Old wine in new bottles?
Exploring MOOCs

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Commonwealth of Learning

UWI, Port of Spain, March 28, 2014
COL Vision

Access to Learning is the Key to Development

Created by the Heads of Commonwealth at CHOGM 1987

Intergovernmental Organization

1987 Commonwealth Heads of Government Meeting (CHOGM), Vancouver, Canada
What is it for?

To help Commonwealth governments and institutions use various technologies to improve and expand learning for development.
Plan

- The context of HE
- The response
- Implications for 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
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
Tertiary Enrolment in the Caribbean (Commonwealth) 2004 - 2012

Access to Higher Education

- OECD Average: 40-50%
- Caribbean: 25%
- South Asia: 15%
- Sub-Saharan Africa: 10%
Rising Costs of Higher Education

Source: The Economist Dec 1st – 7th, 2012, Higher education, Not what it used to be.
Federal funding for HE: US

- 2000: $56 billion
- 2010: $153 billion
- Growth in enrolment: 33%

Huge investments

What impact?

(Baum and Payea, 2011, qtd in Terry Hartle, ‘Accreditation and the Public Interest’)
And yet...

- 36% of college graduates did not show any significant cognitive gains over 4 years.  

- Half the employers say they have trouble finding qualified graduates to hire.  
  *Chronicle of HE* and *Marketplace*
More accountability for HE

- University ratings system
- Earning power of the graduates

Rising costs + growing demand = more emphasis on quality

Arne Duncan

Photo: http://en.wikipedia.org/wiki/Arne_Duncan
The Digital Divide (Commonwealth countries)

Source: International Telecommunications Union
ICT in the Caribbean 2004 - 2011

From digital divide to digital dividend

- The emergence of mobiles
- Use of appropriate technologies that are affordable, accessible and available
THE RESPONSE
Higher Education for the masses

University of London:  
*The People’s University*

“reaching the shoemaker in his garret...”
Queen’s Royal College, Port of Spain
Emergence of the External Degree

This is to certify, that Mr. Frederick William Mackenzie passed the First Examination in Medicine in the year 1829, and that he was placed in the First Division.
Correspondence Colleges

- University Correspondence College (1887): agencies in Jamaica, India, Ceylon, S Africa (1890’s)
- Wolsey Hall
- Rapid Results
Distance Education in the Caribbean

- 1983: UWI Distance Teaching Enterprise (UWIDITE)
- 1996: UWI Distance Education Centre (UWIDEC)
- 2008: UWI Open Campus
The Rise of Open Universities

UNISA

The Open University

Athabasca University

IGNOU
2012 COMMONWEALTH OPEN UNIVERSITIES
Costs in ODL

- Korea (KNOU): annual cost/student $186 as compared to $2880 in a campus university

- Thailand (STOU): studies show cost/learner is $226 compared to $876 for conventional learning

Open and Distance learning in the developing world – Perraton (2000)
Open and distance education in mega universities

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
<th>Enrolment</th>
<th>% of Campus Cost*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>AIOU</td>
<td>456,126</td>
<td>22</td>
</tr>
<tr>
<td>China</td>
<td>CCRTVU</td>
<td>2,300,000</td>
<td>40</td>
</tr>
<tr>
<td>India</td>
<td>IGNOU</td>
<td>1,187,100</td>
<td>35</td>
</tr>
<tr>
<td>UK</td>
<td>OU</td>
<td>203,744</td>
<td>50</td>
</tr>
</tbody>
</table>

*Unit cost per student as a percentage of the average for other universities in the country, NKC, 2004.
The Open University

- highest rated for overall student satisfaction in the 2012 National Student Student Survey
- rated fifth of 100 UK universities (2003)

Source: http://www.open.ac.uk/about/main/the-ou-explained/facts-and-figures
Online enrollment as a % of total enrollment, 2002 to 2012: US

Source: Grade Change - Tracking Online Education in the United States  I.E. Allen and Jeff Seaman
Online enrollments in Asia and Latin America

- Asia has highest growth in the world at 17.3%
  e.g. Vietnam: 44.3% Malaysia: 39.4%
- The growth rate in Latin America is 14.6%
  e.g. Brazil: 21.5% Columbia 18.6%

*Ambient Insight Regional Report, October, 2012*
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
MASSIVE OPEN ONLINE COURSE

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?

Focus on scalability

Focus on community and connections
Massive Open Online Courses: MOOCs
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%

Tsinghua University, China

- Offers MOOC using own content (in Mandarin relating to STEM & history/culture)
  - No certificates offered
  - Purpose is enrichment
National Project for Technology Enhanced Learning, NPTEL, India

- Online Courses in STEM
- Foundation course in IT
- Purpose is to improve job-readiness of young professionals
- Ten week free online course
- Certification available at INR 2000 (USD 35); requires physical appearance in an exam center
- Jointly organized with IIT, NASSCOM and Ministry of HRD
- Over 25000 registered
MOOC for Development (M4D)

- Designed and offered by COL and IIT-Kanpur
- Content as OER
- Delivery compatible with mobiles using Android
- Experts from different countries for online mentoring
  - 2286 sign ups; 116 countries

Photo source: http://www.m4dev.org/m4d.pdf
Would you have taken this course if there was no certificate offered?

- Yes: 73
- No: 15
- Can't say: 12
What is the business model?

- ‘freemium’ model—free content; paid services
- Revenue through certification
- Licensing fees from universities
- Revenue generation from potential employers
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 WINE OR NEW BREW?
Peer to peer interactions: new paradigm

- MOOC platforms today provide for excellent online networking opportunities
  - Learner-Learner

‘instead of the classroom being the centre, it becomes just one node of the network of social interactions’

George Siemens, Oct 2013
Dynamic pedagogy: 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
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
Cost-effective opportunities: scaling up

- 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
New degrees of ‘open-ness’

- Open platforms
- Open content
- Open interactions
Implications for HE

- ‘Unbundle’ services offering more flexibility
- Build on established and successful Open Content & Practices
- Improve teaching-learning experience
Pedagogy: Coursera; Udacity

“Interestingly, while Coursera courses followed a format that resembles the traditional lecture/text - testing routine of traditional university courses spread over multiple weeks with hard deadlines, Udacity courses all followed a format that resembles nothing so much as the programmed learning approach developed by B. F. Skinner (1954).”

Karen Swan from the University of Illinois

Source: http://sloanconsortium.org/conference/2013/alin/exploring-mooc-pedagogy
SPOCs: Small private online courses, Harvard

- Free
- Delivered online
- Restricted through a selection process
- More rigorous assessment

BBC Business, Sept, 2013
Mind to MOOCs: recommendations

- Equity: inclusion, social justice
- Diversity: attention to context
- Innovation & Quality: improve pedagogic practice

ICDE, Beijing, Oct., 2013
Design principles for MOOCs

**Autonomy**
- Choice of contents
- Personal learning
- No curriculum

**Openness**
- Open access
- Open content
- Open activities
- Open assessment

**Diversity**
- Multiple tools
- Individual perspective
- Varied content

**Interactivity**
- Encourage communication
- Cooperative learning
- Emergent knowledge

Source: http://www.slideshare.net/Downes/2014-03-10-valencia
Finally,

- MOOCs are an evolution of past open education practice rather than a revolution
- Being used for continuing professional development in developing countries
- Will refresh pedagogic practice
- Will supplement rather than replace traditional institutions
THANK YOU