

## ***E-LEARNING SUPPORT STRUCTURES***

Prof. Dr. Nicolas Apostolopoulos  
Freie Universität Berlin  
Center for Digital Systems

## The Freie Universität Berlin (FU)





## FU facts and figures\*

- 34,000 students, 60% women, 16% international
- 400 professors
- 1,700 academic staff, 40% research funded
- 2,200 additional staff
- 12 departments, including the Charité
- State budget: 290 million euros p.a.
- Third-party funding: 60 million euros p.a.
- Excellence Initiative: 150 M€ (for five years)



\* Figures exclude human medicine (Charité)

## FU Study profile

- Traditional full research university with 100 fields of study
- 74 institutes
- Center for Area Studies
  - John F. Kennedy Institute for North American Studies
  - Institute for Latin American Studies
  - Institute for Eastern European Studies
  - East Asia Studies
  - Middle East Studies
  - Center for Italian Studies
  - Center for French Studies
  - European Studies
- Bachelors and Masters programs
- Berlin University for Continuous Studies (joint venture with Klett Publ. Inc)






## Institute for Latin American Studies




# Institute for Latin American Studies, Homepage




Freie Universität Berlin


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[Institute](#) | [E-Learning](#) | [Academics](#) | [Research](#) | [Service](#)






## Institute for Latin American Studies



Lateinamerika Institut  
Instituto de Estudios Latinoamericanos  
Instituto de Estudos Latino Americanos



## About Learning and Technologies

What is  
TEL?

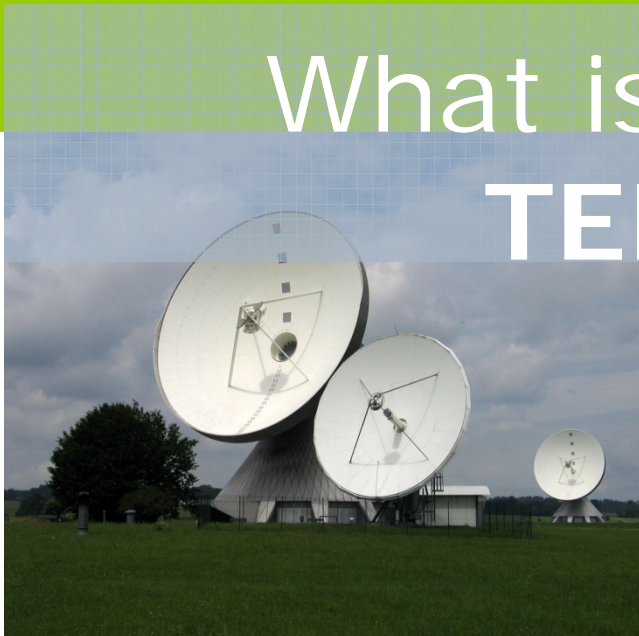


A phone?



## About Learning and Technologies

What is  
TEL?



A Telecom Company?

## About Learning and Technologies

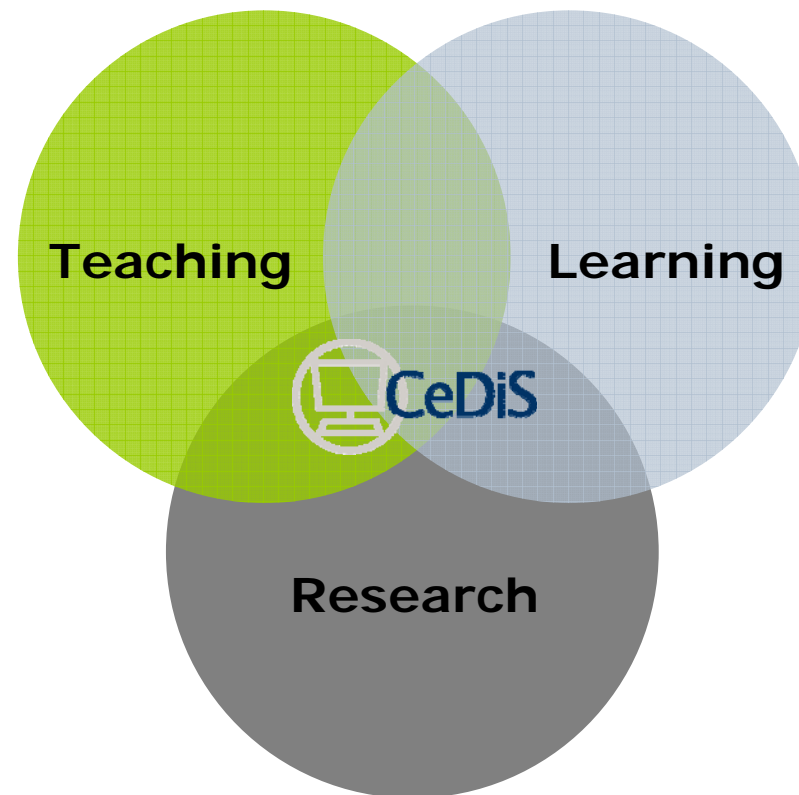
# What is TEL?



An acronym for  
„Technology Enhanced  
Learning“?

## Excellence at Universities

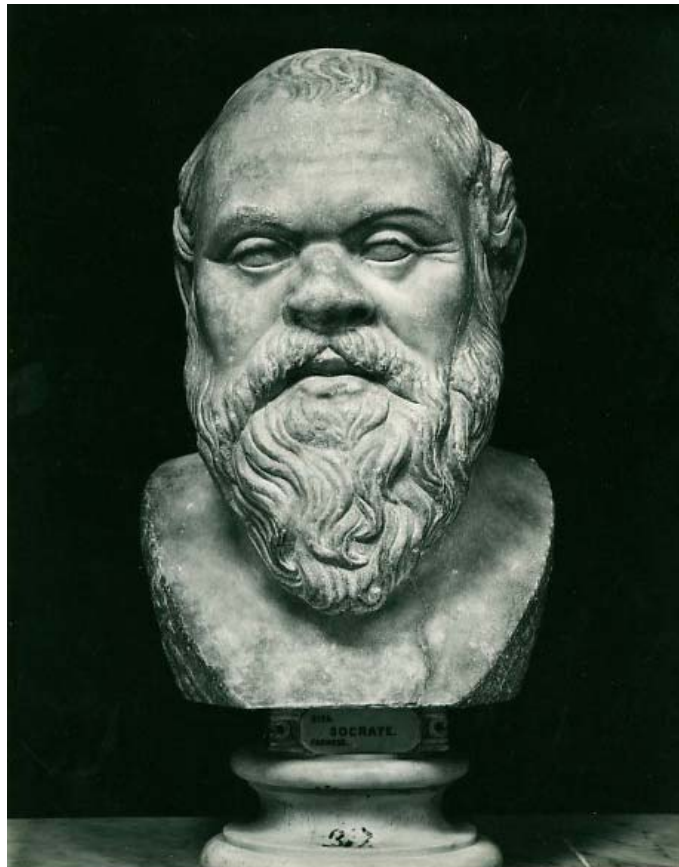
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Gerhard Casper, former President Stanford University



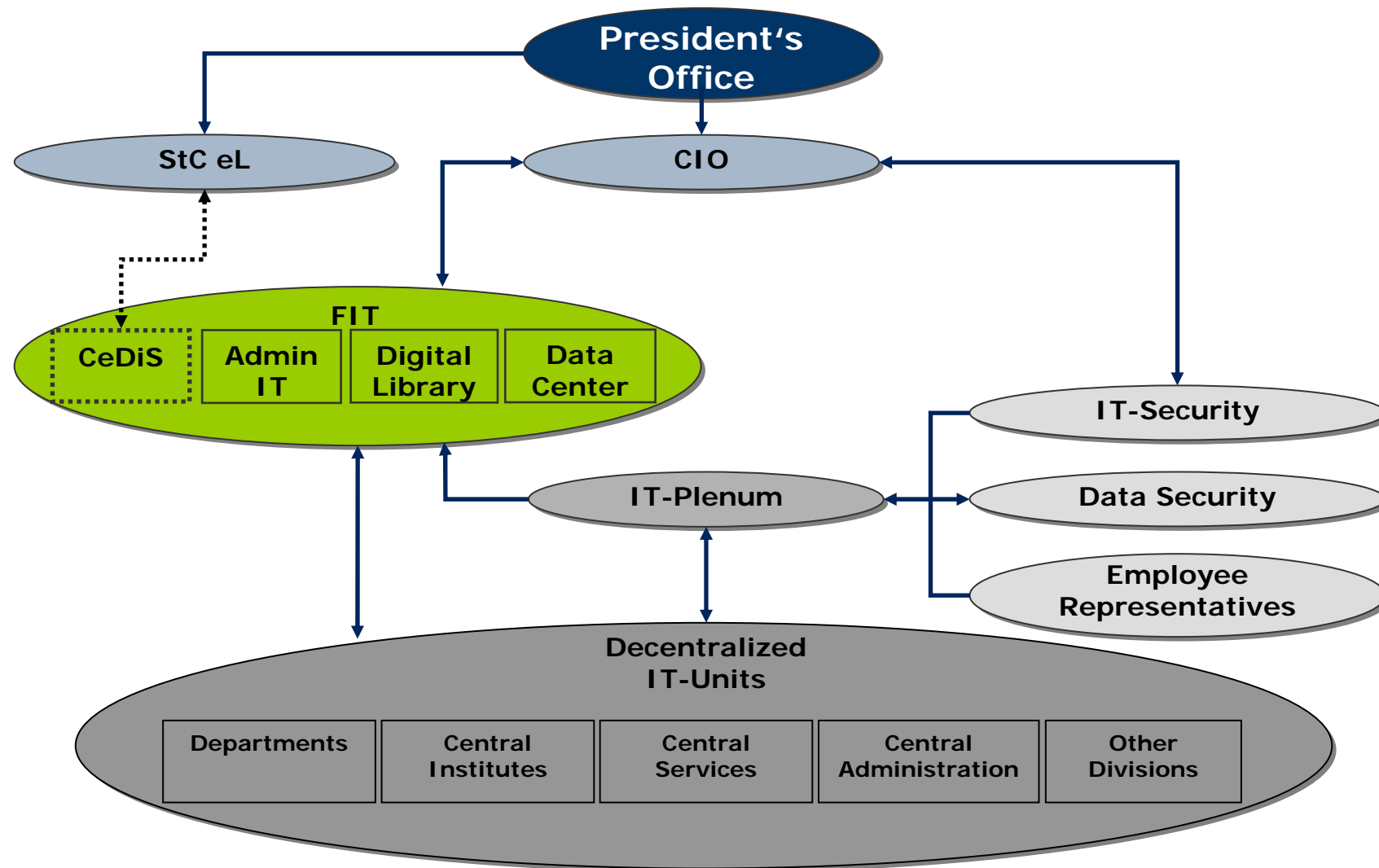
## About lifelong learning ...



