Can the ugly ducking of ODL be transformed into a swan?

The MOOC effect

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"Just as you please," said the old Duck; and she went away.
At last the great egg burst. "Piep! piep!" said the little one, and crept forth. It was very large and very ugly. The Duck looked at it.

"Peep! Peep!" said the younger as he rolled out of the shell.

"It's a very large duckling," said she; "none of the others look like that: can it really be a turkey chick? Now we shall soon find it out. It must go into the water, even if I have to thrust it in myself."
Correspondence Colleges

- INTEC, Cape Town (ICS) (1906)
- Lyceum College (Union College) (1917)
- Rapid Results College (1928)
- Success College (1940)
- Damelin Correspondence College (1948)
- Turret Correspondence College (1970)
The Rise of Open Universities
Athabasca (1978)
IGNOU (1985)
UKOU (1969)
AICU (1974)
Bangladesh Open University (1902)
BRAOU, Hyderabad, India (1982)
UNISA, South Africa (1946)
Open Univ of Sri Lanka (1984)
BCOU (1978)/OLA (1988)
Tele-Universite du Quebec (1972)
2012 COMMONWEALTH OPEN UNIVERSITIES
Mega-Universities

- 1994:
  11 with 3 million

- 2008:
  23 with 9 million
A strange paradox

Distance education is booming

BUT

Opposition to ODL is emerging all over the world
Barriers to ODL

- No government employment for ODL graduates
- Distinguish between ODL and F2F on transcripts

Proposed Legislation:
‘(Academic diplomas and degrees) should make mention of the modality in which the studies were completed...’
August 26, 2010: Ministry of Education announces all distance education programmes in private and public institutions scrapped.

‘distance learning education is unnecessary at this stage in the development of the education sector’
Ethiopia

“a happy ending”

The ban was lifted in October 2010 after robust negotiations with 64, mostly private, institutions and the introduction of a quality assurance system.
“by preventing the TV Universities from offering four-year degrees China effectively condemns them to an educational ghetto of low prestige no matter how high the quality of their work”

John Daniel
Plan

- The context
- The response
- Implications for ODL in the developing world
The context

- Demand
- Costs
- Technology
Exploding demand for HE

- 2007: 150.6 million tertiary students globally
- 2012: 165 million
- 2025: 263 million
Access to Higher Education

- OECD Average 40-50%
- Caribbean 25%
- South Asia 15%
- Sub-Saharan Africa 10%
Tertiary Enrolment - Sub-Saharan Africa

The Demand

4 new universities to cater to 30,000 needed each week to accommodate children who will reach enrolment age by 2025

go.nature.com/mjuzhu

Everitt, qtd Liyanagunawardena et al, 2013
Rising Costs of Higher Education

Source: The Economist Dec 1st – 7th, 2012, Higher education, Not what it used to be.
The Digital Divide (Commonwealth countries)

Source: International Telecommunications Union
ICT in Africa

From digital divide to digital dividend

- The emergence of mobiles
- Use of appropriate technologies that are affordable, accessible and available
ICT in Africa - Mobiles

- Mobile-cellular Subscriptions Per 100 Inhabitants
- Active Mobile-broadband Subscriptions Per 100 Inhabitants

THE RESPONSE
Massive Open Online Courses: MOOCs

... a MOOC is a type of online course aimed at large scale participation and open access via the web. MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by OER.

Wikipedia, 20/09/12
MOOC

Focus on Scalability

What is massive?
- 100?
- 1,000?
- 10,000?
- 100,000?

Focus on Community and Connections

Focus on Scalability

Focus on Community and Connections

What is massive?
- 100?
- 1,000?
- 10,000?
- 100,000?

Open registration?

Local cohorts?

Self-paced?

Start/end dates?

College credits?

Badges?

Role of the instructor?

Learning community?

Open content?

Free of charge?

Affordable?

Real-time interaction?

Scripted assessments and feedback?
Massive Open Online Courses: MOOCs

Coursera

Future Learn

UDACITY

edX
MOOCs are typically

- Free of charge
- Designed for large numbers
- Designed to encourage peer to peer learning
- Meant to award completion certificates rather than course credits

OBHE Report, 2012
Stanford 2011

- Artificial Intelligence course
- 160,000 registered
- 23,000 completed
- All countries except North Korea
The ‘Massive’ in the MOOC

270 000
Students enrolled in Udacity’s Computer Science MOOC

200 000
US University first-year students intending to study Computer Science in 2968 4-year degree granting institutions

The MOOC Experience

- March 2013: 132 MOOCs (US)
- Participants mostly from US and Europe
- Courses in Computer Science (61); Business & Management; (21); Humanities (14);
- Success rates: less than 10%

T Liyanagunawardena, S Williams, A Adams, ‘The impact & reach of MOOCs: a developing countries’ perspective’, May 2013
Student Origins

- United States, 27.7%
- India, 8.8%
- Brazil, 5.1%
- United Kingdom, 4.4%
- Spain, 4%
- Canada, 3.6%
- Australia, 2.3%
- Russia, 2.2%
- Rest of the world, 41.9%

Courses Offered

- Mathematics, 6%
- Science, 30%
- Arts and humanities, 28%
- Information technology, 23%
- Business, 13%

FutureLearn

- A social enterprise initiative of OU UK
- Emphasis on enhancing the quality of learner/user experience
  - To cover 13 M users in five years
- Led by highly experienced instructors and designers
- Partners:
  - 23 Universities in UK, Europe and Australia
  - The British Council and the British Museum
Pakistan

- MOOC’s based on Pakistan Education and Research Network (PERN2)
  - One GB bandwidth to every HE institution
- Use of integrated courses from Coursera, OCW MIT, and Khan Academy
- Course delivery using satellite TV
  - 2000 lectures
  - Synchronous delivery, exams and credits offered
India: Massive Open Online Certification

