COMMONWEALTH of LEARNING

MOOCs

an introduction

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Plan

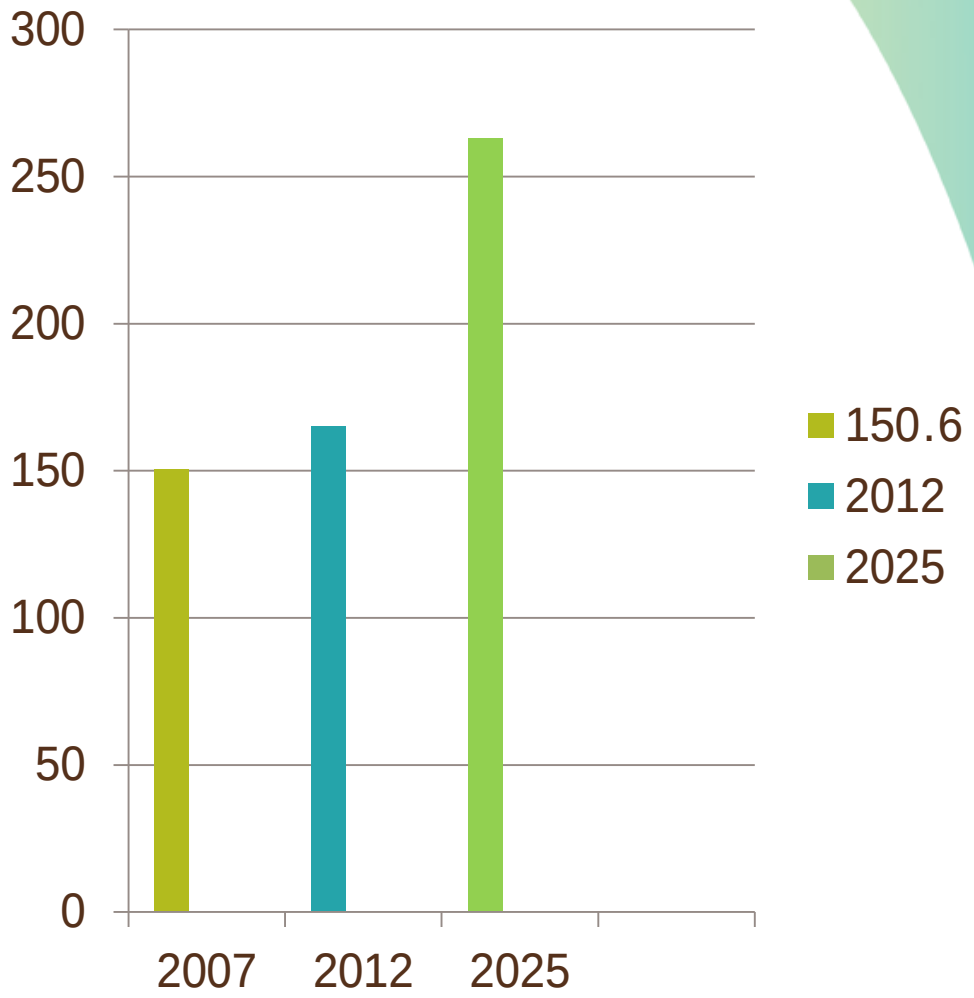
- The context
- The response
- Implications for developing world HEIs

The context

- Demand
- Costs
- Technology

Exploding demand for HE

- 2007: 150.6 million tertiary students globally
- 2012: 165 million
- 2025: 263 million