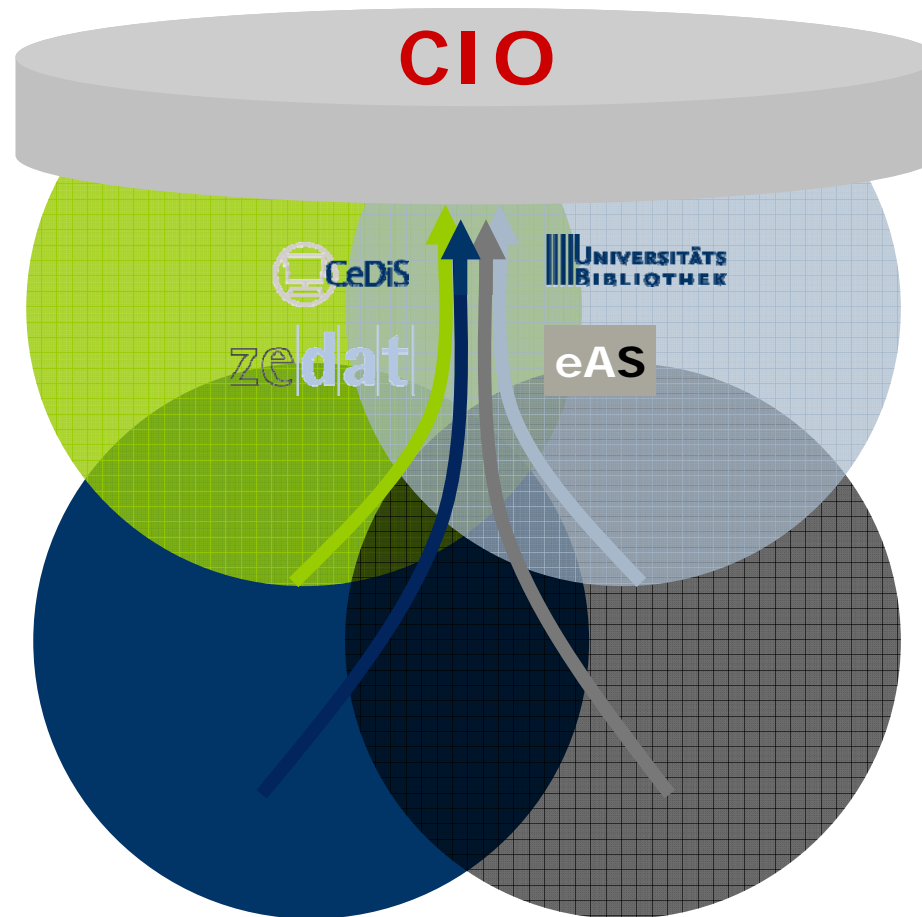
ΓΗΡΑΣΚΩ ΑΕΙ ΔΙΔΑΣΚΟΜΕΝΟΣ

ΣΩΚΡΑΤΗΣ  
470-399 π.Χ.

## FIT: IT at the Freie Universität

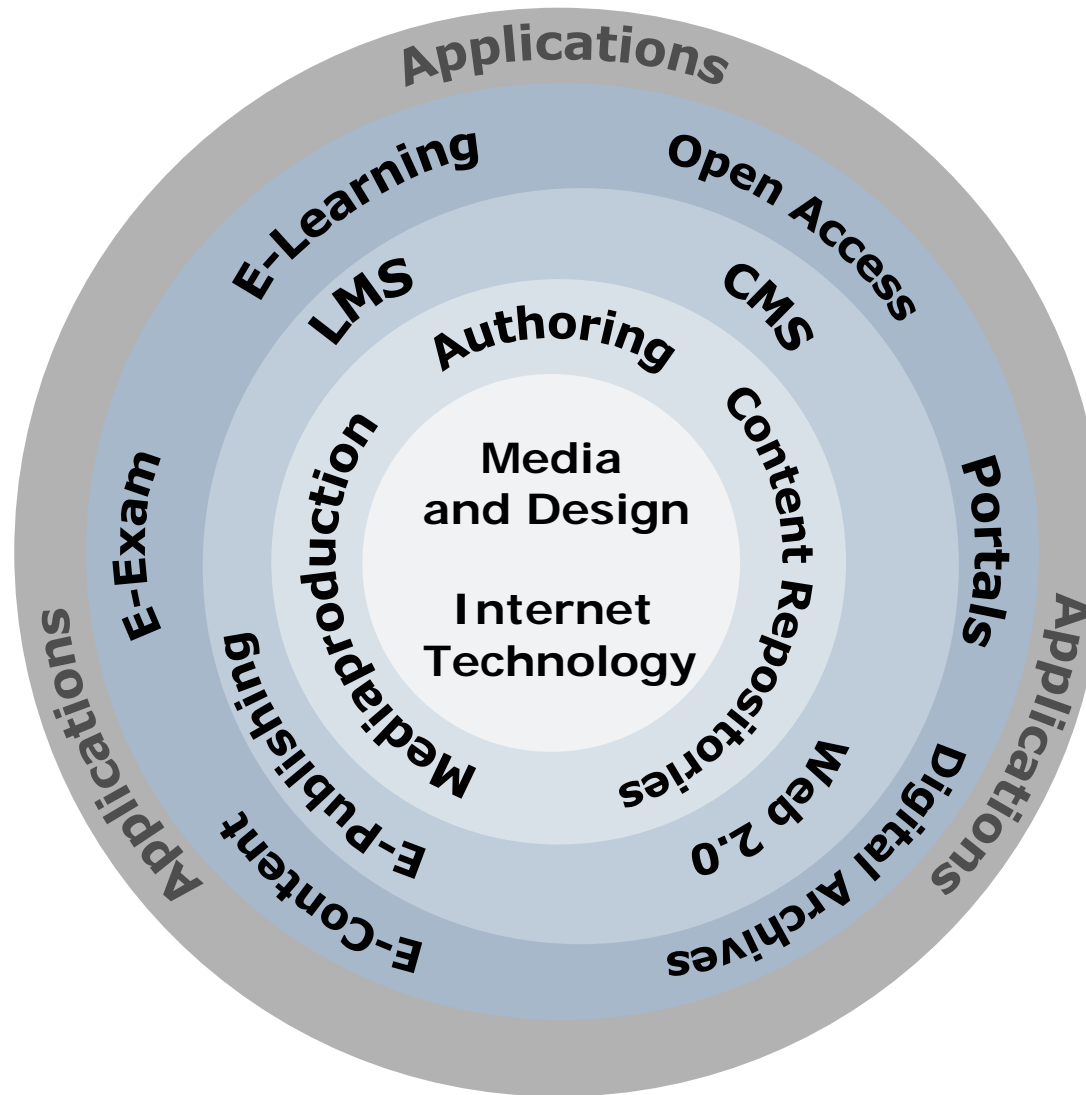


## FIT Strategic Alliance

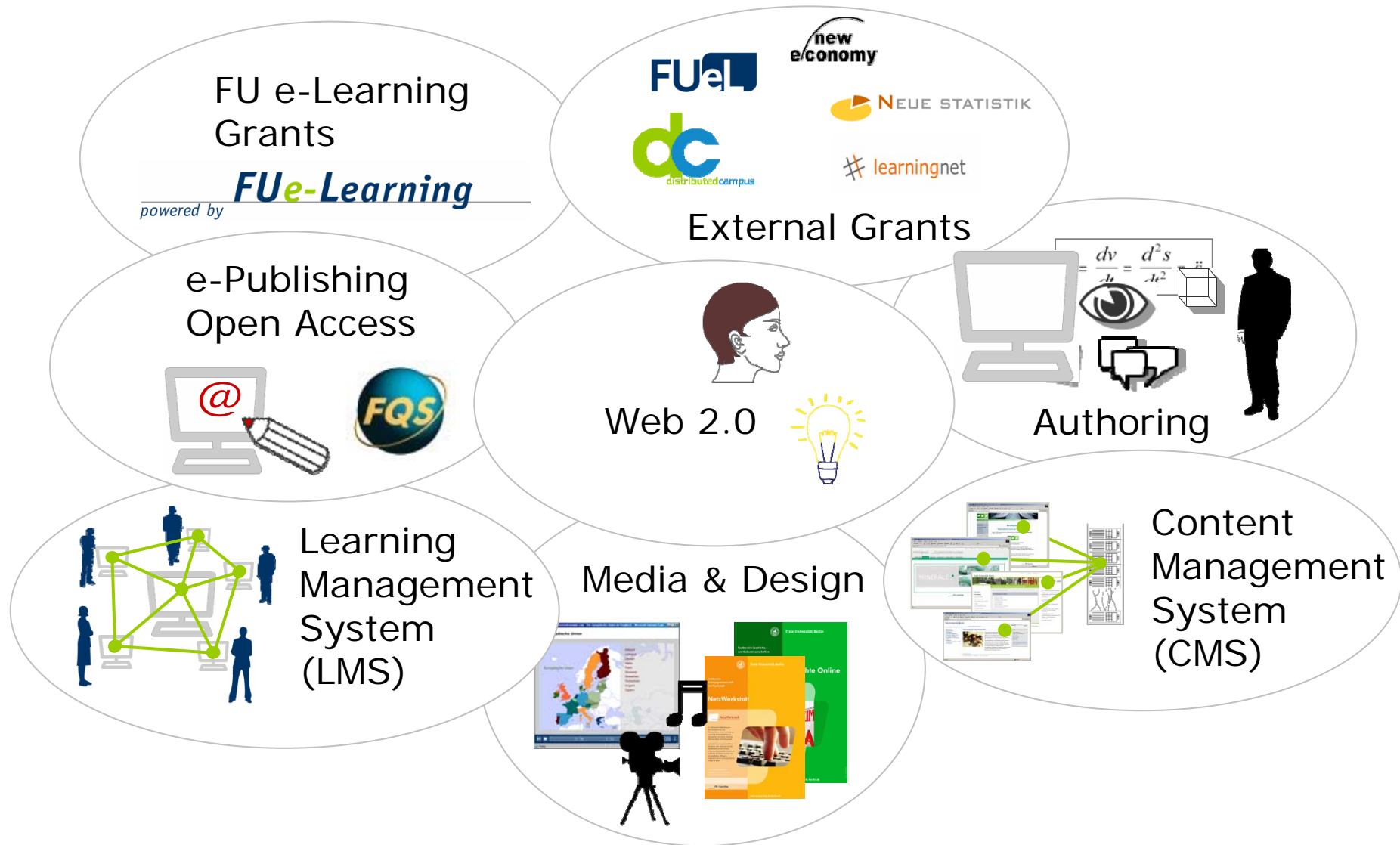




## CeDiS – Structure



## CeDiS Teams



## DT in Education: Some Questions

- Why is e-Learning so important?
- Why is e-Learning so difficult?
- Is there a complexity bubble?
- Is there a unique strategy?
- Will AI solve many problems?
- Will blended learning solve most of the problems?
- Will learner centered learning solve some of the problems?
  