- Between 250,000 to 500,000 learners
- Certification: Data Structures, Algorithms and Programming Methodologies
- Partners: Five IITs (Chennai), Several IIITs, NASSCOM, Cognizant and TCS
- Subject Experts: Academy and Industry
- Online Mentors: senior industry professionals and academics
- Roll out: Oct 2013
MOOC for Development:
COL and IIT-Kanpur (Oct-Nov 2013)

- Designed by COL and IIT-Kanpur
- Offered, managed and certified by IIT-Kanpur
- Cloud-based platform, delivery compatible with mobiles using Android
- Emphasis on quality of learner experience
- Experts from different countries for online mentoring
MOOC on M4D

- Covering use of mobile devices and technologies in education, rural banking and agricultural extension

- Sources of content:
  - IIT-Kanpur (Departments of Computer Science and Electrical Engineering)
  - COL
  - National Institute of Banking Management, India
  - Athabasca University (Center for Distance Education)
  - OER from various sources including ITU, UNESCO and the WWW Foundation

- No pre-requisites either formal or informal
- English

Photo source: http://www.m4dev.org/m4d.pdf
## Comparison of Coursera, edX and Udacity, August 2012

<table>
<thead>
<tr>
<th></th>
<th>Coursera</th>
<th>edX</th>
<th>Udacity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For-profit?</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>1,100,000+</td>
<td>155,000+ (MITx only)</td>
<td>739,000</td>
</tr>
<tr>
<td><strong>Fees</strong></td>
<td>None yet</td>
<td>$100 for completion certificate after autumn 2012 cohort</td>
<td>$80 for Pearson test (optional)</td>
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<tr>
<td><strong>Funding</strong></td>
<td>$16m venture capital; $6m from partners</td>
<td>$30m each from MIT &amp; Harvard; $1m from Gates Fdn; more from private partners</td>
<td>Charles River Ventures, Sebastian Thrun (amounts unknown)</td>
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*Source: The Observatory on Borderless Higher Education, 2012*
What is the business model?

- ‘freemium’ model—free content; paid services
- Revenue through certification
- Licensing fees from universities
- Revenue generation from potential employers
What of pedagogy?

- behaviourist pedagogy, relying primarily on information transmission, computer-marked assignments and peer assessment. Tony Bates
- Attention to teaching—the real revolution. Sir John Daniel
xMOOCs

- Cognitive-behaviourist pedagogy
- Teacher as expert
- Transmission of content
- Videos, automated quizzes, activities
cMOOCs

- Connectivist pedagogy
- Student-student interaction
- Autonomous learner
- Construct share and distribute learning experiences
Pedagogy

- Flipped classroom
- Short chunks of learning resources
- Interactivity
- Peer-to-peer learning
- Continuous improvement because of analytics
Credentialling

- Certificates of completion
- Badges
- Invigilated exams at testing centres
- Credits
Do you believe students who succeed in your MOOC deserve formal credit from your institution?

- Yes: 28%
- No: 72%
Issues for Quality

- Can one size fit all?
- Student verification and academic integrity
- Is a peer reviewed assessment acceptable?
- Is there a delinking of the institutions which teach and the institutions which credential?
ODL: THE MOOC EFFECT
Implications for ODL institutions: Will MOOCs

- attract potential learners?
- identify niche areas to compete globally?
- encourage the development of flexible frameworks for credit transfers, and recognition of qualifications?
What is in it for ODL?

- Potentially increased access to learners
  - Qualitatively better than postal delivery of print or CDROM materials
- A more visible public service
- Opportunity to experiment and innovate
  - Generate possible low cost edn tech solutions
ODL: view MOOCs as platforms for Interaction and Networking

- MOOC platforms today provide for excellent online networking opportunities
  - Learner-Learner
  - Learner-Tutor/mentor/coach

- Interaction with content
  - Increased quality, as good as any F2F
Opportunities for ODL

- Use free MOOC platforms to provide better services
- Reengineer MOOCs to incorporate blended approaches
- Use learning analytics to gather data to improve teaching and learning
Learning Analytics

- Predictive Systems can be developed
  - An Early Warning System: an upcoming drop out can be noticed

- Recommender Systems can be built
  - Tutor/Coach can observe frequent attempts and failures in a particular activity and recommend remedial activities
Khan Academy: Analytics to Improve Learner Performance
The advantage of Learning Analytics

- Creates wholly new personalization pathways for learning from masses of data
- Continuous feedback for ongoing improvement
- Improved outcomes
- Quality of learner experience enhanced
Key features benefitting ODL

- More rigorous registration control
  - Easier to detect multiple ID’s
- Single, unique ID for all services
  - Difficult to achieve in less integrated or manual methods
- ODL contact centers can be advantageous
  - Use of existing services lower costs significantly
If a University in a developing country were to offer a MOOC...

- There is NO need to use only the three or four Global brands
  - These are no more than particular online platforms
- Any University can set up own or shared platform
  - Based on Cloud services or
  - Reliable local hosting services
- Can use OER wherever possible
  - Lower costs, higher quality
What is important is...

- The Brand of the offering Institution
- Quality of learning materials
- Standing of Instructors
- Availability of specialists as speakers where possible
- Availability of (online) mentors
Challenges for Learners in Developing Countries

- Relatively minor
- Connectivity to Internet could be one but could be a changing factor too
- Wide participation in Facebook and use of YouTube have reduced threats of cultural gaps in online learning and socialising
Implications for ODL

- ‘unbundle’ services offering more flexibility
- Provide environments for learning, unlearning and relearning;
- Build on established and successful ODL practices

Can MOOCs help us address issues of access, quality, costs, equity, relevance?
Source: Vilhelm Pedersen