MOOCs to the rescue?
Emergent forms of connectivist teaching and the German use case

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1st Internet of Education conference
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Agenda

1 MOOCs in Germany: A disruptive innovation?

2 The case of “Think Tank Cities” MOOC at Leuphana University

3 Learnings and Challenges
Emergent formats of academic teaching and learning: Massive Open Online Courseware

<table>
<thead>
<tr>
<th></th>
<th>narrow definition</th>
<th>loose definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Massive</strong></td>
<td>Unlimited number of participants</td>
<td>“many” participants (&gt;100)</td>
</tr>
<tr>
<td><strong>Open</strong></td>
<td>access is open to all comers at no charge</td>
<td>Openness of learning goals, choice of topic, forms of participation</td>
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<tr>
<td><strong>Online</strong></td>
<td>Teaching and interaction is taking place primarily online</td>
<td>“Blended” learning may combine on-site instruction with online teaching</td>
</tr>
<tr>
<td><strong>Course</strong></td>
<td>Course-like format</td>
<td>Emphasis on Community and Collaboration, loosely structured</td>
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</table>
MOOC: roots & predecessors

- e-Learning/distance learning

- Open Educational Resources (OER)
  Open Courseware (OCW), Open Access (OA)

- Educational theories:
  Legitimate Peripheral Participation (Lave/Wenger 1990)
  Connectivism (Siemens 2006, 2007, Cormier 2008)
  Conversational Framework (Laurillard 2001)

- Digital Literacy: Generation Facebook

- Big Bang in 2011: Sebastian Thrun at Stanford University
The MOOC hype and the MOOC backlash

John Hennessy, Stanford: „There is a tsunami coming“

Tom Friedman: „Revolution hits the universities“

Time Magazine: “Ivy League for the Masses”

New York Times: 2012 is “Year of the MOOC”

duz 7/13
“Verderben Videos die Lehre”?
MOOCs in North America and the UK

- Stanford/Silicon Valley: Udacity (Thrun), Coursera (Koller, Ng),
- MIT/Harvard: EdX (non-profit)
- UK: FutureLearn (Open University/BBC)

In the anglo context, MOOCs address the spiraling (private) cost and increasing (public) demand for quality higher education; a business model is emerging under conditions of an “educational market” with transparent political implications.
In the German context, MOOCs appear to be a (fairly expensive) solution looking for an (ideologically suspect) problem.
The (very) big picture: A (too) brief history of higher education in Germany

- structures and institutions of German higher education today are shaped by a history of secular emancipation from the religious roots of liberal arts education in medieval feudalist society (CLARKE 2006)

- contemporary “knowledge factories” (RAUNIG 2012) serve to normalize and control the canonic knowledge of industrial capitalism (FOUCAULT 1977)

- continuous metamorphosis of higher education from the post-war “multiversity” (KERR 1963) to the neoliberal “entrepreneurial university” (ETZKOWITZ 2000) where students are considered „customers“

- ubiquitous information and digital culture based on rapid innovation cycles demand suitable modes of academic teaching and a revised concept of knowledge

Institutional framework and established academic formats (e.g. teacher-centered, ex cathedra teaching formats such as lectures) are poorly suited for motivating and empowering students to take responsibility for their education and for civil society.
Agenda

1. MOOCs in Germany: A disruptive innovation?

2. The case of “Think Tank Cities” MOOC at Leuphana University

3. Learnings and Challenges
‘ThinkTank Cities’ was offered as a massive open online course (MOOC) from January 9th to April 28th as the pilot course of Leuphana Digital School.

“Think Tank Cities” was taught under the aegis of Prof. Daniel Libeskind and enrolled 3,500 students, some 450 of which completed the course with a certificate.
Leuphana has previously developed a number of award-winning large-scale (offline) courses and has gained substantial distance learning experience.