- » Make wise use of Digital Technology (DT)!«



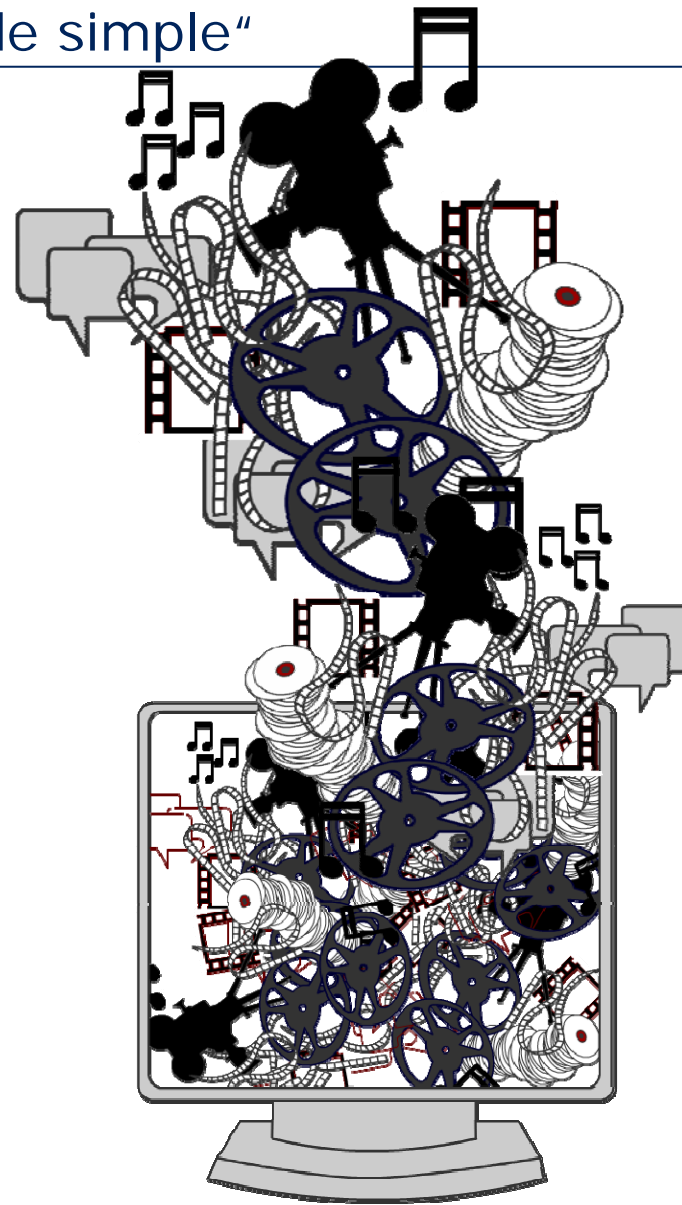


## Outline I

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- I. **First steps in e-Learning**
- II. e-Learning Engineering
- III. e-Learning at a traditional University
- IV. Coordinated action plan
- V. The Web 2.0 Initiative
- VI. Lessons learned
- VII. Open issues

## Multimedia “made simple”



## Fundamental Decisions for Multimedia Learning Applications

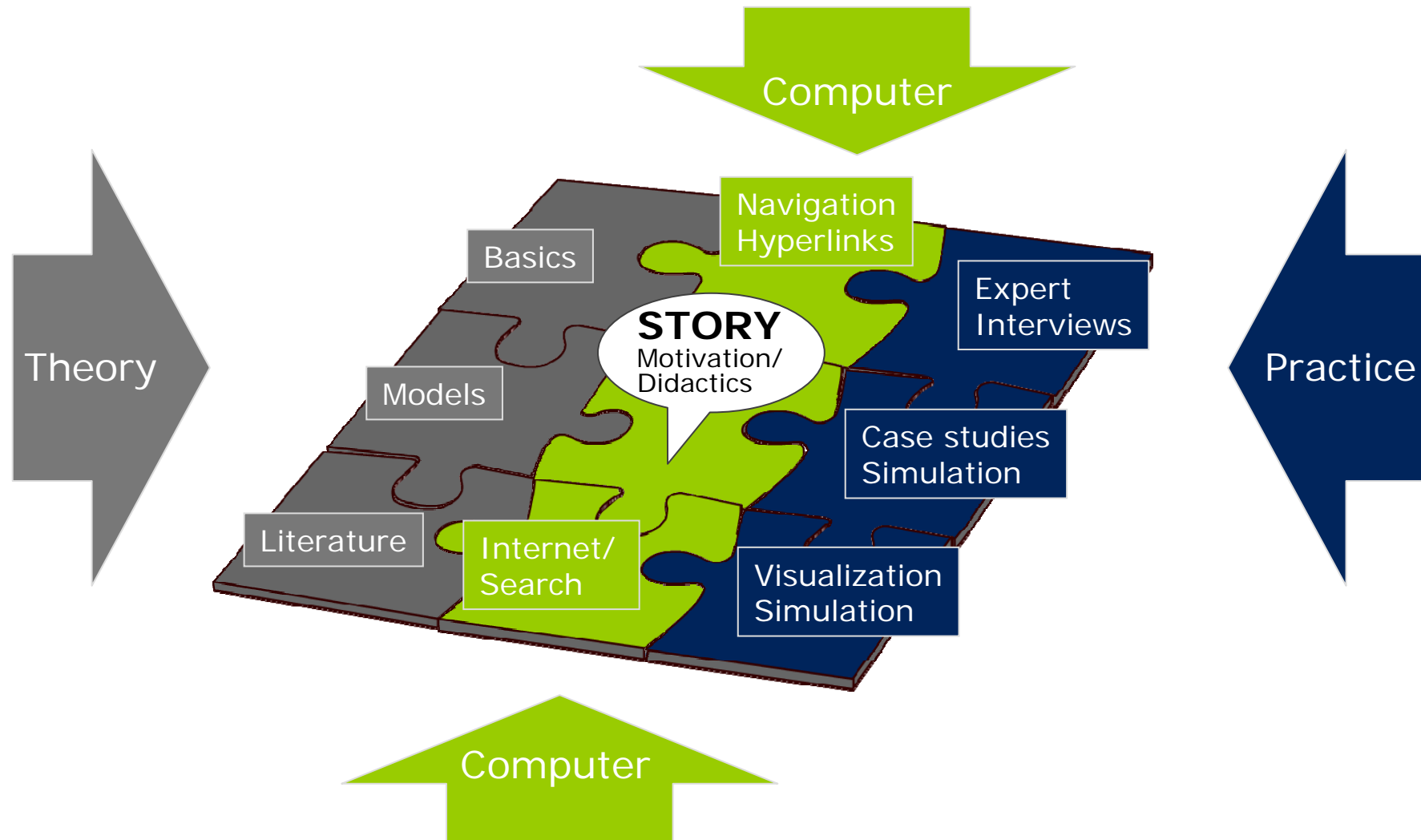
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Attractive digital learning material increases learners' motivation and reduces the weaknesses of computer systems

- Problem based learning (constructivism)
- Combination of theory, practice and computer-aided tools (search, animation, simulation, hyperlinks)
- Enhanced visualization of abstract topics
- Integration of Video
- Active and rich interaction, personalization
- Multiple navigational assistance
- Creation of »aha«-effects

» Create humane applications «

## The DIALECT Model





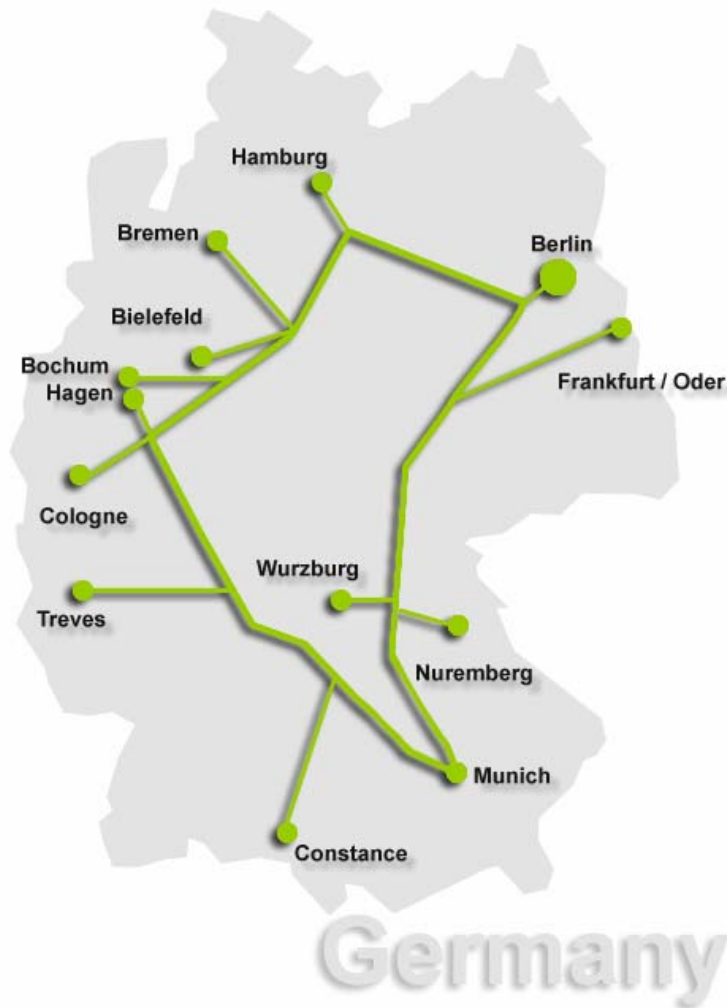
## Outline II

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- I. e-Learning as an experiment
- II. e-Learning Engineering**
- III. e-Learning at a traditional University
- IV. Coordinated action plan
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- VI. Lessons learned
- VII. Open issues