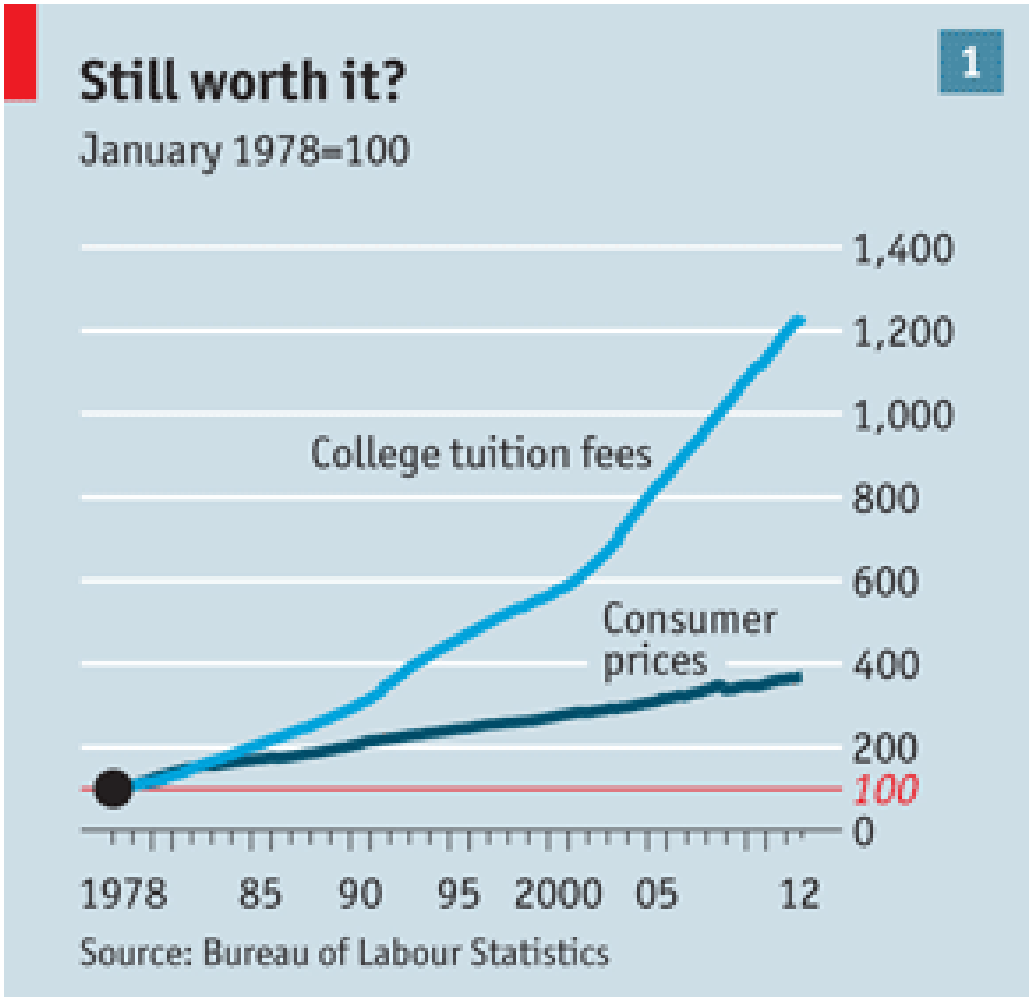
The Demand

- 4 new universities to cater to 30k needed each week to accommodate children who will reach enrolment age by 2025
  go.nature.com/mjuzhu
- India: 5000 students enroll in university and 10 new institutions open every day

  Pawan Agarwal, *Scientific American*, Aug 1, 2013
  - India: 40 million additional university places needed by 2025

    Everitt, qtd Liyanagunawardena et al, 2013

Rising Costs of Higher Education

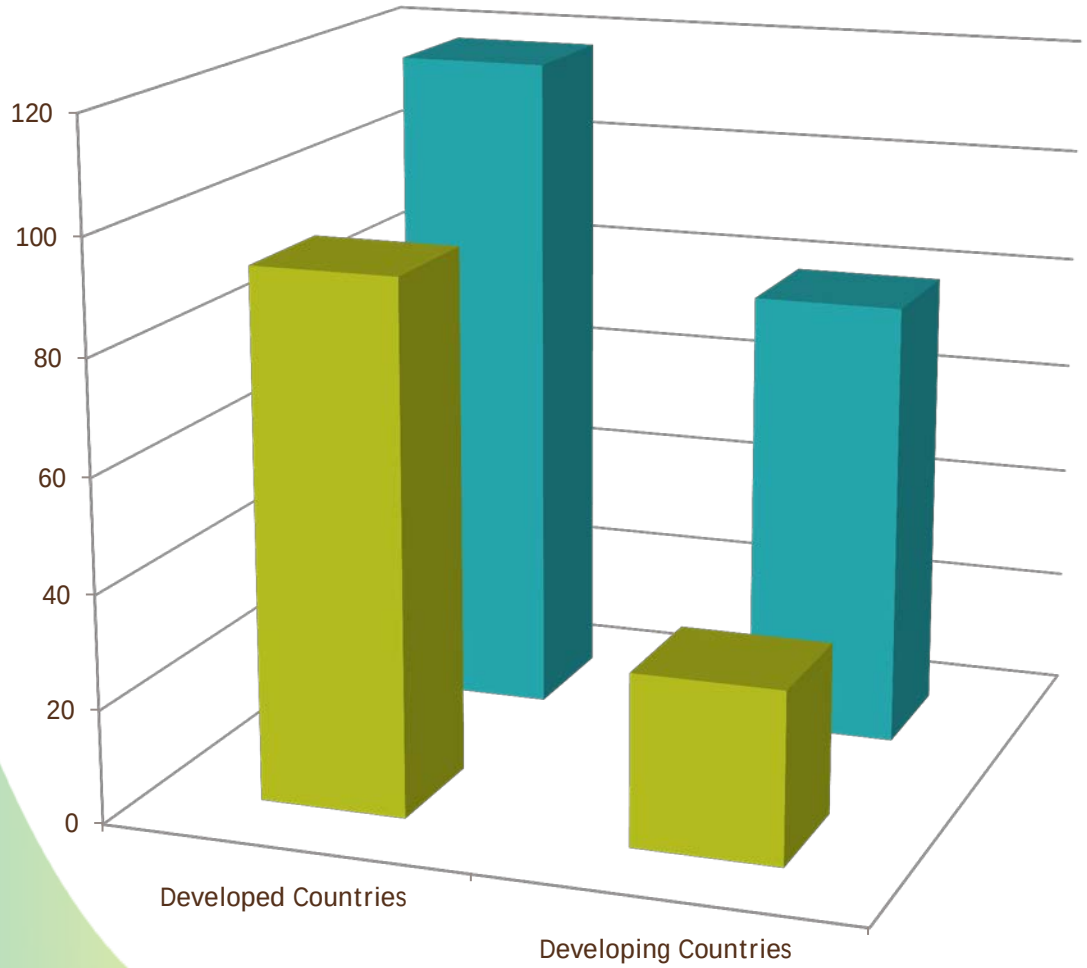


Source: The Economist Dec 1st – 7th, 2012, Higher education, Not what it used to be.

