Overview of current trends in e-learning and institutional strategies in European higher education

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University of Zurich: Key numbers 2015

- Eintritte\(^1\): 4,612 (2014)
- Studierende\(^1\): 25,358
- Dozierende: 4,654\(^2\)
  - Davon Professuren: 634\(^2\)
- Abschlüsse\(^1\): 6,172 (2014)
  - Davon Doktorate: 724 (2014)
Faculties and Students per Faculty, 2015

- Theology
- Law
- Economy
- Medicine
- Veterinary
- Arts
- Sciences

- Bachelor students
- Master students
- Teaching diploma
- Doctoral students
Relevant e-learning networks

- Switzerland:
  - SWITCH eduhub: E-Learning Technology Working Group (community of e-learning professionals of all Swiss HEIs).

- Europe:
  - GMW: Society of Media in Science (community of e-learning professionals working in academic institutions in Germany, Austria and Switzerland).
  - LERU: League of European Research Universities, E-Learning Thematic Group (a working group of e-learning professionals from 22 European research intensive universities).
My goals in this TAM

• **Overview** of present e-learning challenges, solutions and trends in HEI
• Provide **recommendations**, suggestions, further reading, information sources etc.
• Questions and discussion

  – Overview of current trends in e-learning and institutional strategies in European higher education
  – Successful universities using e-learning tools in Europe and the case of University of Zurich
INTRODUCTION

ADVANTAGES OF DIGITAL MEDIA IN TEACHING AND LEARNING

STRATEGY BUILDING: CORE QUESTIONS

CURRENT TRENDS OF MEDIA USE AND TOOLS
Drivers of change for university teaching

- Digitalization in everyday life, in science, research and management
- Physical and virtual mobility of students and staff
- Internationalization

Intersecting areas:
- Educational development
Universities *must* use the advantages of digitalization complementary to the advantages of study on campus.
INTRODUCTION

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STRATEGY BUILDING: CORE QUESTIONS

CURRENT TRENDS OF MEDIA USE AND TOOLS
Strategy building for e-learning: Core questions

- **Situation analysis**, what are our present achievements, urgent needs and pressing problems in teaching and learning?
- **Target group definition**, who are our students (e.g., young learners, working adults?), where are our students (on campus, off campus, mixed)?
- **Learning goals**, what should the students learn?
- **Pedagogy**, what kind of teaching do we need in our subjects?
- **Technology**, what digital infrastructure and services do we need?
- **Budgeting**, how much does it cost, is it affordable?
- **Benchmarking and change management**, how to assess and improve?
**Strategy building for e-learning: Finding answers**

- **Situation analysis** – survey, round table with stakeholders
- **Target group definition** – define present and intended in future
- **Learning goals** – use Bologna framework, adapt curricula according to Bologna reform
- **Pedagogy** – design teacher development program
- **Technology** – evaluate and choose digital infrastructure, run pilot projects, design services
- **Budgeting** – check costs and cost saving possibilities
- **Benchmarking and change management** – exchange with peers, assess your institution using e-learning quality frameworks, improve step by step
Exchange with peers: UZH and LERU

League of European Research Universities LERU

21 Research-intensive universities

Founded 2002
Strategy paper of LERU: Online Learning at research-intensive universities

Advice paper, addressing open questions in:

- Future of blended learning
- Online pedagogy and quality
- Global and international perspective
- Reputation and brand
- Business models
- Collaboration
- Policy making

Appendix with recommendations to university boards

This is how strategy building basics might look like if you start ...
... and after a while
INTRODUCTION

ADVANTAGES OF DIGITAL MEDIA IN TEACHING AND LEARNING

STRATEGY BUILDING: CORE QUESTIONS

CURRENT TRENDS OF MEDIA USE AND TOOLS
Trend? Which trend?
Locating technology innovations

Gartner Hype Cycle

- Technology Trigger
- Trough of Disillusionment
- Slope of Enlightenment
- Plateau of Productivity
- Peak of Inflated Expectations

VISIBILITY

TIME
UZHs areas of current practice and trends

Current use of e-learning tools and trends

- Future trends
- MOOC platforms
- E-portfolios systems
- Social media platforms
- Multimedia, video
- Learning management systems
- E-assessment
Main fields of practice and development @ UZH

We are investing in the development of

- MOOCs
- Flipped classroom
- E-Assessment
- LMS development, integration with other systems (e.g. streaming video platform)
- Multimedia and video use in teaching and learning

We expect to be working soon in context of

- Artificial Intelligence (e.g. automated essay grading)
- Augmented and virtual reality (mobile apps, virtual learning environments)
- Wearable computing (Google Glass, activity trackers etc.)
Can MOOCs help to innovate on campus teaching?

M Massive  many participants, no limit of participants‘ number

O Open    for everybody, no formal prerequisites, open educational resource

O Online  Course content, communication and interaction via WWW

C Course  content is offered in course format, with start date, due assignments, end date

xMOOC  x for extended

cMOOC  c for connectivist
MOOC-Platform Coursera

- 2011, autumn
  - Stanford, Pilot 1 MOOC, 160'000 learners

- 2012, spring
  - start of company
  - 4 partner universities

- 2013, autumn
  - 5 Mio. learners
  - 90 partners
  - 460 MOOCs
  - UZH-Pilot

- 2016, 15 Mio. learners
  - www.coursera.org
UZH on Coursera
22. August 2013

UZH-Pilot MOOC

Prof. Abraham Bernstein
«Informatics for Economists»

HS 2013
LMS – from desktop and laptop to mobile
LMS for E-Assessment, 2015

- **Paper based exams**
  - room entry control (ID scanning)
  - Assessment delivery control
  - processing results

- **E-Assessment**
  - open book e-assessments online
  - closed book e-assessments on campus

**EPIS - Elektronische Prüfungsinfrastruktur**

**Multiple Choice Auswertung Papierprüfungen:**

<table>
<thead>
<tr>
<th>WWF</th>
<th>11 Module, 2'900 Teilnehmende</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhF</td>
<td>27 Module, 5'000 Teilnehmende</td>
</tr>
<tr>
<td>MNF</td>
<td>21 Module, 3'400 Teilnehmende</td>
</tr>
</tbody>
</table>

**E-Assessment (Online Prüfungen):**

18 Veranstaltungen, grösste Prüfung mit 883 Teilnehmenden (RWF)

Fast growing demand for support of e-assessments!
The vision of Next Generation Digital Learning Environment: NDGLE, a follow-up of LMS?

- A confederation of integrated IT systems
  - Flexible, modular, "Lego"-Style
- Full adherence to standards
- Teachers and students add/remove tools
- Support personalization

Adopted by University of Utrecht (Netherlands):
https://www.youtube.com/watch?v=tX57ruRKys0
Next Generation Digital Learning Environment NDGLE

The Next Generation Digital Learning Environment

A Report on Research

Malcolm Brown, EDUCAUSE Learning Initiative
Joanne Dehoney, EDUCAUSE
Nancy Millichap, Next Generation Learning Challenges

http://www.educause.edu
NMC Horizon Report 2016, Higher Education Edition
Topics from the NMC Horizon Report 2016
Sources and References

Images:
- Screenshot UZH MOOCs: https://www.coursera.org/courses?query=University%20of%20Zurich, accessed 01.10.2015
- Lego 1: Retrieved from https://upload.wikimedia.org/wikipedia/commons/2/20/Lego_dublo_arto_alanenpaa_5.JPG, accessed 25.10.16

Other: