Digitalization of the University
Implications for Learning, Teaching and Research

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THE ACADEMIC WORKING PLACE:
RESEARCHING AND TEACHING @ UZH
Overview of Campuses at the University of Zurich
UZH is ...

New Students\(^1\)
4229
4477 (2013)

Teaching Staff
4524
4295 (2013)

Professors
612
584 (2013)

Students\(^1\)
25634
25715 (2013)

Degrees Awarded\(^1\)
5932
5570 (2013)

PhD Degrees
719
771 (2013)

\(^1\) Excluding Master of Advanced Studies (MAS) programs and students
Faculties and Students per Faculty, 2014

1. **Studierende nach Fakultät, HS 2014**
   - Theologische Fakultät: 15%
   - Rechtswissenschaftliche Fakultät: 13%
   - Wirtschaftswissenschaftliche Fakultät: 12%
   - Medizinische Fakultät: 3%
   - Vetsuisse-Fakultät: 3%
   - Philosophische Fakultät: 3%
   - Mathematisch-naturwissenschaftliche Fakultät: 1%

2. **Studierende nach Studienstufe, HS 2014**
   - Lizenziat/Diplom/eidg. Fachprüfung: 23%
   - Bachelor: 52%
   - Master: 19%
   - Lehrgymnasium: 3%
   - Doktorand: 3%
INTERPRETING DIGITAL IMAGES
WORKING ON A MODEL
EXPERIMENTAL MOBILE TEACHING
Digitalization of the Academic Workplace

THE PROFESSOR IS A RESEARCHER, A TEACHER, A MANAGER.

SHE / HE IS WORKING LOCALLY AND GLOBALLY.

IN RESEARCH AND OFFICE, FOR WORKING AND NETWORKING, DIGITAL MEDIA ARE INDISPENSABLE.

THE USE OF DIGITAL MATERIALS AND COMMUNICATION TOOLS DRIVES INNOVATION IN TEACHING, TOO.
Drivers of Change

- Digitalization in Research and Management
- Increasing Physical and Virtual Mobility
- Blended Teaching in Educational Practice
- Educational Development
TIME FOR QUESTIONS AND DISCUSSION

WHERE DO YOU SEE THE DRIVERS OF CHANGE FOR EDUCATIONAL DEVELOPMENT?
DIGITALIZATION – A BRIDGE FROM RESEARCH TO BLENDED LEARNING
Bridging the Gap between Research and Teaching

Digital Objects in Research
- Digital texts, videos, images
- Models, visualisations
- Online resources for research, libraries
- Scientific data bases
- Open Access repositories
- Science blogs, ...

Digital Objects in Learning Environments
- Courses in learning management systems
- MOOCs, Open Courseware
- Digital assignments, e-assessment
- Virtual labs, simulations
- E-portfolios
- Instructional video, social media, ...

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Similar Media Competencies for Similar Processes

- Evaluation
- Market Demand
- Idea Definition of Goals
- Concept Planning
- Assessment
- Implementation
- Concept Planning
- Marketing
- Prepare Teaching Material
- Teaching Project
- Networking
- Funding
- Publication
- Research Project

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Definitions of Blended Learning

OLC Insights

OLC’s eLearning Landscape

Here at the OLC, we see social media as a conduit for the eLearning community to stay informed of the latest news and trends while sharing insights and opinions on this ever changing field.

Updated E-Learning Definitions

The Sloan Consortium defined hybrid courses as those that integrate online with traditional, face to face class activities in a planned, pedagogically valuable manner.
Blended Learning – Somewhere in Between
Blended Learning – A Decision of the Teacher

«... online learning will not be a separate activity, but one component within a wide range of decisions about teaching and learning.»

(Tony Bates, 7.9.2015)
BlendedX: A MOOC on Blended Learning for Further Study

MOOC on EdX Platform [www.edx.org](http://www.edx.org) «BlendedX - Blended Learning with edX»

Time Commitment: Three to four hours
A MOOC on Blended Learning on Coursera

About this Course

Plenty of buzz exists about blended learning and its transformational potential, but what does blended learning really mean? In this course we will explore the different models of blended learning and dive into key issues that impact students, teachers, and schools. Specifically, we will look at these issues through the lens of three high-performing schools that each use a different type of blended learning. A few of the key topics will include:

- The role of the student and how to support students in the transition from traditional to blended learning
- Implications for teachers in their day-to-day work and overall role
- Impact on the way schools are designed, including staffing models, use of time, hardware/software selection, and the use of data
- Implementation challenges, potential solutions, and the remaining open questions

We will live by the attributes of blended learning in this course, encouraging students to take quizzes at the beginning of the module to assess their understanding and skip material they already know. Overall, we will take a hands-on approach and the course will culminate in participants prototyping their own blended learning model.

If you are interested in learning more about how to best leverage technology in education and rethink the way we run schools, join this MOOC and encourage your colleagues to do the same. Become a part of this growing movement and learn first-hand how blended learning can help provide students a more personalized learning experience.