From digital divide to digital dividend

- The emergence of mobiles
- Use of appropriate technologies that are affordable, accessible and available

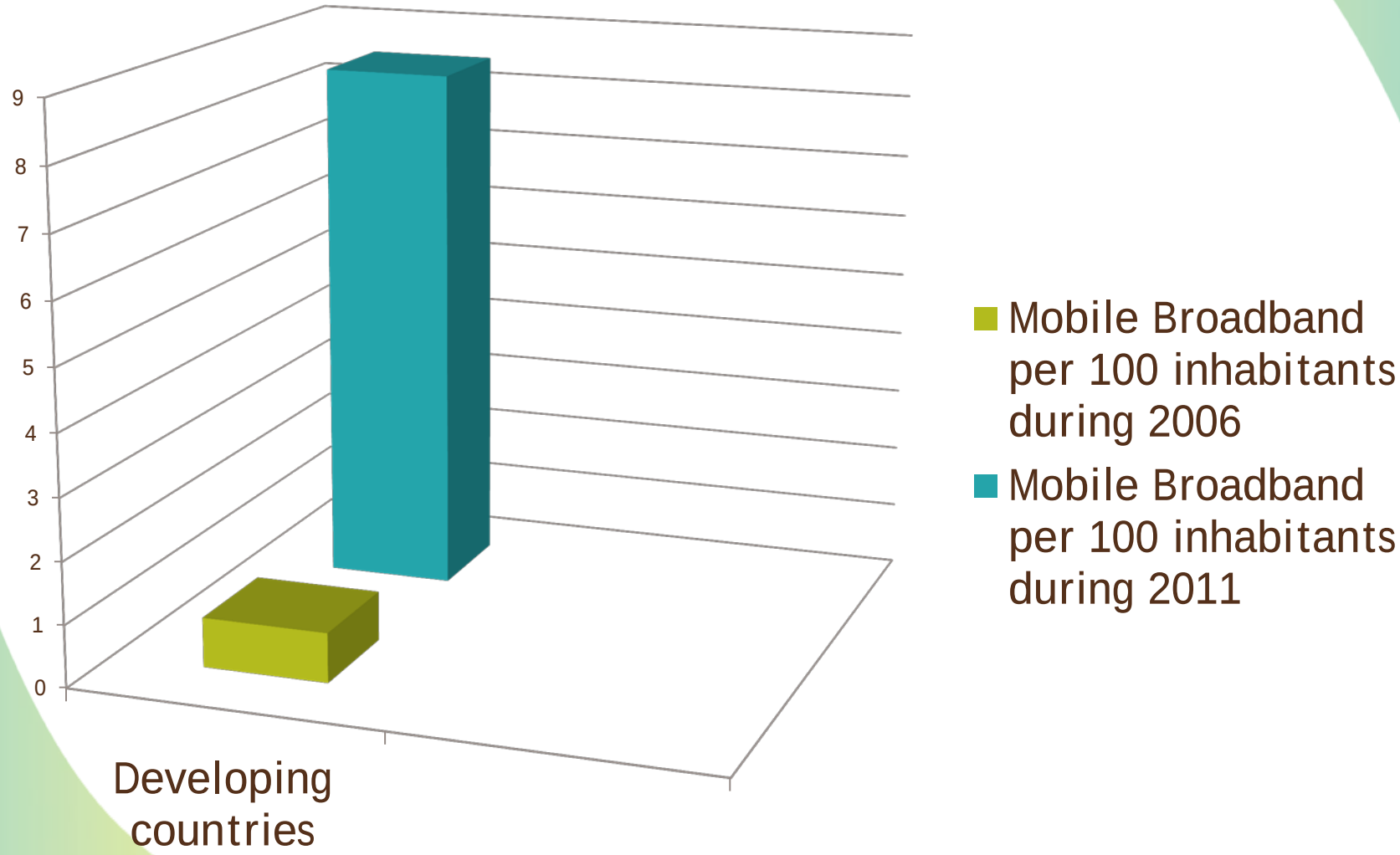
The Mobile Dividend



- Number of Mobile Phones per 100 inhabitants during 2006
- Number of Mobile Phones per 100 inhabitants during 2011

Source: ITU http://www.itu.int/ITU-D/ict/statistics/at_glance/KeyTelecom.html

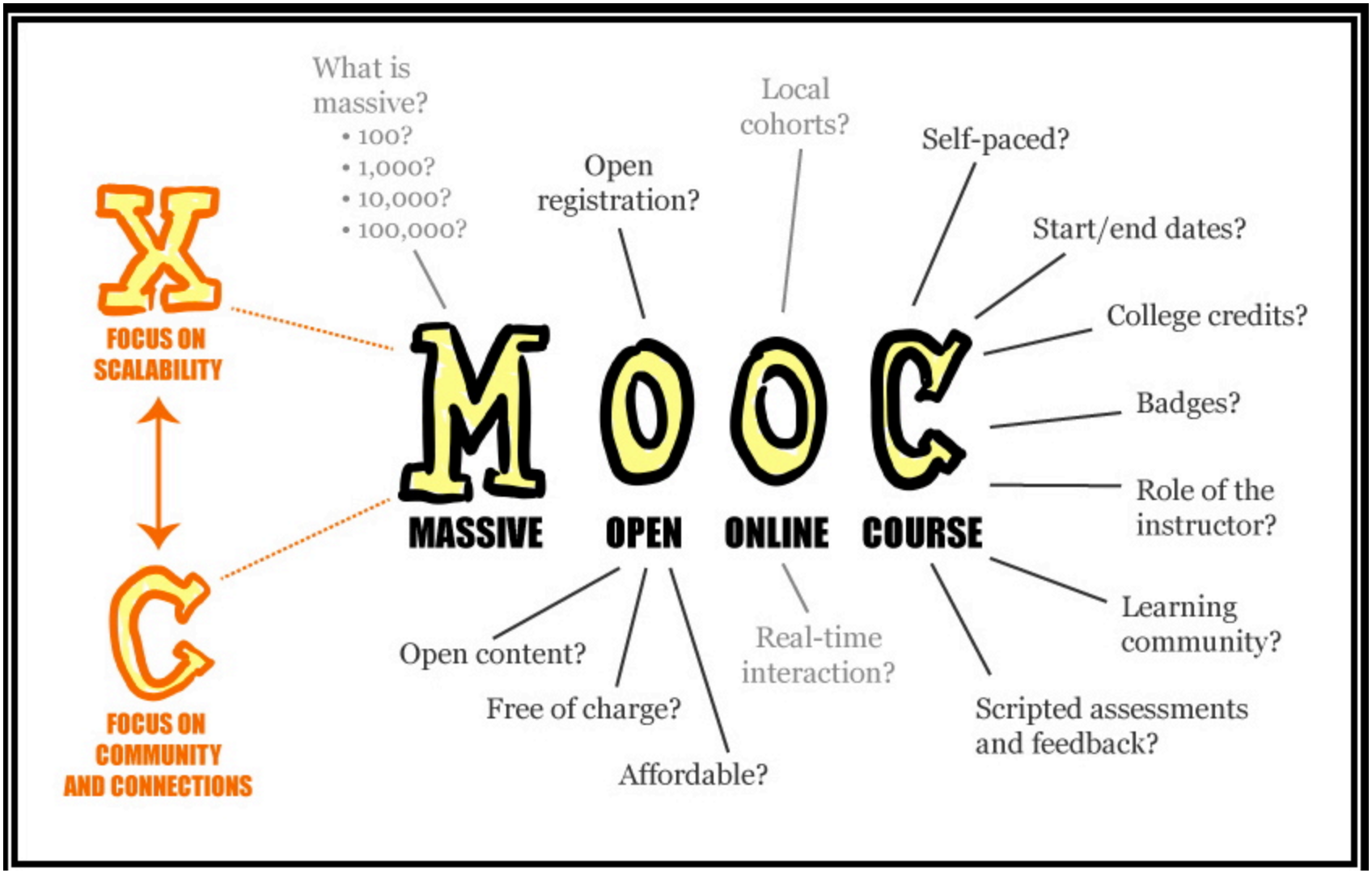
Mobile Broadband Increase in Developing Countries



The response: Massive Open Online Courses: MOOCs

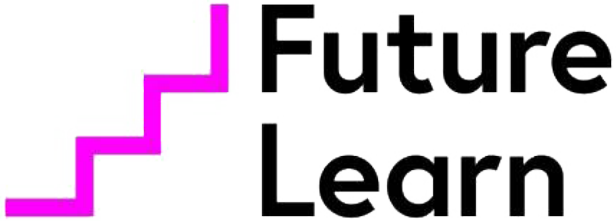
… a MOOC is a type of online course aimed at large scale participation and open access via the web. MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by OER

