The impact of OER and MOOCs on ODL: an international perspective

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The Commonwealth comprises 53 developed and developing nations around the world.
The Commonwealth of Learning

What is it for?

To help Commonwealth governments and institutions use various technologies to improve and expand education, training and learning in support of development.
Plan

The Global Context

The Fifth Decade of ODL

Rise of OER

The MOOC Phenomenon

Implications for ODL
The Global Context
The youth ‘bulge’

- In 2013, 74.5 million young people aged 5–24 were unemployed

1.2 billion youth
17% of the world’s population
74.5 million unemployed youth
Population of Youth in China

278.6 million young people

China has which is equivalent to of its population in 2014.

Source: UNFPA report: State of World Population 2014
Global Youth Unemployment Rate

Source: ILO - Global Employment Trends for Youth 2013
Youth Unemployment (% of total labor forces ages 15-24) in China 2003 – 2013

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

Everitt in Liyanagunawardena et al, 2013
Tertiary Gross Enrolment Ratio in China
2003 – 2013

Can the phenomenal growth in ICTs help?
Percentage of households with Internet access, by level of development, 2005-2014

http://www.itu.int/en/newsroom/Pages/wtis14-mis-images.aspx
ICT in China 2004 - 2014

ICT Trends: Horizon Report 2015

TRENDS

SHORT-TERM
- Increasing Use of Blended Learning
- Redesigning Learning Spaces

1-2 years in each direction

MID-TERM
- Growing Focus on Measuring Learning
- Proliferation of Open Educational Resources

3-4 years in each direction

LONG-TERM
- Advancing Cultures of Change and Innovation
- Increasing Cross-Institution Collaboration

5+ years in each direction
The Fifth Decade of ODL
1. The Rise of Open Universities
Implications for Pedagogy

• Self-instructional Materials
• Extensive use of Media
• Flexibility and modularity
2. Online learning: Increasing Access

The proportion of higher education students taking at least one online course now stands at 33.5 percent for a total of 7.1 million.

Source: Babson Survey, 2014
China is the second largest self-paced eLearning market in the world after the US.

There are two significant trends in China's eLearning market:

- the proliferation of online education startups (and a spike in funding deals made with them)
- and the growing number of large Internet companies entering the market.

Implications for Pedagogy

- Learning Management Systems
- Wider use of web resources
- Interactivity
The Rise of OER
Open Education Resources
What are Open Education Resources (OERs)?

Materials that are

- Free and freely available
- Suitable for all levels
- Reusable
Rise of OER

14 COUNTRIES HAVE MADE NATIONAL COMMITMENTS TO OPEN EDUCATION
Legislation or projects that lead to the creation, increased use, or improvement of open educational resources by requiring an open license like CC BY.

Source: https://stateof.creativecommons.org/report
OER Policies in the Commonwealth

**South Africa:** Draft Policy Framework for the Provision of Distance Education in South African Universities
(Page 28, MHET will establish a Task Team that will play an awareness-raising and advocacy role around the use of OER)

**Mauritius:** Education and Human Resources Strategy Plan 2008-2020
(page 119, 1.3 promote e-learning and Open Educational Resources)

**India:** Open Licensing Policy Guidelines for NMEICT, 2014
UNISA developed an OER Strategy

- Unisa Institutional Operational Plan 2014
- Promote the use of OER:

  - **College**: develop OER material
  - **Library**: provide access to library OER repository
  - **ICT**: system and infrastructure to support OER
  - **DISA**: Tracking of OER update by academics
  - **Legal Services**: Creative Commons license

Source: UNISA - Open Education Resources (OER) Strategy 2014 - 2016
Prominent OER initiatives and providers/users

1. **Chinese Quality Course project (Jingpinke.com)**
   - **Provider:** Chinese Ministry of Education
   - **User:** College and university teachers (Undergraduate level)

2. **The national cultural information resources sharing project NCIRS, http://www.ndcnc.gov.cn**
   - **Provider:** Ministry of Culture / Public libraries
   - **User:** Public

3. **China Open Resources for Education (CORE)**
   - **Provider:** Consortium of universities
   - **User:** University students / public

OER Survey, Asia, 2011 (WOU, IDRC)

**Teachers:**
difficult to locate, adapt, and re-purpose OER material relevant to their work.

**Technical Support:**
lack of standard practices in the packaging and re-use of OER.

**Learners:**
OER should be more open and multi-modal.

**Management:**
concerns regarding intellectual property; copyright issues and competition.
OER Impact on Teachers

93.8% of K12 teachers agree or strongly agree that they used a **broader range of teaching and learning methods** due to use of OER.

