE initiative (AACU) - eportfolios
HE Examples

- **Indiana University** – ‘Open Badges & beyond in OpenedX & beyond’
- **Deakin University** – DeakinConnect integrates open credit into MOOC
- **Purdue University** – Passport learning & eportfolio system for learner-centred engagement & skill-building
- **University of Michigan** – Recognizing co-curricular learning using digital badges in Engineering & STEM Academies
- **Open University** – introducing BOCs
Issues arising

• Sharpening & broadening learning outcomes
• Replacement or integral to degrees?
• Shifting accreditation – from HEI to instructor, from learner to community of practice?
• Utility for employers?
• Uses of data?
“The convergence of IT, telecommunications & media is changing the way information is collected, stored and accessed. This revolution is having effects on the development & organisation of information & artefact repositories such as libraries and museums…”

Digitizing…

• Google Books - largest online body of human knowledge?
• Google Books Partner Program, Google Library Project (books out of copyright to increase access)
• HE Partners – Harvard, Oxford, Stanford…
• Oxford & Michigan: *Early English Books Online* – 25,000 texts into public domain; March 2015 Hackfest & Ideas Hack – students, researchers (all disciplines) + public create projects
Issues arising

• Copyright status (Google Books - settlement of class action still pending, 2014)

• Lack of editing to correct errors in texts & metadata (for cataloguing)

• Open access v for-profit access

• Privacy – ‘passing personal data to the mothership’ (Adobe Digital Editions Software)
Future Scenarios for Research Libraries?

(ARL 2030 Scenarios)
Personalized student pathways

“Institutions need to proactively manage the machinery of profiling, attracting & retaining students….

Students expect greater VFM from their investment & demand up-to-date collaboration, greater diversity of provision, more variety in modes of learning…”
IBM – ‘creating a holistic view of every student’

• A pillar of the IBM Smarter Education Framework

• Recruitment with Digital Marketing
• Access via Personalised Portal
• Pedagogy with Social Collaboration
• Retention with Predictive Analytics

HELPING EDUCATION BECOME TRULY STUDENT-CENTRIC
HE examples

• **University of London** – integrating access to key services, virtual learning environment & email

• **University of Arizona** – integrating data giving deans, administrators & professors 90% faster access to data

• **University of Telecommunications Leipzig** – using analytics to respond quickly to industry needs (launching course in 2.5 c/f 12 months & increasing demand to 300% + students more employable)

• **LSBU** – integrating predictive analytics, social collaboration & personalised digital portal – improve teaching, assessment, feedback & student preparation for work
Issues arising

• Privacy
• Ethics
• Hype v reality?
• Passive or active learners?
• Impact on faculty
Alternative futures?