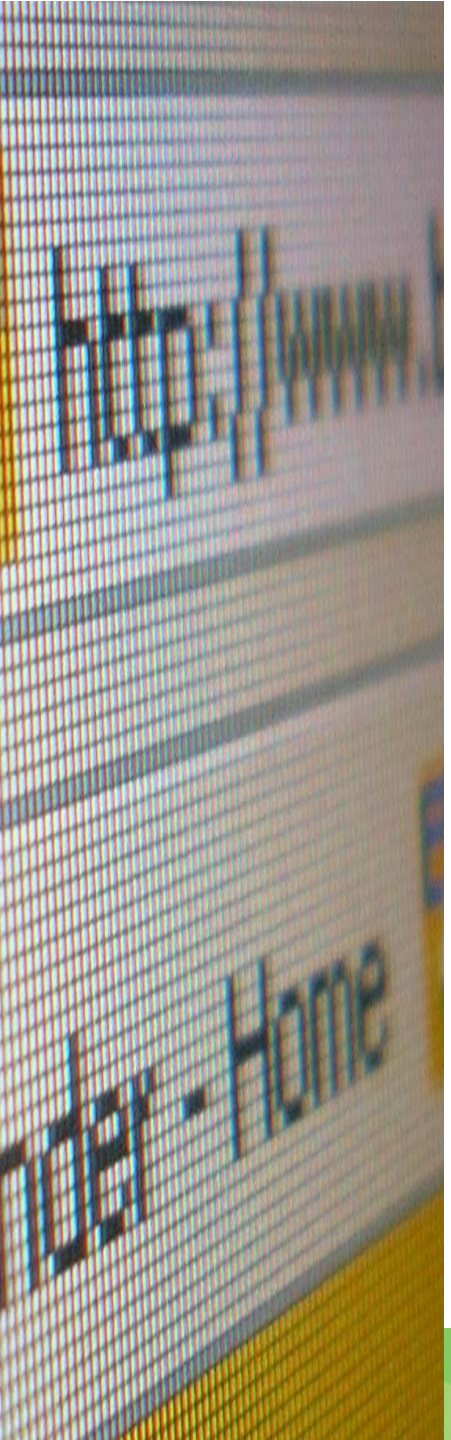
Wikipedia, 20/09/12


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?
Scripted assessments and feedback?
Real-time interaction?
Affordable?
Free of charge?
Open content?
X
FOCUS ON SCALABILITY
C
FOCUS ON COMMUNITY AND CONNECTIONS
MOOC
MASSIVE OPEN ONLINE COURSE

Massive Open Online Courses:

MOOCs





MOOCs are typically

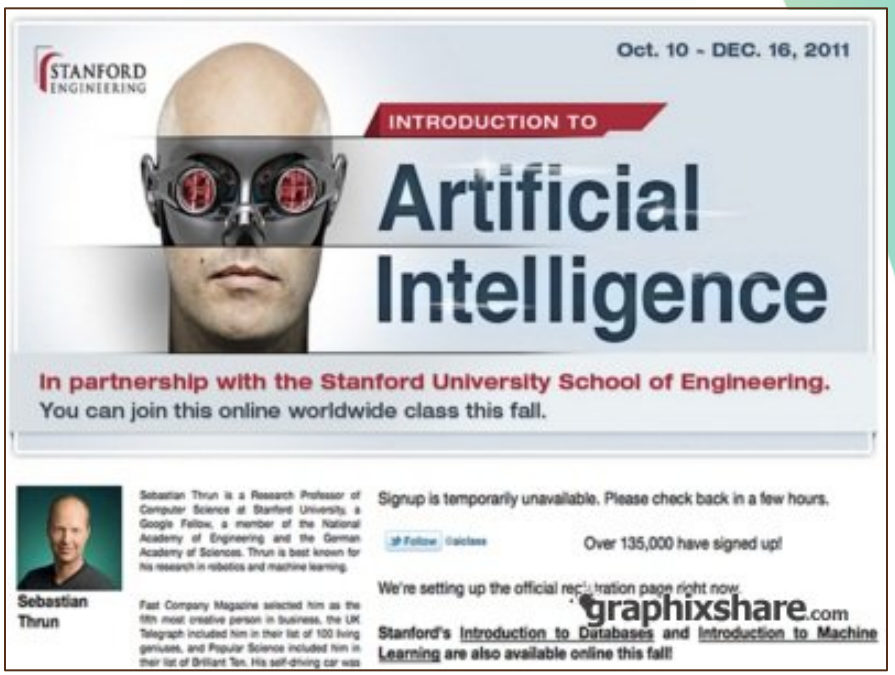
- Free of charge
- Designed for large numbers
- Designed to encourage peer to peer learning
- Meant to award completion certificates rather than course credits