1.200 – 1.800 students, within one week, jointly …

… restructure a public theater to avoid its closure (2007)

… design measures to protect the labor market during a period of drastic downturn (2008)

… promote the work of renowned street artists by creating films (2009)

… work with world-class landscape architects to re-design the University campus (2010)

… conceive a just and financeable public health system for Germany (2011)

Leuphana is …

… a long-term provider behind Germany’s only dedicated distance learning university in public service, FernUniversität Hagen

… the European Commission’s hub of the Innovation Incubator encompassing a substantial public eLearning initiative

Source: Leuphana ThinkTank Team
Offering a free online course minimizes the threshold to high quality education and simultaneously sets new standards for online collaboration.

How it works

1. Are you interested in designing a city from scratch? This is the project of our pilot course.
2. Then sign up on leuphana.de/digital-school. There are no entry restrictions, and participation is free, as we are a European public University.
3. Starting January 9th, 2013, you will then collaborate with 5 team members on a series of assignments, leading to a 3D model of your envisioned city.
4. During the process, your work will be reviewed online by your team members, your peers from the many other multi-national teams, as well as from the University faculty.

We are

- Using Social Media for team learning
- Working in small international teams on projects of true relevance to mankind
- Providing a platform to collaborate with world-leading academics, artists, and decision-makers in each field
- Free to everybody
Our core MOOC platform is a lean content and process management system that leverages existing functionalities from market-leading internet businesses.

Leuphana ThinkTank Framework

Proprietary

- User Profiling & Management
- Crowd Evaluation
- Faculty Interaction
- Workflow Management
- Forum Functionality

Leverage

- Streaming Content (YouTube)
- Video Conferencing (skype)
- Collaborative development (google docs)
- 2D/3D Design (sketchup)
The course was structured in seven topical categories, the collaborative teaching team is located all over the globe.

Teaching categories:

- Architecture
- Cities as Economic System
- Social Science
- Cultural History
- Infrastructure
- Sustainability
- Public Health
Leading scholars and experts in the field collaborated with Daniel Libeskind and recorded a large number of video lectures especially for the course.

**Architecture**

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Daniel Libeskind</td>
<td>Architecture, Leuphana University</td>
</tr>
<tr>
<td>Prof. Philipp Misselwitz</td>
<td>Marginal Cities, Stuttgart University</td>
</tr>
<tr>
<td>Bart Brands</td>
<td>Karres en Brands, Landschapsarchitecten, RMIT University in Melbourne</td>
</tr>
<tr>
<td>Prof. Elliot Sclar</td>
<td>Urban Planning, Columbia University</td>
</tr>
<tr>
<td>Parag Khanna, PhD</td>
<td>Geo-Strategy, Hybrid Reality Institute</td>
</tr>
<tr>
<td>Gerhard Stryi-Hipp</td>
<td>Energy Systems, Fraunhofer-Institut, Morgenstadt</td>
</tr>
<tr>
<td>Prof. Jiang Lin</td>
<td>Special Development Zones, Lingnan College, Sun Yat-Sen University</td>
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<tr>
<td>Prof. Jürgen Kluge</td>
<td>Principles of Effectiveness and Efficiency, TU Darmstadt</td>
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<td>Jaana Remes</td>
<td>Economic Development, McKinsey Global Institute</td>
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<tr>
<td>Uwe Jean Heuser</td>
<td>Behavioral Economics, Die Zeit</td>
</tr>
<tr>
<td>Dr. John Beard</td>
<td>Cites for an Ageing Population, WHO</td>
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**Infrastructure**

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<tr>
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<tbody>
<tr>
<td>Prof. Dr.-Ing. Wilhelm Bauer</td>
<td>Technology Management, Fraunhofer Institute for industrial Engineering IAO</td>
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<tr>
<td>Diego Pavia</td>
<td>Smart Cities, KIC Innoenergy</td>
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<tr>
<td>Henry Ritchie</td>
<td>Infrastructure, McKinsey &amp; Company</td>
</tr>
<tr>
<td>Ayesha Khanna, PhD</td>
<td>Mobility, London School of Economics</td>
</tr>
<tr>
<td>Dr.-Ing. M.Sc. Tobias Hegmanns</td>
<td>Urban Logistics, Fraunhofer Institute</td>
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**Cities as Economic Systems**

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<td>Urban Logistics, Fraunhofer Institute</td>
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In conjunction with extensive digitized reading material, the international faculty provided a multi-perspective approach on a complex topic.

