Massive Open Online Courses (MOOC): An Instrument for ETP and STI Capacity Building, Experiences from Universities in Bremen and Germany


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Overview

1. Bremen University and ZMML
2. MOOC Basics, up to date Statistics and Trends
3. Germany and Bremen University Perspective
4. Tunisia Perspective
University of Bremen

• Founded in October 1971

• 18,000+ Students
  • 30% from Bremen
  • 30% from Lower Saxony
  • 25% from other German federal states
  • 15% from abroad

• 3,200+ Staff
  • 1,990+ Scientists and Scholars
  • including 280+ tenured Professorships
  • 750 Researchers are financed by external funding
  • 1,240+ Administrative, Technical and Secretarial staff
The E-Learning-Center
Center for Multimedia in Higher Education (ZMML)

• E-Learning-Platform (LMS)
  70%+ of lectures run on the platform (elearning.uni-bremen.de)

• E-Assessment / Testcenter
  8,500+ eExam / semester (eassessment.uni-bremen.de)

• Media Services
  1,400+ recordings of lectures
  Pre-Production in Green screen Film Studio (mlecture.uni-bremen.de; egs.uni-bremen.de; e-lecture.uni-bremen.de; www.va-bne.de)

• Training / Consulting / Support
  Instructional Design

www.zmml.uni-bremen.de
What is MOOC?

• **Massive**
  • Student numbers can be 100,000 +

• **Open**
  • Everyone can register (usually for free)

• **Online**
  • Opposed to face-to-face or blended

• **Course**
  • Learning units in an academic subject
  • Registration, support and assessment of students
What do MOOCs promise?

Open up Higher Education

by providing university courses

for free or at low cost

for everyone

who is interested in learning
The different types of MOOCs

• xMOOC (content-based):
  • Formal, structured teaching
  • Traditional relationship between teacher and learner
  • Behaviorist and cognivist approach (drill and practice, problem sets)

• cMOOC (connectivist MOOC):
  • Based on on a connectivism theory of learning with networks developed informally
  • Changed relation between teacher and learner (learner centric, instructor guided)
  • Content as a starting point, learners expected to create and extend
  • Multiple technologies to connect learner (LMS, Blogs, Twitter, Facebook,...)
MOOC Example (2011)

160.000+ Students enrolled

13% Completion rate (20.000+ Students)

www.udacity.com

Check out our new classes at www.udacity.com!

Class has ended, but you can still log in here. Sign in Visitor

I am convinced that learning via the internet from leaders in the field is the way forward in education.

Balakrishnan

Enrollment is closed. We hope to offer more online classes in the future, and you can watch the lectures for this course on youtube.

A bold experiment in distributed education, "Introduction to Artificial Intelligence" will be offered free and online to students worldwide from October 10th to December 18th 2011. The course will include feedback on progress and a statement of accomplishment. Taught by Sebastian Thrun and Peter Norvig, the curriculum draws from that used in Stanford's Introductory Artificial Intelligence course. The instructors will offer similar materials, assignments, and exams.
Completion rates

Via http://www.katyjordan.com/MOOCproject.html

370.000+ Students enrolled

Free, but £29 for a “Statement of participation”

www.futurelearn.com
Growth of MOOCs

**MOOC Hype Phase**

"Year of the MOOC"  The New York Times


- 2014: Doubled
- 2015: Doubled
- 4,200+ Course
- 35 Mio. Students
Prediction: The global MOOC market is expected to grow by 56.61% CAGR* between 2014 and 2018 (Report of market research provider Sandler Research)

• Key market driver: Increasing cost of Education

• Key Market Challenge: Low Course Completion Rate

• Key Market Trend: Big Data Tools and Analytics

*CAGR, or compound annual growth rate, a commonly used method to calculate the average return of investment funds
Major MOOC Players by #Courses (2015)

- **Udacity**
  - Funding: $160mio
  - Google, Facebook, AT&T, ...

Other key players include:
- edX
  - 18.1%
- Coursera
  - 35.6%
- Non-profit:
  - MIT, Harvard, ...

- Canvas.net
  - 6.92%
- FutureLearn
  - 5.68%
- Miríada X
  - 3.66%
- France Université Numerique
  - 3.33%
- Udacity
  - 2.95%
- Open Education by Blackboard
  - 2.12%
- Rwaq
  - 1.83%
- iversity
  - 1.78%
- NovoEd
  - 1.66%

Funding: $146mio
- 1,100 courses
- 15mio users

MOOC Distribution by Subjects (2015)

MOOC Distribution by Subjects (2015)

Training of softskills with MOOCs
(Social Skills, Personal Skills, Digital Skills,...)
EU-Project: Elene4Work
www.elene4work.eu

Why offer a MOOC? University Perspective

• Benefits
  • Marketing the university
  • Innovations in teaching and learning (new pedagogical approaches)
  • High quality lectures for huge number of students at low cost

• Challenges
  • Finding a viable model that allows for sustainability; Won’t directly generate revenue; Requires investments
  • Concerns about the pedagogy and quality, e.g. Completion rates, Accreditation
MOOC Trends 2015

• The Death of Free Certificates (New Business Models)
  • Udacity: Nanodegrees
  • Coursera: Specializations
  • edX: Xseries  
  \[\text{(Cost per certificate $50-60)}\]

• Rise of Self-Paced Courses (vs Session Based)

• MOOCs Targeted at High Schoolers with Collection of Courses
  e.g. edX High School Initiative (US), Future Learn (UK)
Trend 2016: Global crediting transfer system for MOOC

• Six universities from Australia, Europe, Canada and the US are seeking to establish a new alliance in which each organisation’s MOOCs are formally accredited by partner institutions.