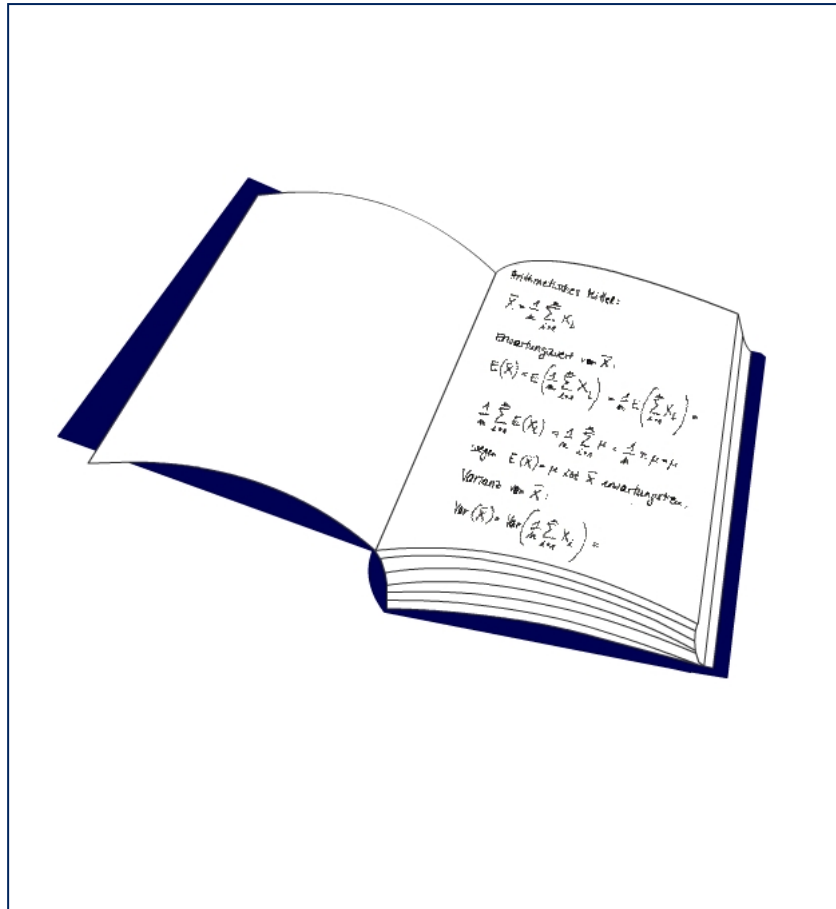
## BMBF Project New Statistics

### 13 Departments at 10 German Universities

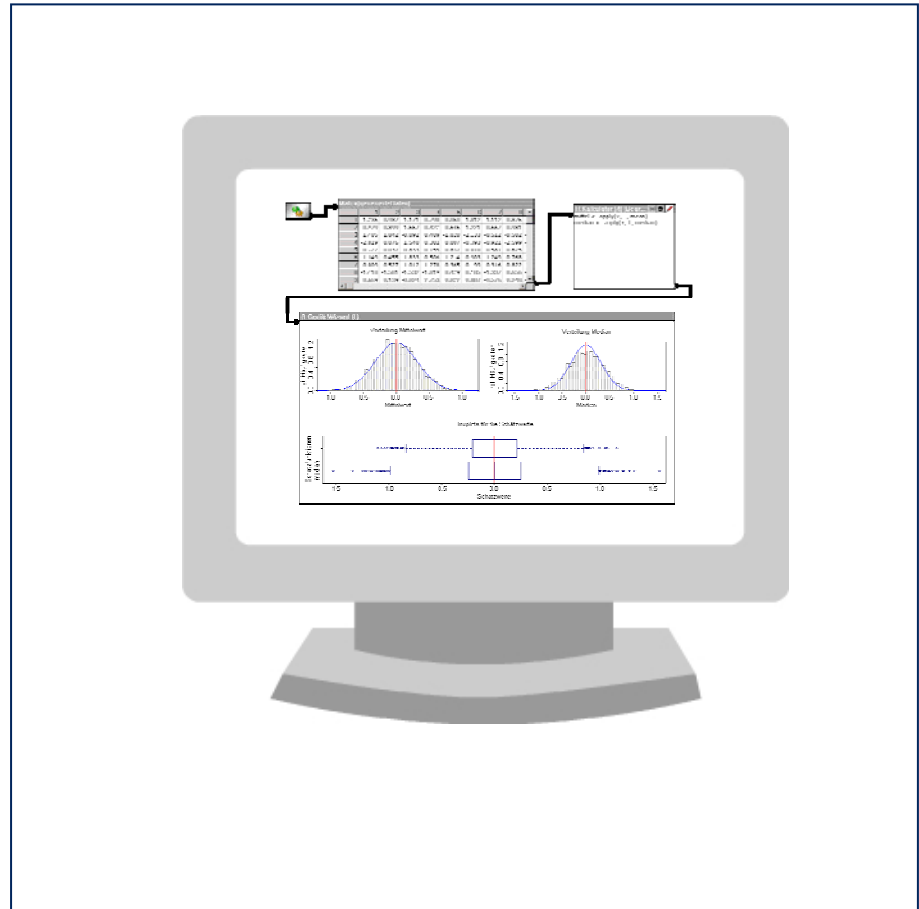


- European-University Viadrina  
Frankfurt/Oder
- University of Applied Sciences Cologne
- University Hagen
- Free University Berlin
- Friedrich-Alexander University  
Erlangen-Nuremberg
- Humboldt University Berlin
- University of Bielefeld
- University of Bremen
- University of Hamburg
- University of Konstanz
- Virtual University of Applied Sciences