**Cultural History**
- Prof. Michael Schefczyk
  Political Philosophy & Ethics
  Leuphana University
- Prof. Beate Söntgen
  Experiential Geography
  Leuphana University

**Social Science**
- Prof. Saskia Sassen
  Sociology of the City
  Columbia University
- Prof. Timon Beyes
  Creativity
  Leuphana University / Copenhagen Business School
- Prof. Scott Lash
  Creative Cities
  Goldsmith University London
- Prof. Jeffrey Shaw
  Art and Cities
  City University Hongkong

**Sustainability**
- Jonathan Woetzel
  Resource Productivity
  McKinsey & Company
- Prof. Daniel Lang
  Transdisciplinary Sustainability
  Leuphana University
- Prof. Manfred Laubichler
  Sustainable Cities
  Arizona State University
- Prof. Sander van der Leeuw
  Sustainable Cities
  Arizona State University

**Public Health**
- Prof. Wulf Rössler
  Clinical and Social Psychiatry
  University of Zurich
- Prof. Gerd Folkers
  Pharmaceutical Chemistry
  Collegium Helveticum & ETH Zurich

**Operational Course Head**
- Dr. Carsten Siebert
  Philosophy and Philanthropy
  Daniel Barenboim Stiftung
- VP Holm Keller
  Course Development
  Leuphana University
A clearly structured assistance model assures ease-of-interaction between participants and experts and transparent communication in a public forum.

<table>
<thead>
<tr>
<th>Task</th>
<th>Public discussion forum</th>
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</thead>
<tbody>
<tr>
<td>Initial video input, subject related answers, qualitative</td>
<td>• All discussion within this forum</td>
</tr>
<tr>
<td>evaluation of top ranked final submissions</td>
<td>• Knowledge base and FAQ</td>
</tr>
<tr>
<td>Permanent teaching input, subject related answers and</td>
<td>• Extra highlighted profiles for Experts, Mentors, and Tutors</td>
</tr>
<tr>
<td>discussions, qualitative evaluation of final submissions</td>
<td>• Tutors with admin access, gathering discussions to threads</td>
</tr>
<tr>
<td>Supervision of related groups and their team pages, monitoring of</td>
<td>• Tutors able to relocate interesting discussions from team pages to the main forum</td>
</tr>
<tr>
<td>the submitted reports and group performance, evaluation assistance</td>
<td>• Forum dashboard for analytics and statistics</td>
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</tbody>
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Scholars and Experts

Mentors

1 Tutor per 100 students
The actual ThinkTank didactic flow is structured in a pre-phase, followed by a sequence of five assignments each with distinctive products.
During each assignment cycle, students completed one team task and uploaded artefacts (essay, map, design, etc.) for peer-review and grading into the MOOC platform.

Dear students,

As we approach the end of this course and your final assignment, it is time to change gears once again. Up to this point, you have been dealing mostly with concepts and facts, with pieces of information that you have organized according to various methodologies, theories or ordering principles. This was true even when you worked with images, since the task was always to illustrate a specific idea or element within a larger system. In Assignment 8, we ask you to move beyond this taxonomic or prescriptive method, and let us really “experience” your city.

This task is both easier in some ways, and far more difficult than the preceding assignments. It is easier because its end result is more intuitive than the previous analytical assignments. In this sense, it is more closely related to our everyday experience. We do not generally perceive the places we live in as a concatenation of internally complex elements or as implementations of specific models of city life that we happen to agree or disagree with. We experience them as a whole, as a Gestalt, as psychologists might say. Most cities have a very specific feel, a holistic experience of just what it feels like to be immersed in them. We do not need to analyze individual elements to have an intuitive understanding of how being in, say, Mumbai is different from being in
The submission for each assignment combines a peer-review and revision phase to maximize connectivist learning and peer discussions.