Subtitles available in English, Russian
LERU Advice Paper: Online Learning at Research – Intensive Universities

On Campus - Where is the Blend?
On Campus, Classroom Presentation
On Campus, On Line

ONLINE AND ON CAMPUS: BLENDED LEARNING
Off Campus: Mobile Learning
TIME FOR QUESTIONS AND DISCUSSION

WHAT TYPE OF BLENDED LEARNING DOES YOUR INSTITUTION NEED?
UZH: IT SERVICES AND INFRASTRUCTURE
IT Services

General provisions: Infrastructure and Services

- Network (LAN and WLAN), Working Stations, Servers
- Storage, Backup
- Audio-Video Infrastructures
- Scientific Computing

E-Learning

- LMS
- Multimedia Production, Scientific Visualization
- Lecture recording (Podcasts)
- E-assessment
- MOOC
Digitalization of University Administration

• From immatriculation through studying to delivery of certificates
  • Databases with core information (university management)
  • Digital identity for all UZH Members (students, faculties, staff)
  • Web applications for immatriculation, enrollment for semester and courses
• Interface with Learning Management System (LMS)
  • one-click option to create a basic learning environment per course

more efficiency in organization and teaching logistics!
Scientific Computing: «Science Cloud»
LMS Statistics, 2014
OLAT Online Learning and Training

registered users 70'000+
of which active in 2014 50'000+
of which UZH-users 35'000+
total of courses 17'000

**New or renewed UZH-courses per semester** 1500

individual log-ins per day (average) 1‘200

highest number of log-ins per day 2700+

http://www.olat.org
OLAT: E-Assessment Statistics 2014

Online assessments
• 20 – 30 online assessments
• 1 Open Book online assessment with 800+ students (Faculty of Law)

On campus assessments (max. 350 students)
• 20 – 30 E-Assessments on campus

Room entry control, assessment delivery control
• for E-Assessments on campus or paper based assessments
• 40+ examination sessions, largest with 1'050 students

Fast growing demand for all assessment related services!
Podcasting Statistics, 2014

- **1500** single lectures recorded and published
  - 90 minutes each
  - 130 lecture series from 5 faculties
  - 110 special events (congresses, VIP talks etc.)
- **40** inaugural lectures
- **650'000** views or downloads
- **12 %** growth compared with 2013

Fast growing demand for lecture recordings!
MOOCs on Coursera, 2013-2015

- Informatik für Ökonomen
- Teaching goes massive: new skills required
- Introduction to Statistics for the Social Sciences
- Spacebooks. An Introduction To Extraterrestrial Literature
- Sagas and Space – Thinking Space in Viking Age and Medieval Scandinavia
- Sprachtechnologie in den Digital Humanities

About the Course
Since the invention of the telescope in 1608, outer space has been turned into a play of free imagination and science. And it is a field that has thrived since then. The human mind was on the journey to other planets – and after this time it returned from there with breathtaking news, describing images or philosophical insight. And, of course, with a lot of questions: Why are nuclear Askards on the Moon included in our imagination and explored? Is it true that the people of Mars do live according to higher moral standards than we do? And where does the world alien obsession with terraformed paper actually come from?

These are some of the questions we will be addressing within this course. Moreover, we will watch the birth of the alien reader, we will explore the logic of space invariance, and the history of space colonists. We will examine the inventory of extraterrestrial literature and survey the competing projects of global cosmopolitanism. Next to well-known authors like Edgar Allan Poe, Dunne de Berges, Shelley or Lem, you will also be introduced to neglected and forgotten works. Finally, we might even understand how literature itself was transformed by this journey throughout the universe – and how it finally became a true international medium.

The soundtrack to this MOOC will be provided by Swiss artists like Tunes and Dadie.

Keywords: Science Fiction, Sci-Fi, Extraterrestrial Literature, Spacebooks

Course Syllabus
INTRODUCTION: WHAT IS EXTRA-TERRESTRIAL LITERATURE?

Main Source: Jonathan Swift, Travels into Several Remote Nations of the World, In Four Parts. (1724, Part III, Chapters 1-5).
TIME FOR QUESTIONS AND DISCUSSION

WHAT KINDS OF INFRASTRUCTURE AND SERVICES DOES YOUR INSTITUTION NEED?
Sources and References

Images:
- Online Learning Consortium: http://onlinelearningconsortium.org/updated-e-learning-definitions/, Copyright © 2015 Online Learning Consortium
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Other:
- BlendedX on YouTube: https://www.youtube.com/watch?v=1nyAax_iOaY
- Online Learning Consortium: http://onlinelearningconsortium.org/updated-e-learning-definitions/ Copyright © 2015 Online Learning Consortium
- Science Cloud: Quelle: http://www.s3it.uzh.ch/infrastructure/sciencecloud/
- TedX, Blended Learning, on YouTube: https://www.youtube.com/watch?v=Mb2d8E1dZjY
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