## „Traditional“ versus „New Statistics“

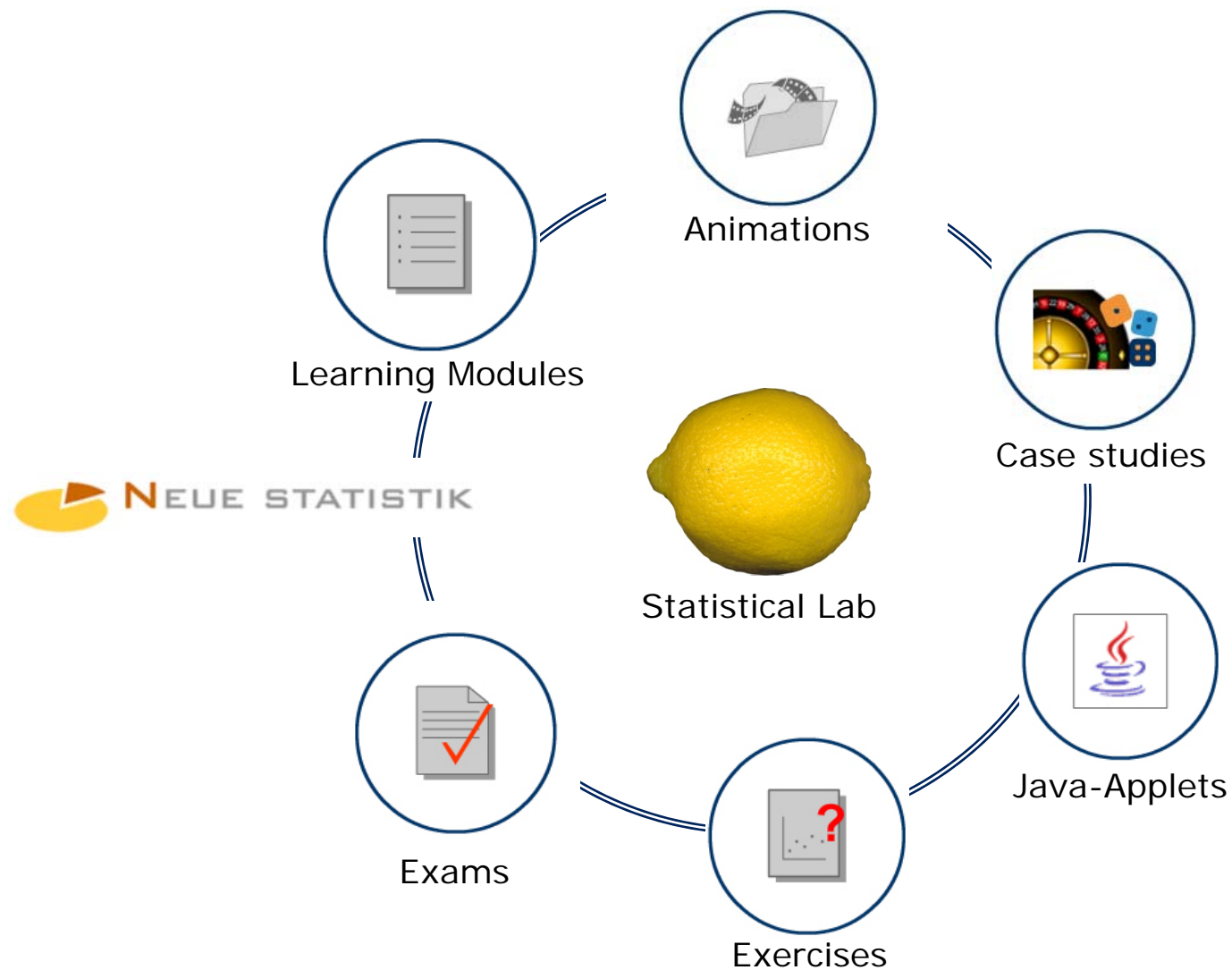


Statistics: yesterday and today



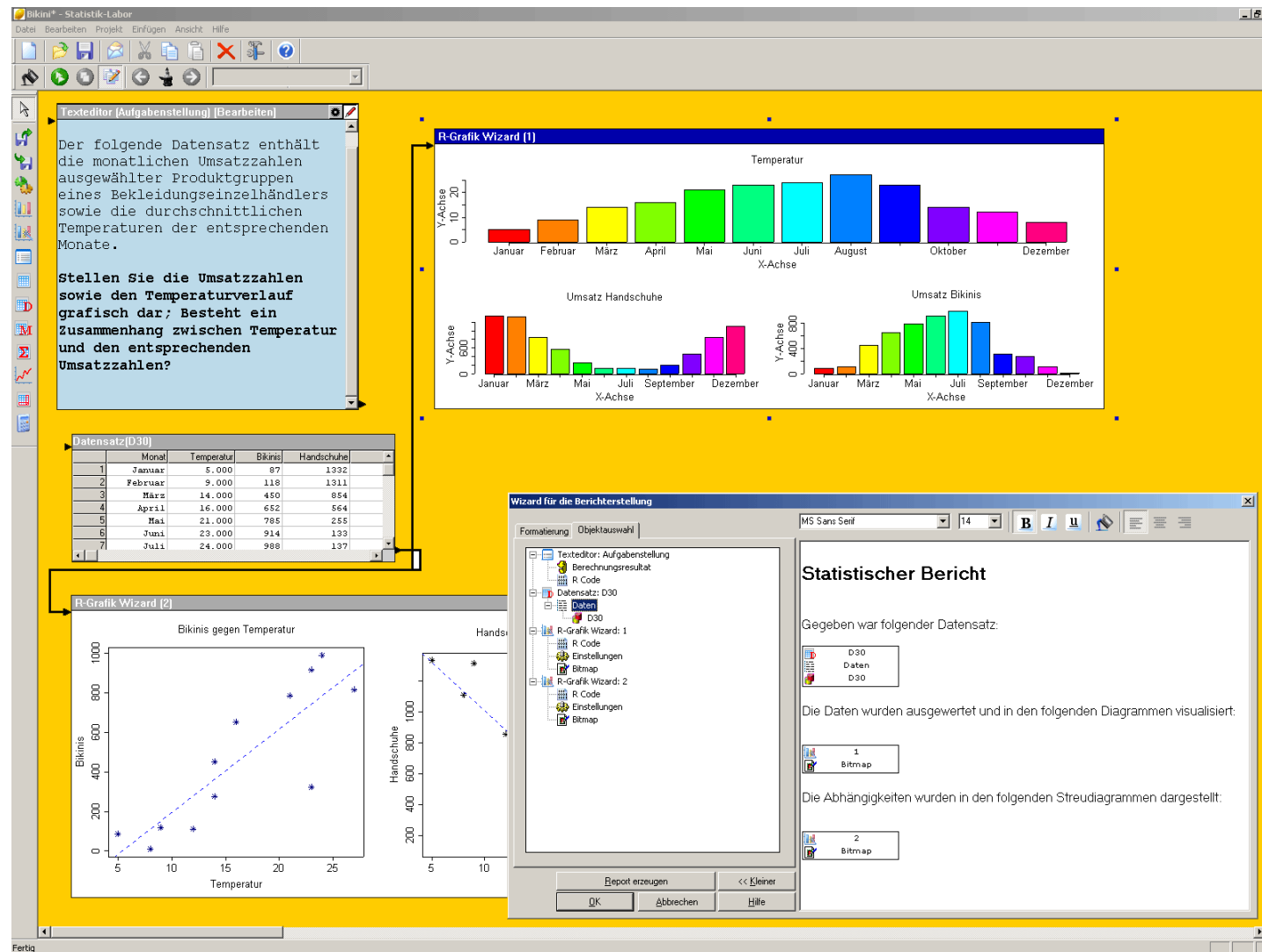
Statistics: today and tomorrow

# New Statistics: Multimedia Learning Environment



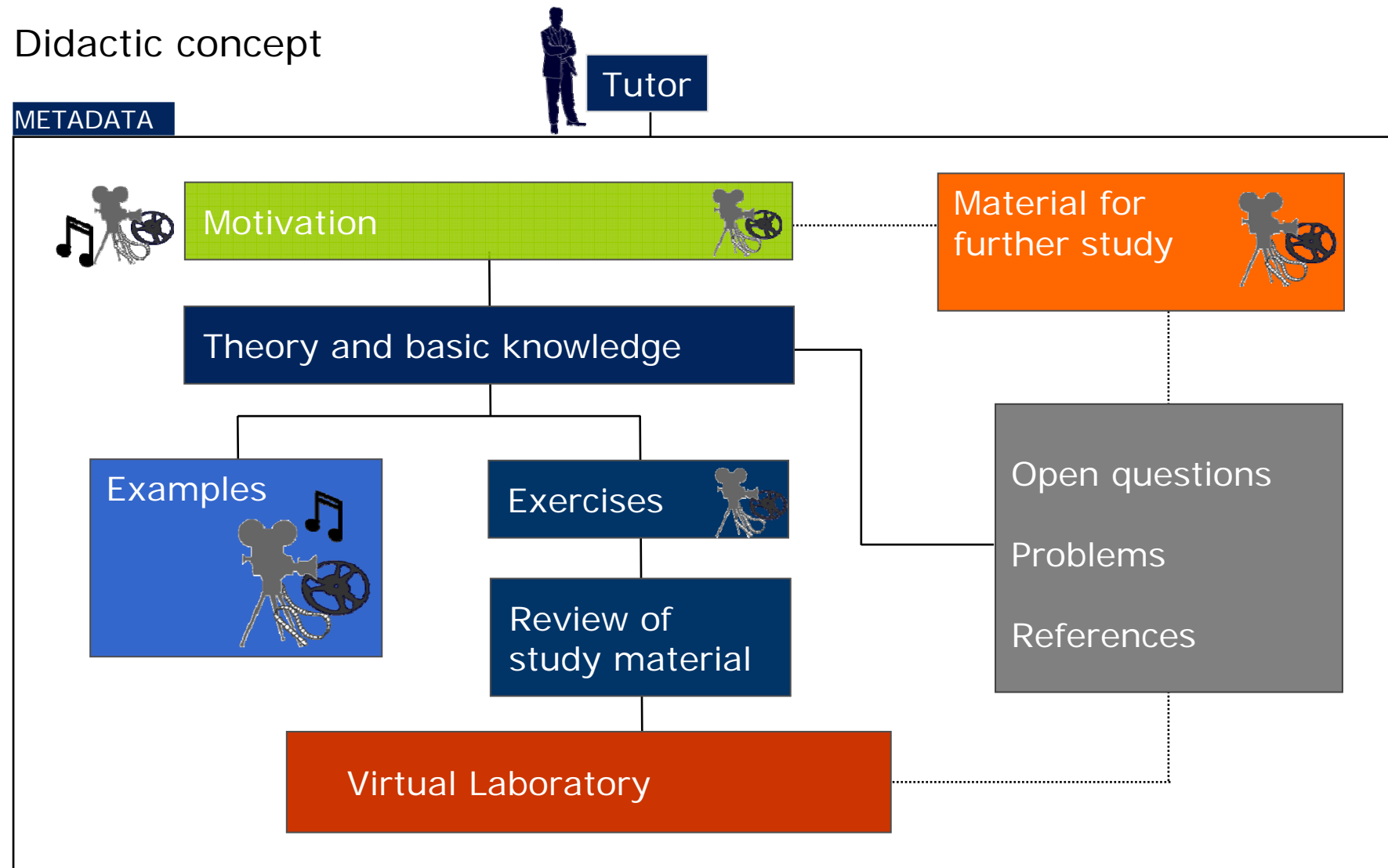


# Statistical Lab ([www.statistical-lab.org](http://www.statistical-lab.org))

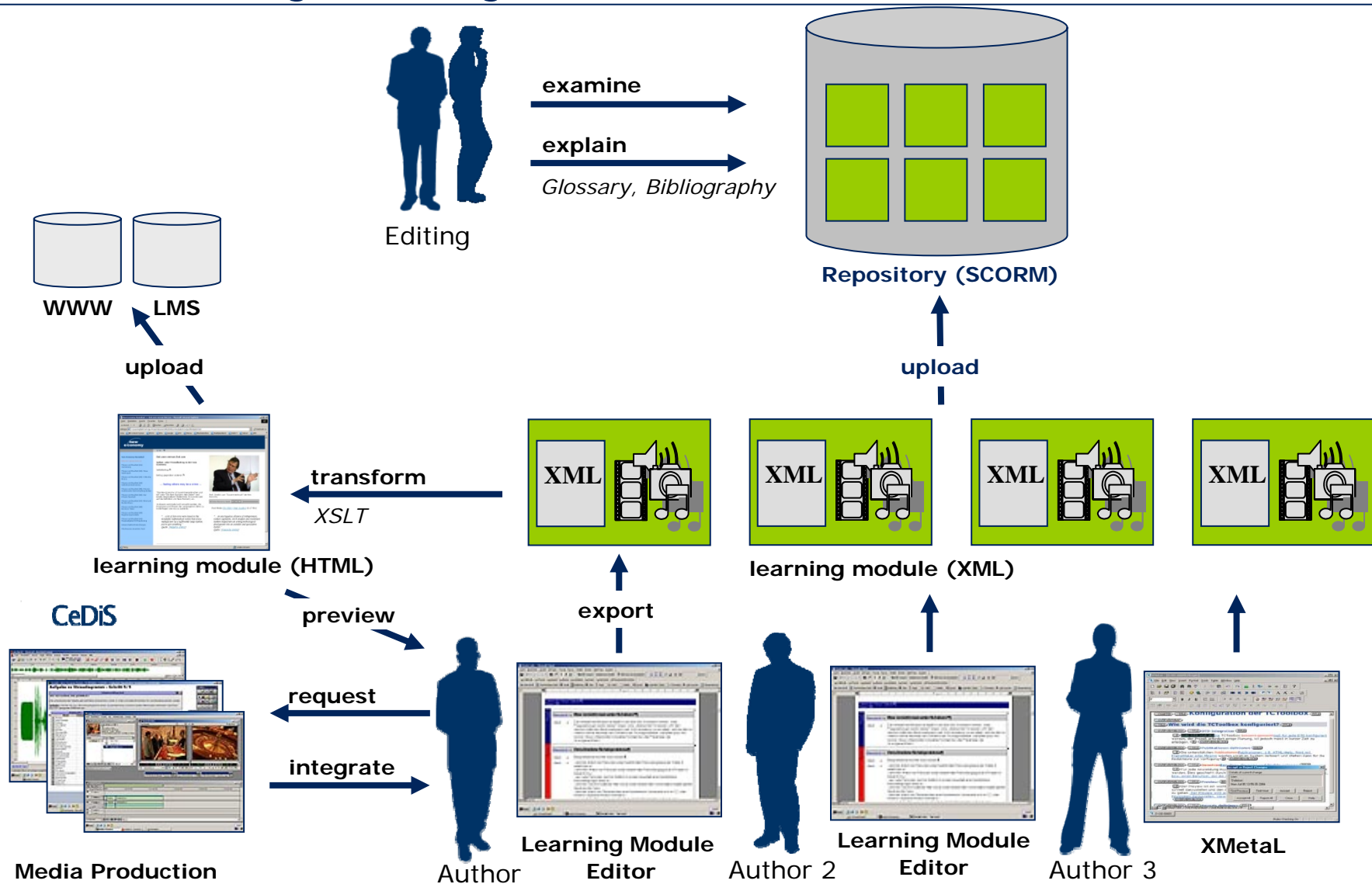


# Authoring: Structure of Learning Modules

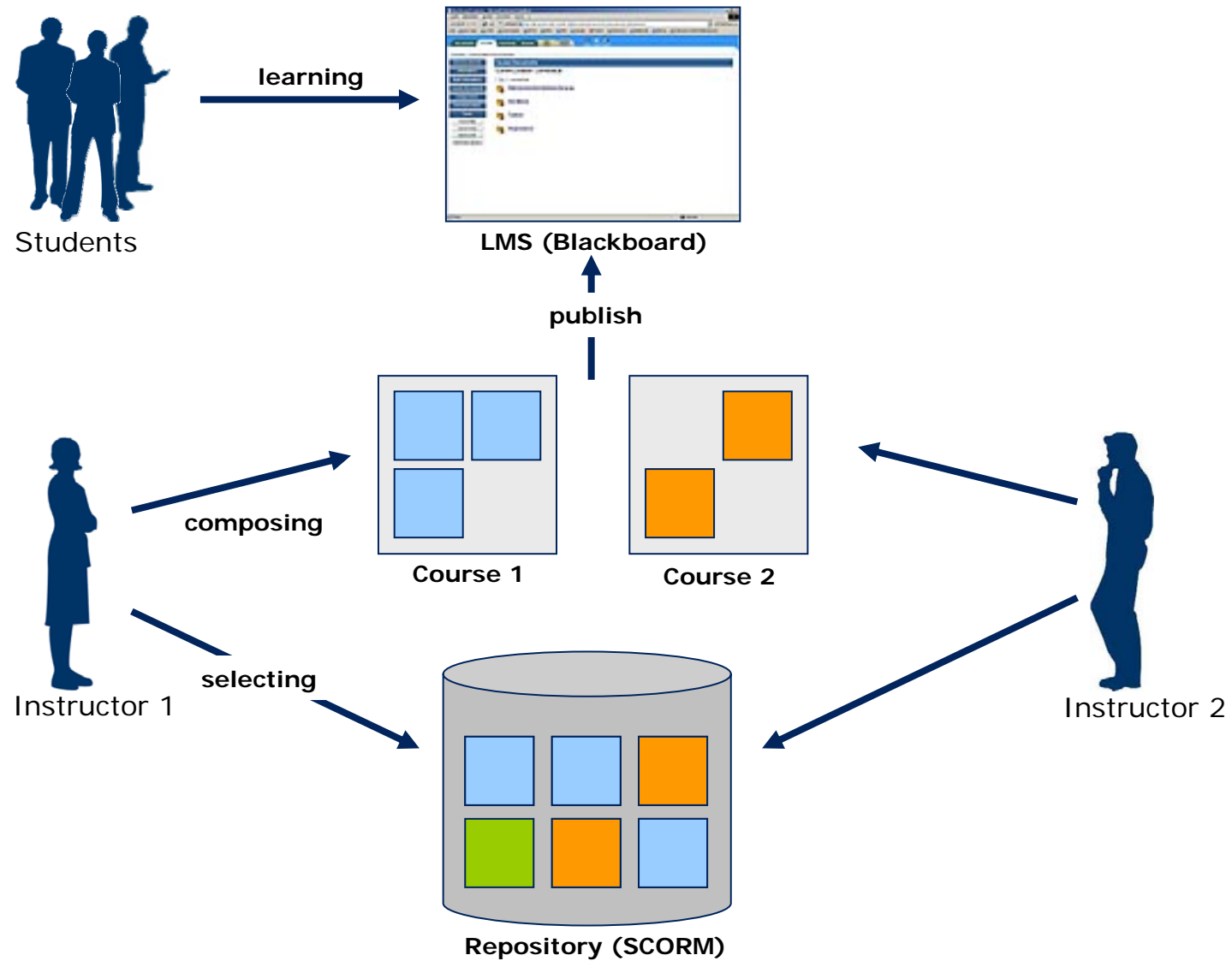
Didactic concept



# Manufacturing Learning Modules



## Course creation



## Economics of E-Learning

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**It's the Economy, Stupid ...**

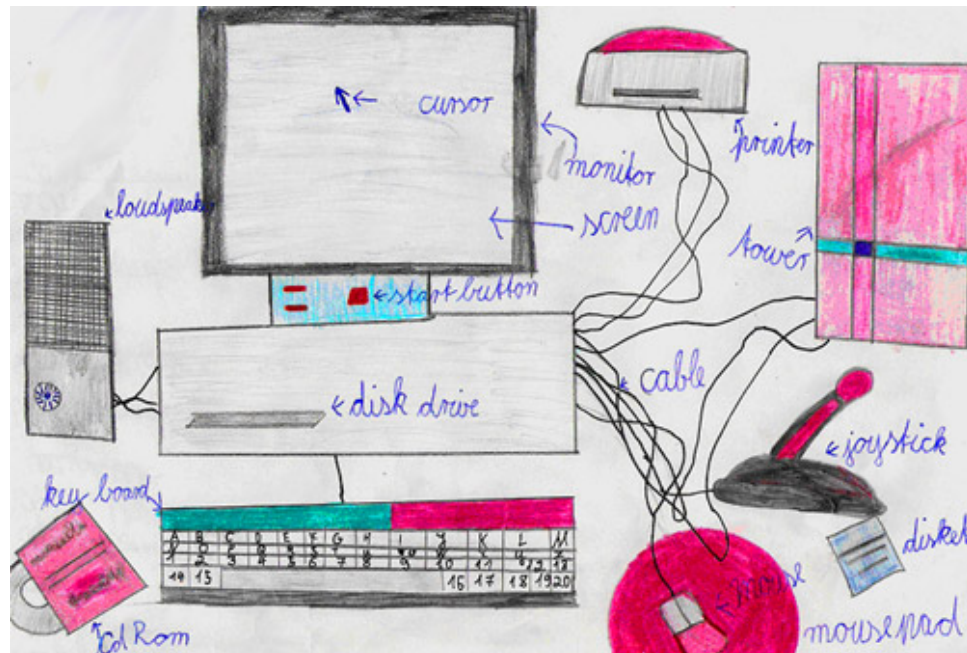


## Outline III

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- I. e-Learning as an experiment
- II. e-Learning Engineering
- III. e-Learning at a traditional University**
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- VII. Open issues