89.7% agree or strongly agree that they make use of a **wider range of multimedia**.

88.6% agree or strongly agree that they **reflect more** on the way that they teach.

Impact of OER on Teaching

Impact of OER use on teaching

To what extent do you agree with the following statements about the impact on your teaching practice of your using OER? N=977

- I have broadened my coverage of the curriculum
  - Strongly agree: 17.6%
  - Agree: 41.4%
  - Neither/nor: 27%
  - Disagree: 5%
  - Strongly disagree: 9%

- I use a broader range of teaching and learning methods
  - Strongly agree: 17.8%
  - Agree: 46.5%
  - Neither/nor: 23.8%
  - Disagree: 3%
  - Strongly disagree: 8.4%

Source: OER Hub
Impact on Students

Impact of OER use

In which of these ways has your use of OER made an impact on your formal studies? N=1167

- Increased participation in class discussions: 32.6%
- Increased interest in the subjects taught: 61.9%
- Increased satisfaction with the learning experience: 60.7%
- Grades improving: 38.9%
- Gaining confidence: 51.6%
- Having increased independence and self-reliance: 51%
- Increased engagement with lesson content: 46.5%
- Increased experimentation with new ways of learning: 53.2%
- Increased collaboration with peers: 26.8%
- Increased enthusiasm for future study: 60.4%
- Becoming interested in a wider range of subjects: 54.7%
- Being more likely to complete my course of study: 46.9%

Source: OER Hub
**Impact on Learning**

Students who used open textbooks scored .65 points higher on end-of-year state standardized science tests than students using traditional textbooks.

*Source: (Robinson et al, 2014)*
Cost Savings: OER Textbooks

31% students in the US don’t register for a course due to textbook costs.

Source: Thanos & Wiley, 2014

Utah Open Textbooks project: $5 per printed and zero for online content
Implications for Pedagogy

- Learner not just a consumer but also a producer
- Collaboration rather than competition
Qingdao Declaration 2015

We commit to develop sector-wide strategies and capacity building programmes to fully realize the potential of OER to expand access to lifelong learning opportunities, and to achieve quality education.
The MOOC phenomenon

Source: Google Trends
“... a **MOOC** is a type of online course aimed at large scale participation ....**MOOCs** are a recent development in the area of distance education...”
Massive Open Online Courses
Features of MOOCs

• Massive enrolments
  *(Over 25 million since 2012)*

• Open to *anyone* without restrictions

• Online without *face-to-face* contact

• Courses offered by *top* institutions and professors
Most MOOC learners are having a first degree (about 70%).

Gender participation rate is a function of the subject matter of the MOOC.

MOOC learners are serial MOOC takers.

Source: Mcleaod et al, TechTrends, 59 (1), Jan/Feb 2015
Prominent MOOC initiatives and providers/users

**Chinese MOOCs**

- Provider: Peking University, Alibaba
- User: University students, high school students and Public.

**XuetangX.com 学堂在线**

- Provider: Tsinghua University, Ministry of Education Research Centre for Online education and Beijing Muhua Information Inc.
- User: University students, high school students and Public.
- More than 1 million registered users as of September 23rd, 2015.

**CN MOOC**

- Provider: Shanghai Jiaotong University, Baidu
- User: University students, high school students and Public.
Impact on Learners

Learners motivated by career or educational advancement even more likely to report benefits

The Career Builders

52% of learners surveyed took online courses to advance their careers. These learners reported the following benefits.

- 87% Reported Career Benefits
- 33% Reported Tangible Career Benefits

The Education Seekers

28% of survey respondents came to Coursera to pursue academic goals. These learners reported the following benefits.

- 88% Reported Educational Benefits
- 18% Reported Tangible Educational Benefits

*Tangible career benefits include receiving a pay raise, a promotion, a new job, or starting a new business.
*Tangible educational benefits include gaining credit towards an academic degree or completing prerequisites for an academic program.

Impact on Learners

Online learners from less educated and less affluent backgrounds more likely to report tangible career benefits.

Career builders with no bachelor’s degree, from low SES brackets, and from emerging economies are more likely to report tangible career benefits.