OBHE Report, 2012

Stanford 2011

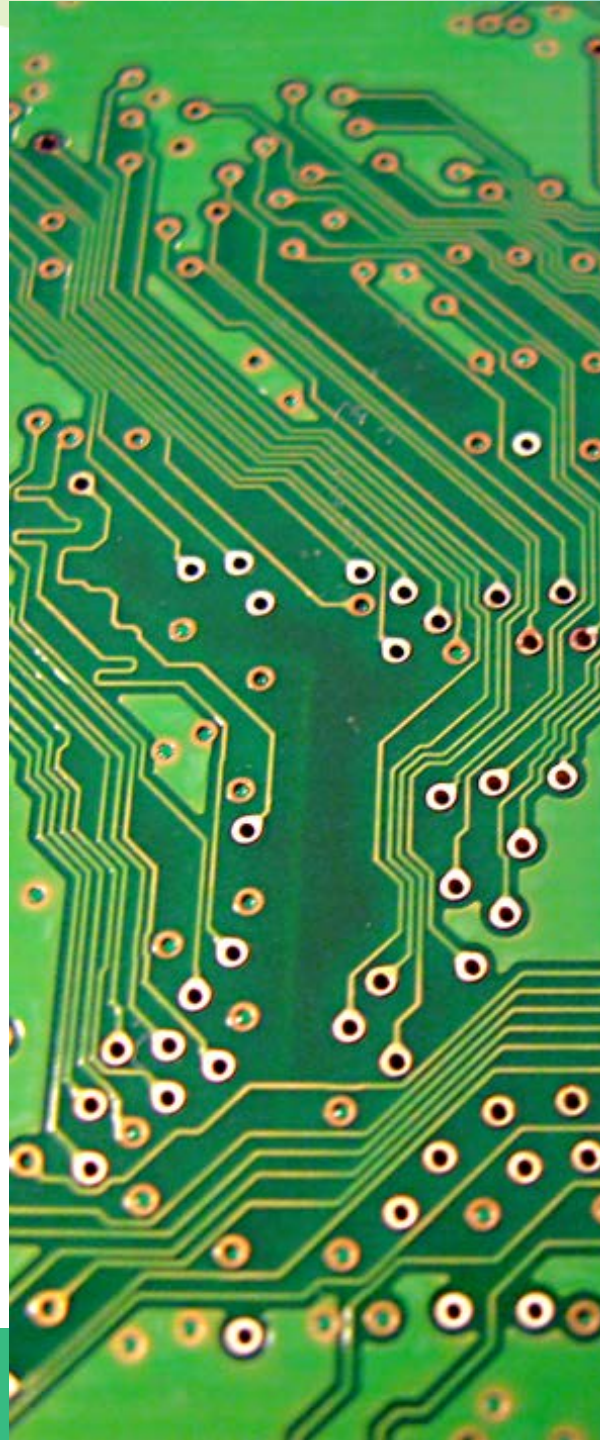
- Artificial Intelligence course
- 160,000 registered
- 23,000 completed
- All countries except North Korea

STANFORD UNIVERSITY



edX 2012

- Circuits and electronics
- 155,000 registered
- 7157 passed the course
- 160 countries



The MOOC effect

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

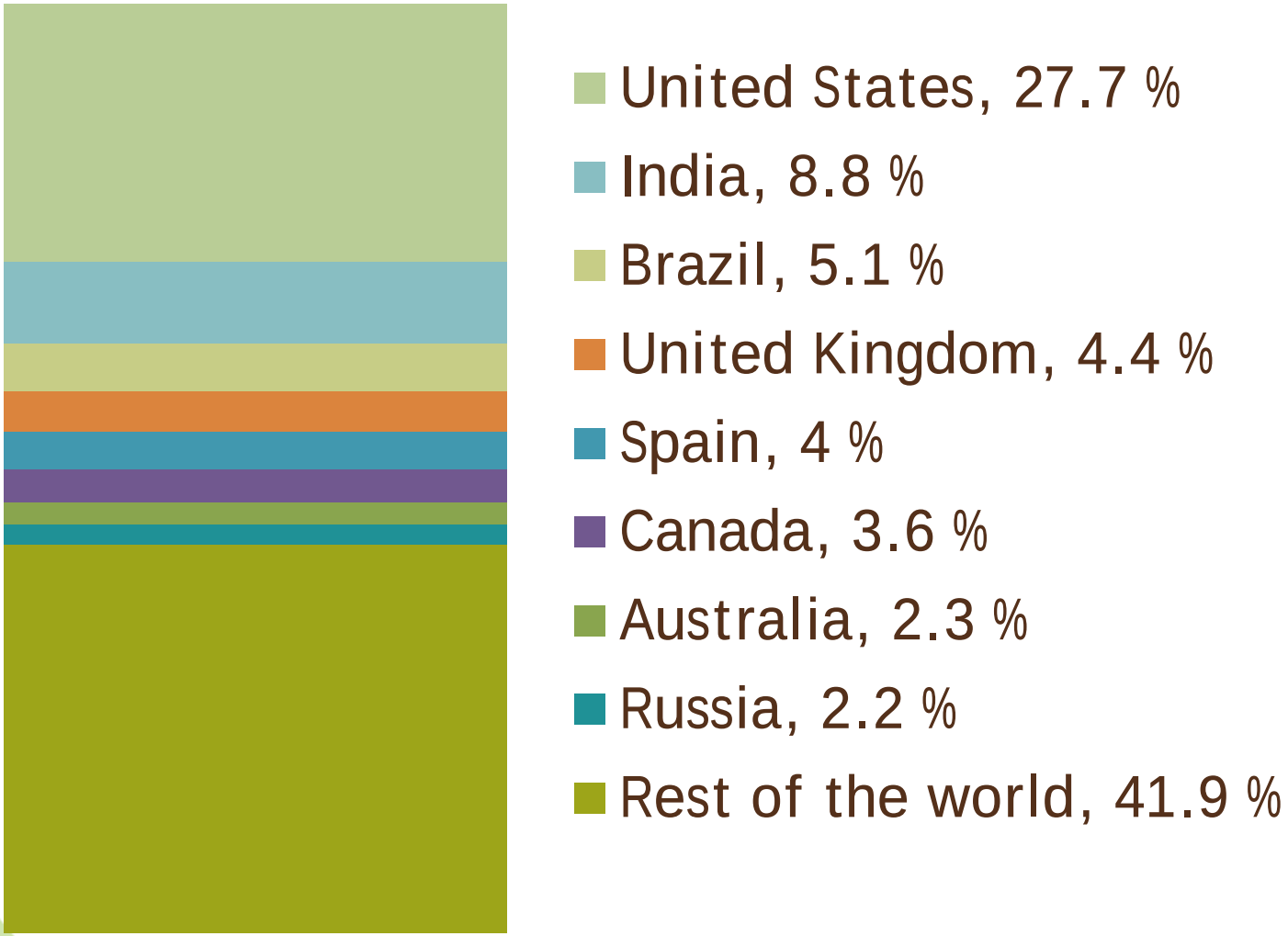
Source: Waldrop, M. M. (2013). Campus 2.0. *Nature, 495,* 160-163