## Vision: Is e-Learning easy to do!?



Source: [www.uni-potsdam.de/agelearning/](http://www.uni-potsdam.de/agelearning/)

## e-Learning Environments



A significant advantage of e-Learning is the creation of individualized learning environments.....

Source: [www.open-academy.com/de/elearning/lernende\\_/index.html](http://www.open-academy.com/de/elearning/lernende_/index.html)

## e-Learning everywhere?





## Digital Technology in Education: Future Vision...

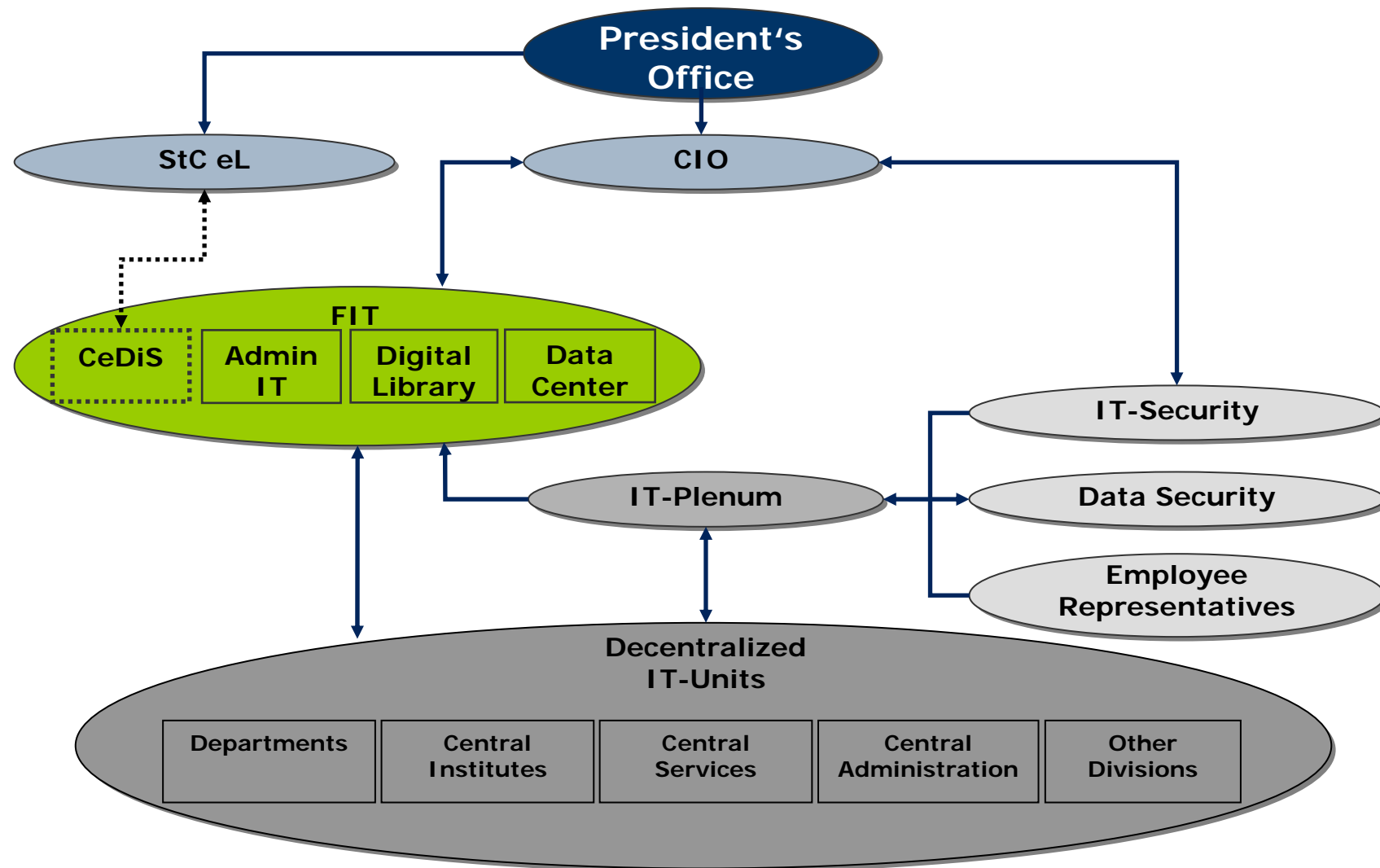




## Digital Technology and the Reality



## FIT: IT at the Freie Universität



## Outline IV

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- I. e-Learning as an experiment
- II. e-Learning Engineering
- III. e-Learning at a traditional University
- IV. Coordinated action plan**
- V. The Web 2.0 Initiative
- VI. Lessons learned
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# Media and Design