• The proposed scheme is similar to the European Credit Transfer System (ECTS).

• That will allow students to count participation in MOOCs towards their degrees.

Involved Universities: Delft University of Technology; Swiss Federal Institute of Technology in Lausanne (EPFL); the Australian National University; the University of Queensland; the University of British Columbia; and Boston University
German Perspective

• German Platforms: Inversity, openHPI, mooin

• The German expert group for science and innovation (EFI) report in 2015:
  • Recommends perceiving MOOCs more as an opportunity rather than a risk for education in Germany.
  • MOOCs can relieve the universities from the teaching of standard knowledge and create a scope for more research-oriented teaching.

• DAAD: Central challenge for using MOOCs in higher education institutions, only if crediting and transfer is recognized
University of Bremen Perspective

SPOC
Small Private Online Course
SPOC
Universität Bremen

eGeneral Studies
University funded Project

• 3 ECTS
• 1.100+ Students/Semester
• 550+ eExams/Semester
• Content is free
• Registration and graded Assessment on only Students of Bremen University

www.egs.uni-bremen.de
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- Students need up to 30 ETCS from General Studies for their study
- Faculties have capacity problems to provide sufficient number of courses
- Reach huge number of students with high quality lectures at low costs
- Learn anytime, anywhere

www.egs.uni-bremen.de
SPOC/MOOC
Universität Bremen

Virtual Academy of Sustainability
Funded by
German Federal Environmental Foundation (DBU)

- 3 ECTS
- Content is free
- Registration is free
- Graded Assessment only for Students of Partner Universities

www.va.bne.de
UN Decade of Education for Sustainable Development (2005-2014)

Subject of Sustainable Development important and necessary for all Universities in Germany, but universities have capacity problems to provide high quality lectures for their students.

www.va.bne.de
Zentrum für Multimedia in der Lehre

SPOC
Universität Bremen

E-Lecture
Innovationsmanagement

e-lecture.uni-bremen.de
Tunis Perspective

• UN Commission on Science and Technology for Development, report in 2015:
  • Low-income countries can utilize the full potential of MOOCs for the building and enhancing of human capacity
  • Enormous impact due to the potential of MOOCs to reach millions of students free of charge.

• Example: MOOC FOFLE «apprentissage en ligne du Français en Afrique francophone et ailleurs» in supported by Orange Foundation in cooperation with Virtual University of Tunis.

• Survey 2015 „Use of MOOC in Tunisia“ conducted by Center for Professional Skills Development (CDCP, Tunisia)
Survey 2015

The use of MOOC within companies, sectors of education and higher education and Tunisian public services.

Via: http://cdcp-tn.com
Survey MOOC En Tunisie

• 145 participants
  • 62% between 26..45 years old; 21% 46-65 years old
  • 78% in charge/active:
    49% master,
    20% university degree,
    12% doctorate
Result of Survey

- 30% Followed a whole MOOC (complete)
- 34% Followed a MOOC but not full
- 36% Did not follow a MOOC
Do you know MOOC?

• 59% Know exactly what does the acronym MOOC mean
• 17% Have heard of MOOC but do not know exactly what it is
• 24% Not familiar with this phenomenon
• Motivation:
  • Curiosity (50%)
  • Vocational Training (35%)
  • For Study (15%)
• 45% attended and/or completed 2 or more MOOC
• 85% says that the educational objectives are clear
Review of personal experience - What do you think of MOOC?

• 10% temporary fashion
• 80% A major educational revolution
• 6% Marketing tool for institutions
• 4% A minor phenomenon and uninteresting
Review of personal experience

• 91% Think participation in this MOOC allowed them to acquire new knowledge?
• 91% Think they will use gained knowledge in their studies / in their professional and personal life?
• 86% Overall satisfied with MOOC experience
• 93% Plan to register to one or more other MOOC
Summary/Recommendations

• SPOC/MOOC as an instrument for marketing and to reach huge number of students with high quality lectures at low costs at any distance

• Instrument for companies for employee training in cooperation with universities (Coursera survey: >90% say MOOC are same or better than company training)

• Allows to easily build up national and international cooperations and networks for developing and providing joint lectures

• Support Life Long Learning (L3)

• Marketing

-> Think of recognizing crediting and transfer in Higher Education
Thank you!

Links:

- [www.zmml.uni-bremen.de](http://www.zmml.uni-bremen.de) (ZMML)
- [www.elearning.uni-bremen.de](http://www.elearning.uni-bremen.de) (LMS)
- [www.eassessment.uni-bremen.de](http://www.eassessment.uni-bremen.de) (E-Assessment)
- [www.media.uni-bremen.de](http://www.media.uni-bremen.de) (Media Services)
- [www.egs.uni-bremen.de](http://www.egs.uni-bremen.de) (eGeneral Studies)
- [www.va-bne.de](http://www.va-bne.de) (Virtual Academy of Sustainability)
- [www.e-lecture.uni-bremen.de](http://www.e-lecture.uni-bremen.de) (E-Lecture: Innovationsmanagement)

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