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

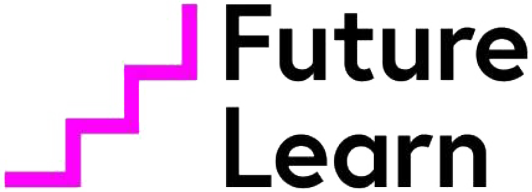


Source: Waldrop, M. M. (2013). Campus 2.0. *Nature, 495,* 160-163.

Courses Offered

Source: Waldrop, M. M. (2013). Campus 2.0. *Nature, 495,* 160-163.

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:
  - 16 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

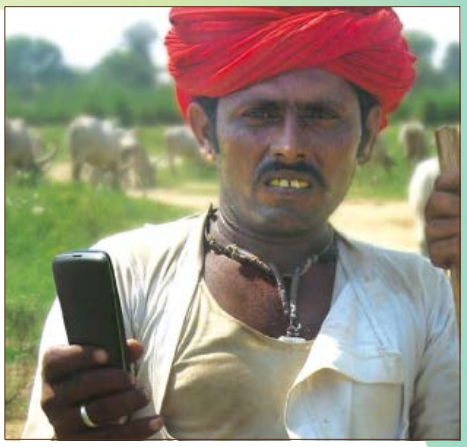
India: Massive Open Online Certification

- 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
- Target Learner : approx 14 000
- English

Photo source: http://www.m4dev.org/m4d.pdf

Comparison of Coursera, edX and Udacity, August 2012

	Coursera	edX	Udacity
For-profit?	Yes	No	Yes
Number of Students	1,100,000+	155,000+ (MITx only)	739,000
Fees	None yet	$100 for completion certificate after autumn 2012 cohort	$80 for Pearson test (optional)
Funding	$16m venture capital; $6m from partners	$30m each from MIT & Harvard; $1m from Gates Fdn; more from private partners	Charles River Ventures, Sebastian Thrun (amounts unknown)

Source: The Observatory on Borderless Higher Education, 2012

What is the business model?

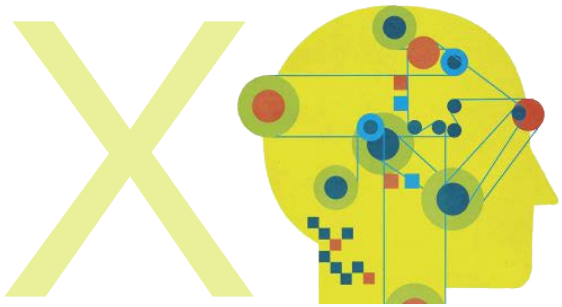
- ‘freemium’ model—free content; paid services
- Revenue through certification
- Licensing fees from universities
- Revenue generation from potential employers