Unique to the MOOC format, students can contribute their own research to the class, and review or comment on each other’s work results, using the Discovery module.
Participants interacted with teaching staff and each other in an online discussion forum.

<table>
<thead>
<tr>
<th>Organization &amp; Process</th>
<th>General discussions in regard to process and administration here</th>
<th>Topics</th>
<th>Posts</th>
<th>Views</th>
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<tbody>
<tr>
<td></td>
<td>Last Post: LDS ALUMNI -- What happens after April 28th?</td>
<td>50</td>
<td>664</td>
<td>2548</td>
</tr>
<tr>
<td></td>
<td>by S. PICY about 6 hours ago</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources Discussions</td>
<td>Please post all your questions about library resources here</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Last Post: Saska Sassek 4/6 - City &amp; Social Change</td>
<td>298</td>
<td>716</td>
<td>2399</td>
</tr>
<tr>
<td></td>
<td>by Nino Grachyans about 11 hours ago</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Technical Support</td>
<td>Please post all technical questions or bugs here</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Last Post: lost matter in the lab</td>
<td>79</td>
<td>483</td>
<td>2170</td>
</tr>
<tr>
<td></td>
<td>by Agnieszka Kubara about 12 hours ago</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Your City</th>
<th>General Discussions about this course phase in this topic</th>
<th>Topics</th>
<th>Posts</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Last Post: Can't save evaluators</td>
<td>4</td>
<td>13</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>by Antje Brauer about 14 hours ago</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questions to teachers</td>
<td>Here you can post any questions to teachers</td>
<td>Topic</td>
<td>Posts</td>
<td>Views</td>
</tr>
<tr>
<td></td>
<td>Last Post: Felix Seyfarth</td>
<td>1</td>
<td>17</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>by Mia Wood 3 days ago</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Resources Discussions</td>
<td>Please post all your questions about library resources here</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Last Post: hearing the city</td>
<td>3</td>
<td>15</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>by Marina Rossow 4 days ago</td>
<td></td>
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</table>
Two-fold results: Artefacts and Networks

Team #523 Cookbook: New Port City

Harbor/Superport:
The need for a modern international port facility is the central economic purpose behind the foundation of the New Port City. The Nation, the State, and Private industry will form multiple agreements and “Public Private Partnerships” to assemble the investment in the key elements of the economic engine that will sustain the city and enable it to grow. PPP administration challenges conventional government approaches to development and presents brings risk with reward. The harbor is both industrial engine and natural resource. Open to the public as promenade and as a place for meeting. A port as an open door to the world, a strategy to generate a space where exchange goods and ideas flows. The working port is located upstream and protected from storms. It is important to maintain a natural buffer between the city and the ocean. Industrial activity can be integrated with landscape and recreation.

New Port is a multi-sized city from sketch which serves the purpose to have manageable sized cities accommodating 15 million inhabitants. In New Port City, the slogans intelligent growth, renewable energy, electric mobility, change of habits and technological innovation become visible in an unexploited dimension and get a new meaning through implementation of already available inventions.

Transportation:
All the districts will be involved in the network of the city in order to allow free movement of people from one side to another. The urban design will accommodate different scales of speed and distances. Short distances between corners and concentration of mixed activities – commerce and services – along main streets, connecting squares and parks, through which the urban tissue will breathe. The city has bike lanes and a public system of bike renting and sharing as well as ped cabs and other facilities. Public transportation by surface and underground will be the key to mass transit. A dense streetcar system combined with a BRT (Bus rapid transit) system will allow the to be simplified to a few lines that will connect those strategic points of the city that are not able to be connected on the ground, for reasons of distances, scale or topography. Stops and stations will be along main streets so that from any point of the domestic urban tissue there will be not more than 10 minutes walking. In order to reduce carbon emissions and improve city environment, for individual cars, will promote peer to peer car sharing (P2P), hitchhiking, carpooling, etc. combined with control of pollution, taxes, advantages for eco-vehicles, restricted eco-zones and campaigns to implement the needlessly of private cars.