Impact on Teachers

In 2012, Duke University began using MOOCs to promote innovation in teaching and learning within the campus community, with the goal of importing successful new pedagogical ideas into Duke classrooms.

Since that time, 30 instructors from 28 departments have developed 31 MOOCs on Coursera, attracting 2.8 million enrollments and issuing more than 72,000 certificates.

Instructors changed their teaching approach in both MOOCs and traditional courses, including by improving classroom materials and activities, crafting better measures of student learning, and experimenting with new pedagogies to increase engagement and learning.

## Cost Of MOOCs

### Table ES 2: Estimated Costs of MOOC Production and Delivery at Four Institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>Type of MOOC</th>
<th>Length of MOOC (weeks)</th>
<th>Total estimated costs per MOOC</th>
<th>Costs per completer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers College, Columbia University</td>
<td>xMOOC</td>
<td>8</td>
<td>$38,980</td>
<td>$74</td>
</tr>
<tr>
<td>University of Manitoba</td>
<td>cMOOC</td>
<td>12</td>
<td>$65,800 - $71,800</td>
<td>*</td>
</tr>
<tr>
<td>American Museum of Natural History</td>
<td>xMOOC</td>
<td>4</td>
<td>$104,620</td>
<td>$272</td>
</tr>
<tr>
<td>Large Midwestern University</td>
<td>xMOOC</td>
<td>5-8</td>
<td>$203,770 – $325,330</td>
<td>*</td>
</tr>
</tbody>
</table>

* Completion data were not available for these MOOCs. See Cases 10, 11, 12, and 13 for sources.
How learning takes place is changing

Traditional Classroom
- Instructor prepares material to be delivered in class.
- Students listen to lectures and other guided instruction in class and take notes.
- Homework is assigned to demonstrate understanding.

Flipped Classroom
- Instructor records and shares lectures outside of class.
- Students watch/listen to lectures before coming to class.
- Class time is devoted to applied learning activities and more higher-order thinking tasks.
- Students receive support from instructor and peers as needed.

Implications for Pedagogy

- Shift from teacher moderation to learner responsibilities
- Dynamic pedagogy: Learning Analytics
- Move from small group teaching to offer eLearning to masses
Qingdao Declaration 2015

Online learning, including in the form of Massive Open Online Courses (MOOCs) has the potential to build new learning pathways towards tertiary education and lifelong learning. We therefore recommend that governments, institutions and other stakeholders further consider and harness the opportunities brought by online learning innovations.
Impact on ODL
ODL in the age of OER and MOOCs?

- ODL institutions played a minimum role in innovation and became followers
- ODL institutions yet to adopt, appropriate and domesticate OER & MOOCs
OER as Disruption in ODL practices

- Free availability of content
- Faculty time used up to 80% for course development before: can now focus on learner support
Open Universities

**Then**
- Industrial model of operation
  - Institutional Teams
  - Student as consumer

**Now**
- Connected model of operation
  - Global Teams of course developers
  - Student as producer
MOOCs as Disruption in Higher Education

- Flexibility
- Affordability
- Fast-track
Open Universities

Then

- National or provincial jurisdiction
- Limited interaction at study centres
- Print+ (audio, video, online)

Now

- Global offering of courses
- Increased use of Peer2Peer learning and social media
- Online+ (increased use of learning analytics)
1. Revisit the Philosophy of ‘Open-ness’

- Open as to people
- Open as to places
- Open as to methods
- Open as to ideas
1. Embrace openness

Adopt openness in a systematic manner. This would include adopting and adapting OER as well as MOOC platforms for sharing and collaborating on research locally and globally.
2. MOOCs promote:

- Higher learner autonomy
- More structured course content
- Increased peer to peer dialogue and interaction
2. Review Practices

- **Do we need smaller segments of content?**
- **Can we provide instant assessment?**
- **What technology options do learners prefer?**
- **Do we need to offer nano and micro qualifications?**
3. Sustainable Development Goals
GOAL 4

ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

SUSTAINABLE DEVELOPMENT GOALS
More at sustainabledevelopment.un.org/sdgsproposal
Goal 4

Quality education leading to effective **learning outcomes**

- **Skills** for employment and entrepreneurship

- Knowledge and skills for **peace** and global **citizenship**

- Qualified **teachers**
3. Promote ODL for Development

- Evidence-based advocacy for ODL for formal, non-formal, informal learning
- Support lifelong learning
- Harness OER & MOOCs
Thank You
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