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**

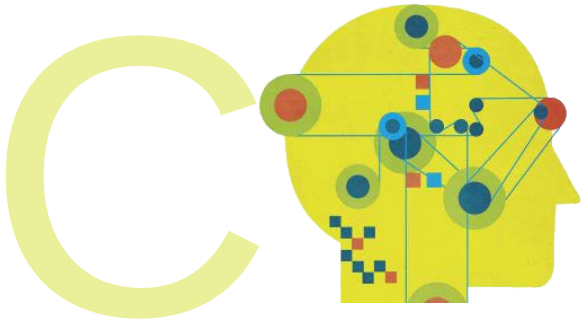
xMOOCs

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



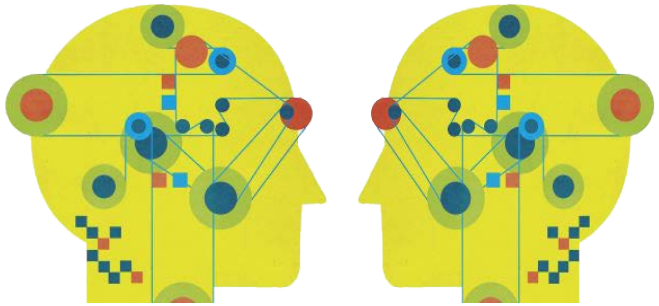
cMOOCs

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



Pedagogy

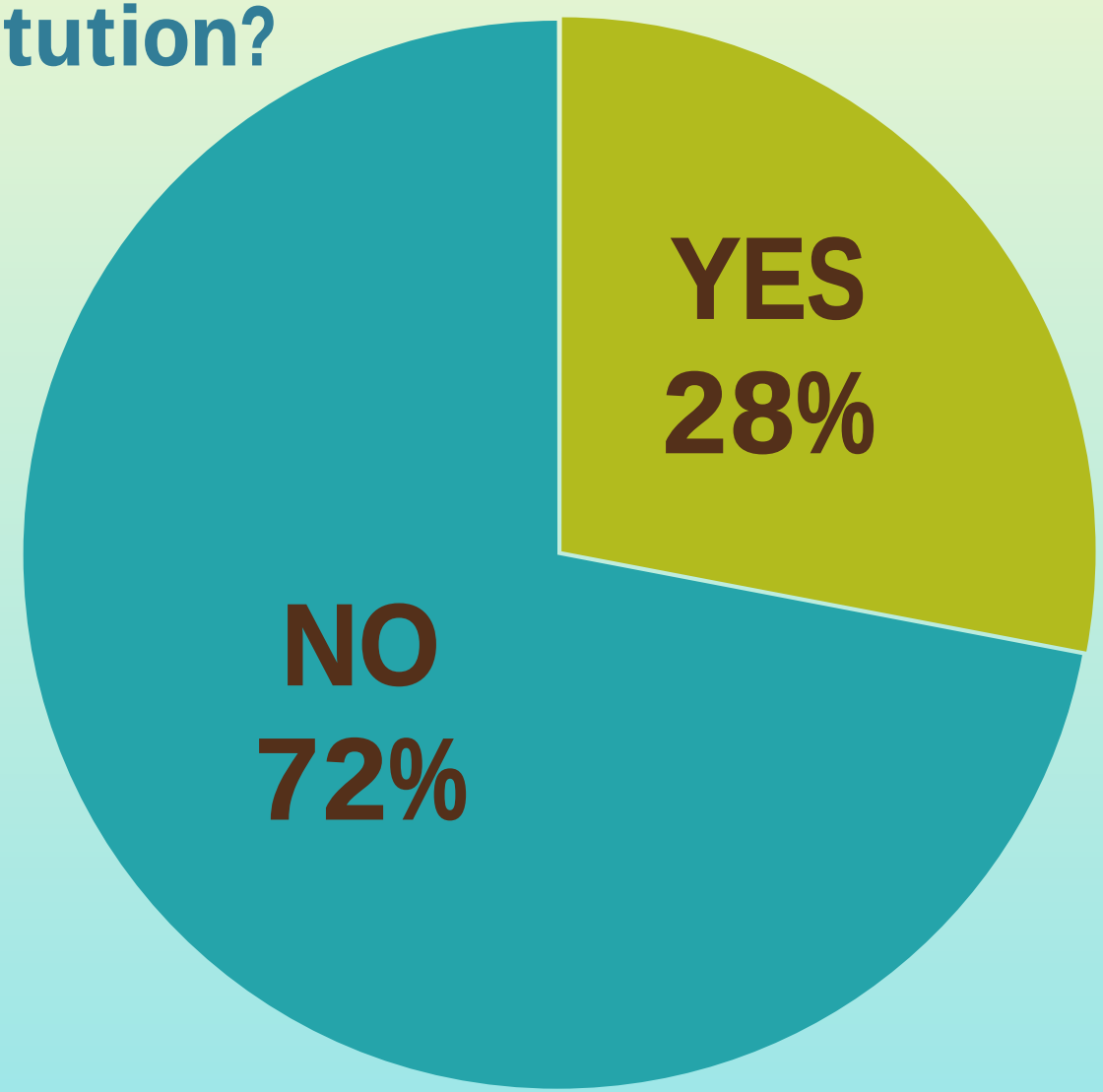
- Flipped classroom
- Short chunks of learning resources
- Interactivity
- Peer-to-peer learning
- Continuous improvement because of analytics



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?



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?

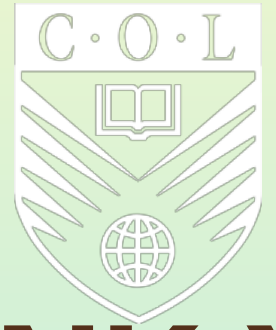
Implications for developing countries: Will MOOCs

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

Advantages for developing countries

- Reengineer MOOCs to incorporate blended approaches
- Use learning analytics to gather data to improve teaching and learning
- Use MOOCs platforms for faculty development and research

Can MOOCs help us address issues of access, quality, costs, equity, relevance?



THANK YOU

www.col.org