## Media & Design



## Distributed Campus, Homepage

### Distributed Campus


Username


Login


I forgot my password

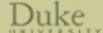
If you are not registered yet, type in 'guest' for username and password


Password




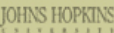
 BARNARD


 COLUMBIA UNIVERSITY


 Duke UNIVERSITY


 THE UNIVERSITY OF CHICAGO

 CORNELL

 JOHNS HOPKINS UNIVERSITY


 Penn

 Princeton University

 STANFORD UNIVERSITY

VASSAR

Yale University



DC

Imprint | Postmaster



# CeDiS – CMS



Content  
Management  
System  
CMS



# Visual History Archive (VHA)

## Video example



The screenshot shows the homepage of the Visual History Archive (VHA) website. The header includes the Freie Universität Berlin logo and navigation links: Home, Deutsch, Contact, Imprint. The main banner features the USC Shoah Foundation Institute logo and the text "Visual History Archive" over a background of silhouettes. A sidebar on the left contains a "News" section with links to "About the Archive", "Use at the Freie Universität", "In Schools", "Services and Support", "Usage Information", and "Links". Below this is a red button labeled "Enter Archive". The main content area is titled "Home" and "The Visual History Archive at Freie Universität Berlin". It contains a paragraph describing the archive's mission and access, followed by a list of links: "Usage Information / Terms of Use", "Introductory Presentations", "Assistance with technical problems", "In order to directly access the Visual History Archive, please use the link Enter Archive", and "Online Survey to evaluate the usage". To the right of the text is a photo of two people looking at a laptop. Below the text is another photo of a person using a laptop. A "News" section on the right lists recent events: "AG Jüdische Sammlungen visit", "Symposium on 'Oral History'", and "New third-party funding project", each with a brief description and date.

Freie Universität  Berlin

[Home](#) | [Deutsch](#) | [Contact](#) | [Imprint](#)

**USC SHOAH FOUNDATION INSTITUTE**  
FOR VISUAL HISTORY AND EDUCATION

**Visual History Archive**

**News**

- [About the Archive](#)
- [Use at the Freie Universität](#)
- [In Schools](#)
- [Services and Support](#)
- [Usage Information](#)
- [Links](#)

**Enter Archive**

**Home**

### The Visual History Archive at Freie Universität Berlin

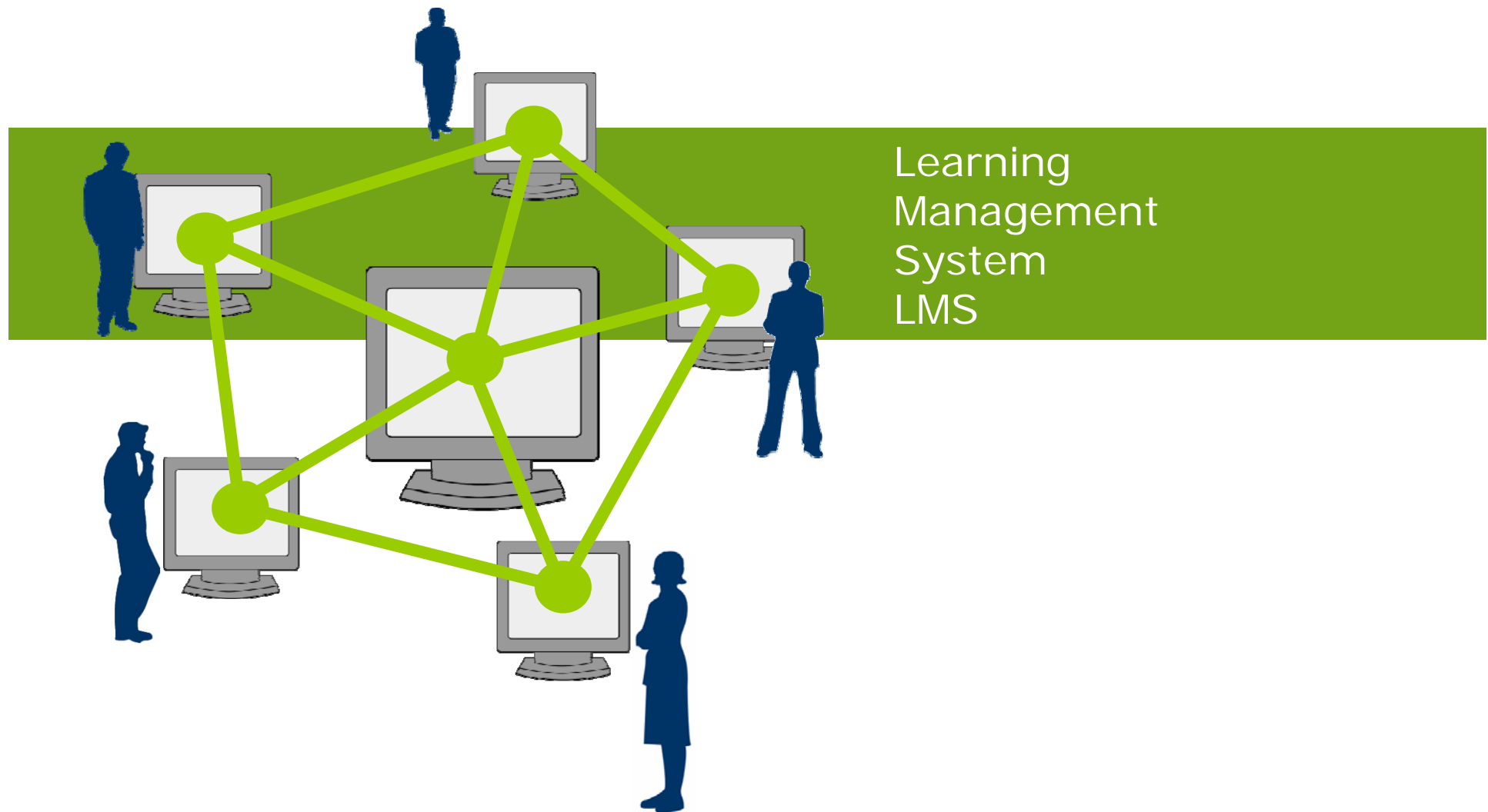
The Freie Universität Berlin is the first European university that is providing access to the Visual History Archive of the Shoah Foundation Institute for Visual History and Education of the University of Southern California (USC). Students, teachers and researchers at the Freie Universität as well as external scientific institutions and researchers have access to the Visual History Archive. This makes it possible to view the 52,000 video interviews and testimonies with the survivors and witnesses of the Holocaust. The Visual History Archive is the world's largest historical video archive. This website provides you with information on the background and utilisation possibilities of the Visual History Archive.

- [Usage Information / Terms of Use »](#)
- [Introductory Presentations »](#)
- [Assistance with technical problems »](#)
- [In order to directly access the Visual History Archive, please use the link Enter Archive »](#)
- [Online Survey to evaluate the usage »](#)

**News**

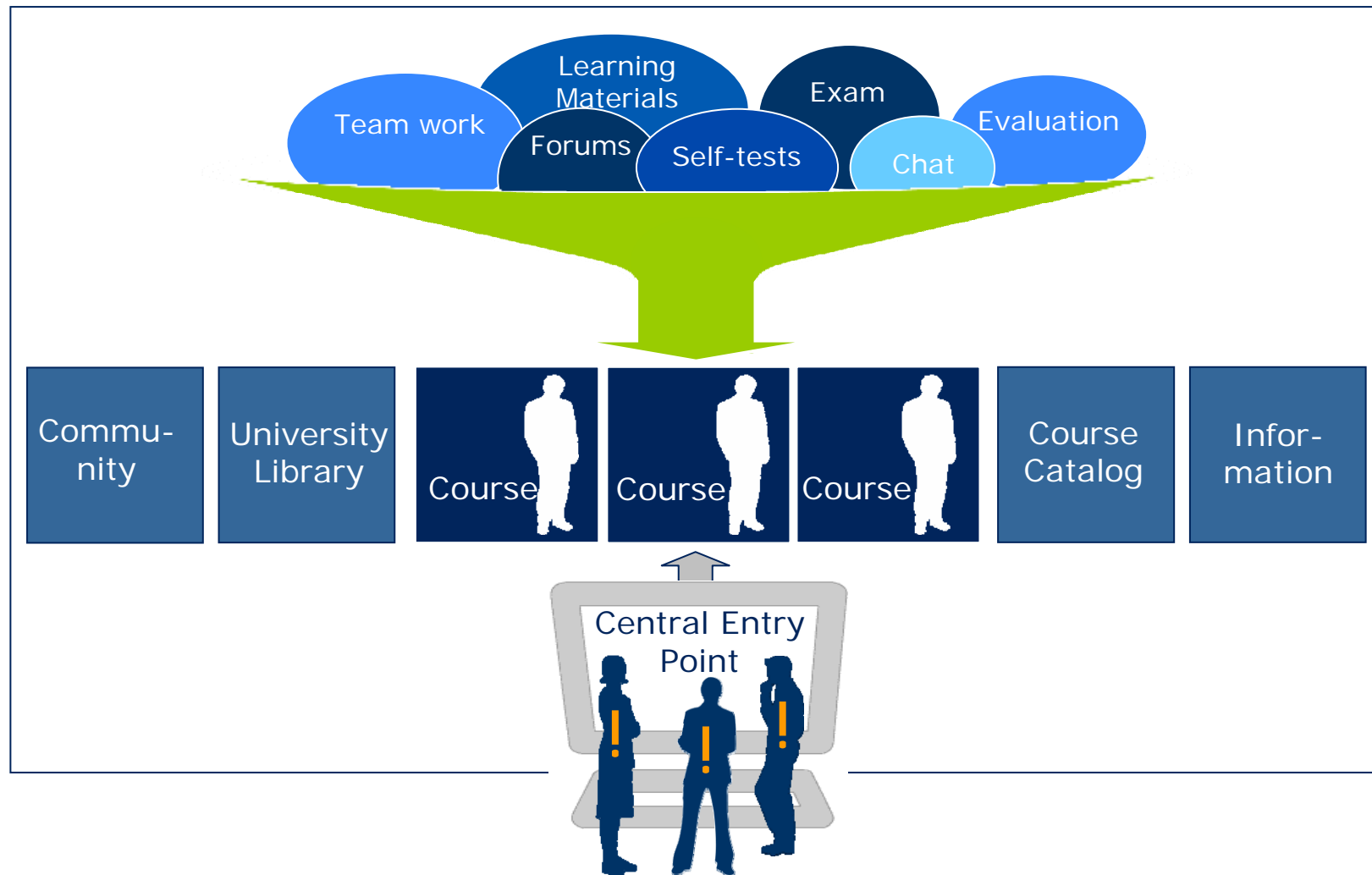
- [AG Jüdische Sammlungen visit](#)  
Presentation of the VHA and afterwards a reception in the Clubhaus of the FU on Thursday, 18.09.2008  
10.09.2008
- [Symposium on "Oral History"](#)  
Participation of the VHA at the Memorial to the Murdered Jews of Europe Foundation event.  
01.09.2008
- [New third-party funding project](#)  
The Stiftung Deutsche Klassenlotterie foundation is funding the use of VHA interviews in school education and the classroom.  
28.08.2008  
[more News »](#)