City squares and plaza creating public space and make a city breath.

Parks and natural space in the city play important role in management of water runoff.

Team #523 stood out in their comprehensive version for a place that feels grounded, tangible and solid. Presenting a suggestive narrative, the submission helps New Port City become a specific place rather than a mere bundle of concepts. Judicious use of multiple media – maps, line drawings, renderings, schematic sketches – takes the viewer from the big picture to well-chosen details in a coherent and convincing manner. Last not least, the submission is impressively source, with a sound bibliography that cites both relevant literature and digital resources.

Public Space:
The empty space, that is mostly public, should be the main area of the city and will characterize it from the ground level. The built substance can be reconstructed and changed over the years following economic prosperity, however empty space (public) will always remain empty and will serve in a continuous dialogue, spreading and contracting, good pulse and breathing. Creates a network of parks with public maintained spaces for sports, recreational and social. Also there will be urban gardens supplying some of food the city needs. All people have access to the beaches and the sea. The natural environment will be protected and promoted as a cultural and natural heritage, specially the coast in which inland nature and the sea nature meet, will be protect and stimulated as a natural scenery of a way of life.

Housing Compensation:
Urban river connects promenade and city center. One of the challenges within Brazilian cities is the large number of favelas which arise from urbanization. To avoid the strengthening of gap between property and poverty the city builds privately financed residential areas which will be well connected to the port as cities’ most important employer. The long term goal for housing in Harbor City is to develop reasonable, energy and space efficient neighborhoods gently and in possession of the public sector, but firstly financed by loans from private sector.

Bianca Kindler (D), Martina Helms (D), Esteban Fernandez Rosso (ARG), Javier Pérez-Lanza (E), Eric Rentzka (USA)
The diversity of Team #523 Cookbook is not only culturally determined but also in terms of their industry and academic level. Bianca Kindler is a German student of Cultural Sciences with an interest in Urban Studies. Martina Helms works in Logistics in Germany. Argentinean Esteban Fernandez Rosso teaches Urban Design and Architectural Design at the University of Buenos Aires. Javier is Spanish architect and also student of Energy Efficiency and Bio-climatic Architecture currently living in Germany. American Eric Rentzka is an Architectural Designer and artist.

http://digital.leuphana.de/pages/finalists
http://www.thinktank-idealcity.com/
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Learnings

- peripheral participation (90 - 10, 80 - 20) highly relevant

- “eventedness” (Anderson 2008, White/Cornu 2010)

- digital literacy and other aspects of inclusion

- Interdisciplinary and intergenerational teaching

==> applicable for “peripheral” teaching?

==> Corporate Training, Corporate Communications?
Challenges

• Technological infrastructure and operational funding

• Technological know-how

• Media literacy and MOOC pedagogy

• Institutional incentive structure

==> intervention on federal or European level?

==> resource-sharing and best-practice policies?
Hypotheses

1. The innovative potential of MOOC is primarily pedagogical, not technological. Sensible use and widespread institutional adoption will therefore depend on pedagogical strategies and concepts.
2. MOOC make teaching transparent and offer especially medium-sized and smaller universities in Europe the opportunity to manage and showcase quality in teaching to a global audience, which positively impacts internationalization efforts and life-long learning programs.
3. Visibility of German (insert your preferred non-English language here) universities in particular can benefit from German (or other non-English) language MOOC. In the case of German, this is especially true for humanities and cultural sciences, but not limited to them.
4. Connectivist MOOC pedagogy results in highly useful network artefacts which may be maintained throughout the entire educational lifespan of “students” provided they retain relevance.
dipl pol Felix C. Seyfarth
Lecturer/MOOC Curator, PhD cand.

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