## CeDiS - LMS



# LMS – a Central Learning Platform for Teaching

## Student Access to the Central LMS



## Pro / Contra Blackboard LMS

### strong points:

- ease-of-use for students and teachers (maybe except Content Collection)
- quite stable operation
- scalable architecture
- expandability (Building Blocks concept)
- large user community

### weak points:

- mainly instructor centered
- lack of tools for student participation / collaboration
- Poor technical documentation, proprietary API
- old UI techniques (no deep linking possible)
- lack of standard conformity e.g. SOAP, WSRP, JSR168
- lack of conformity with the German data protection laws

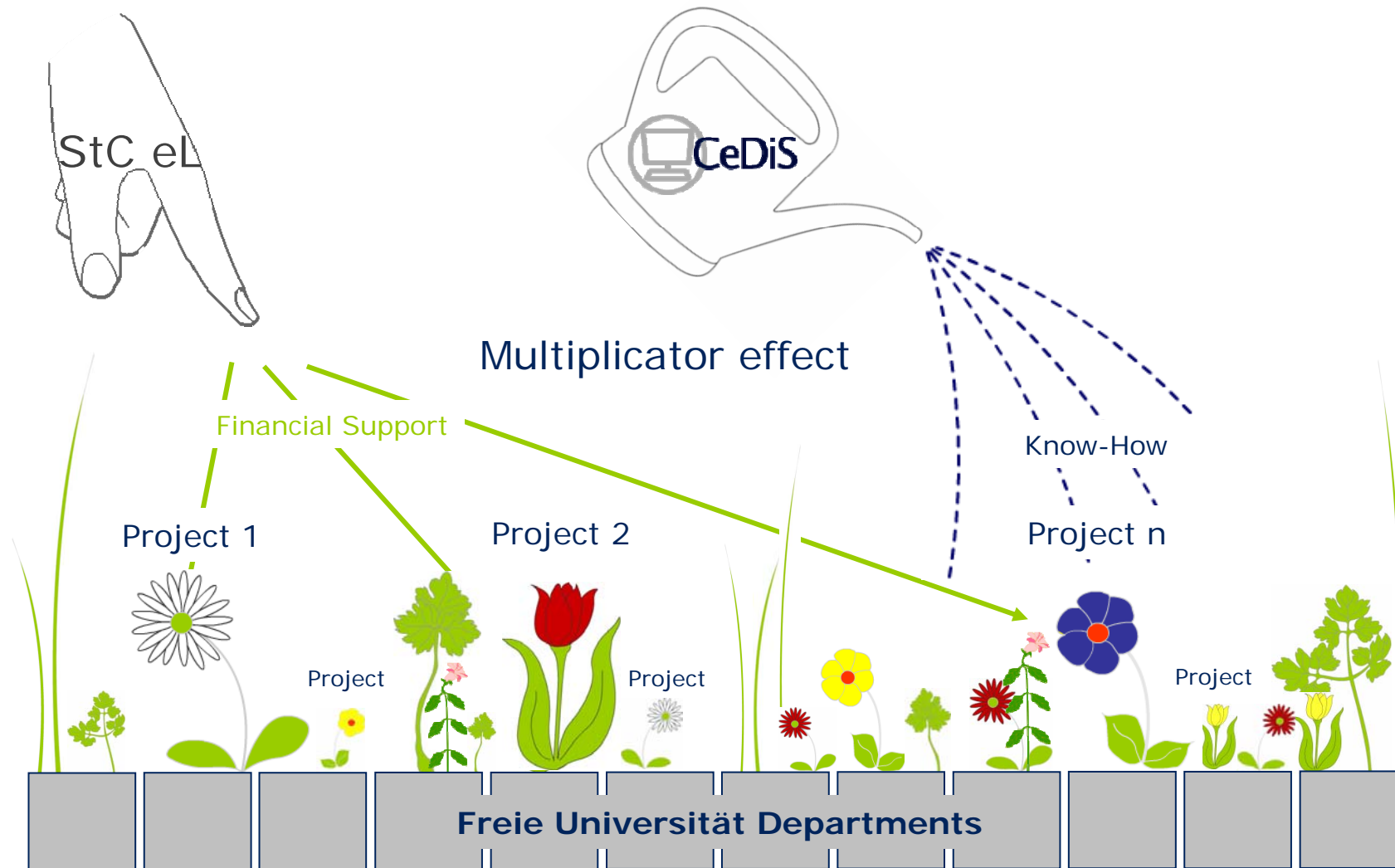
## FU e-Learning Grants

FU e-Learning Grants



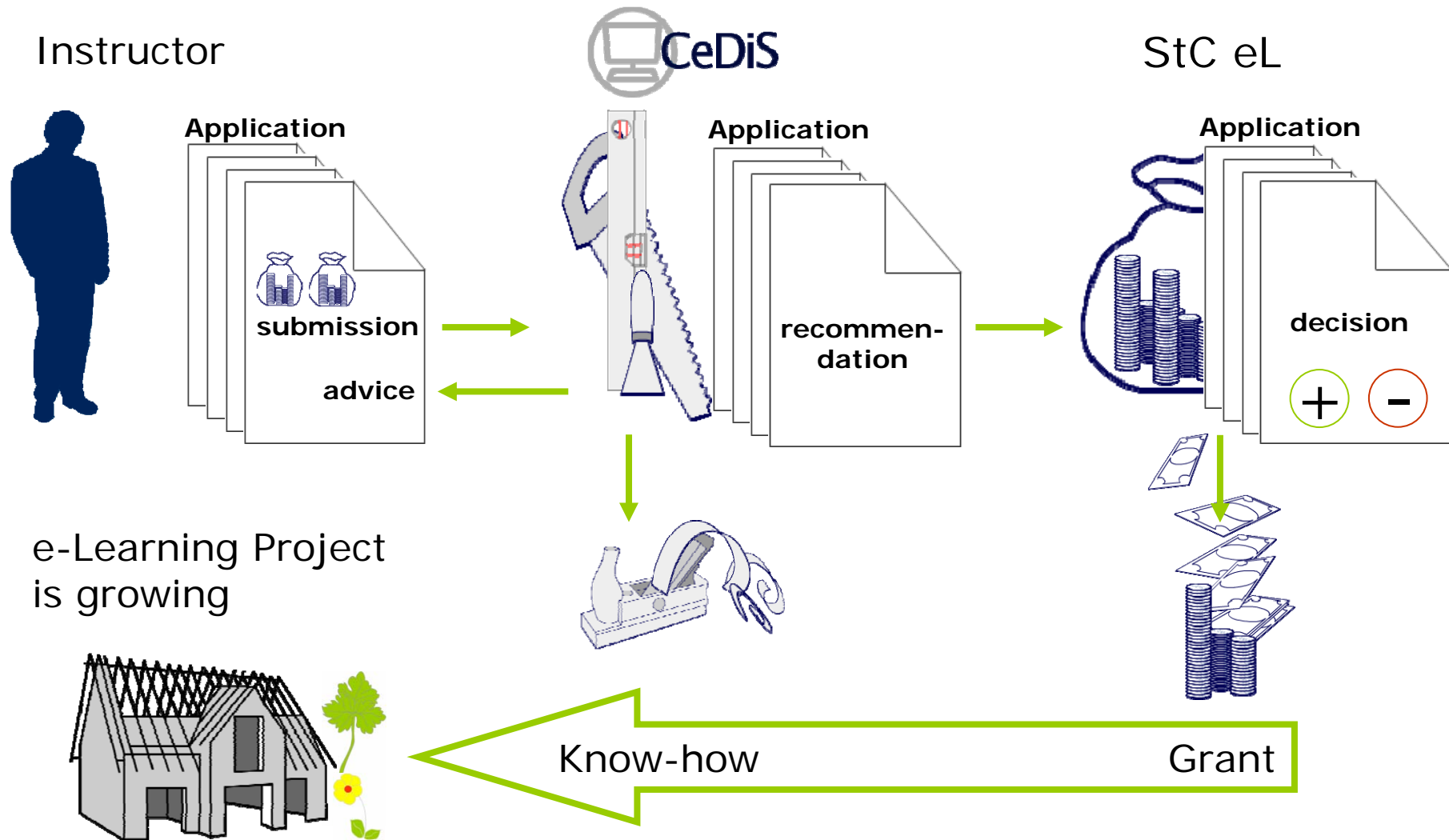
*powered by* **FUe-Learning**

## FU e-Learning Grants - Growth

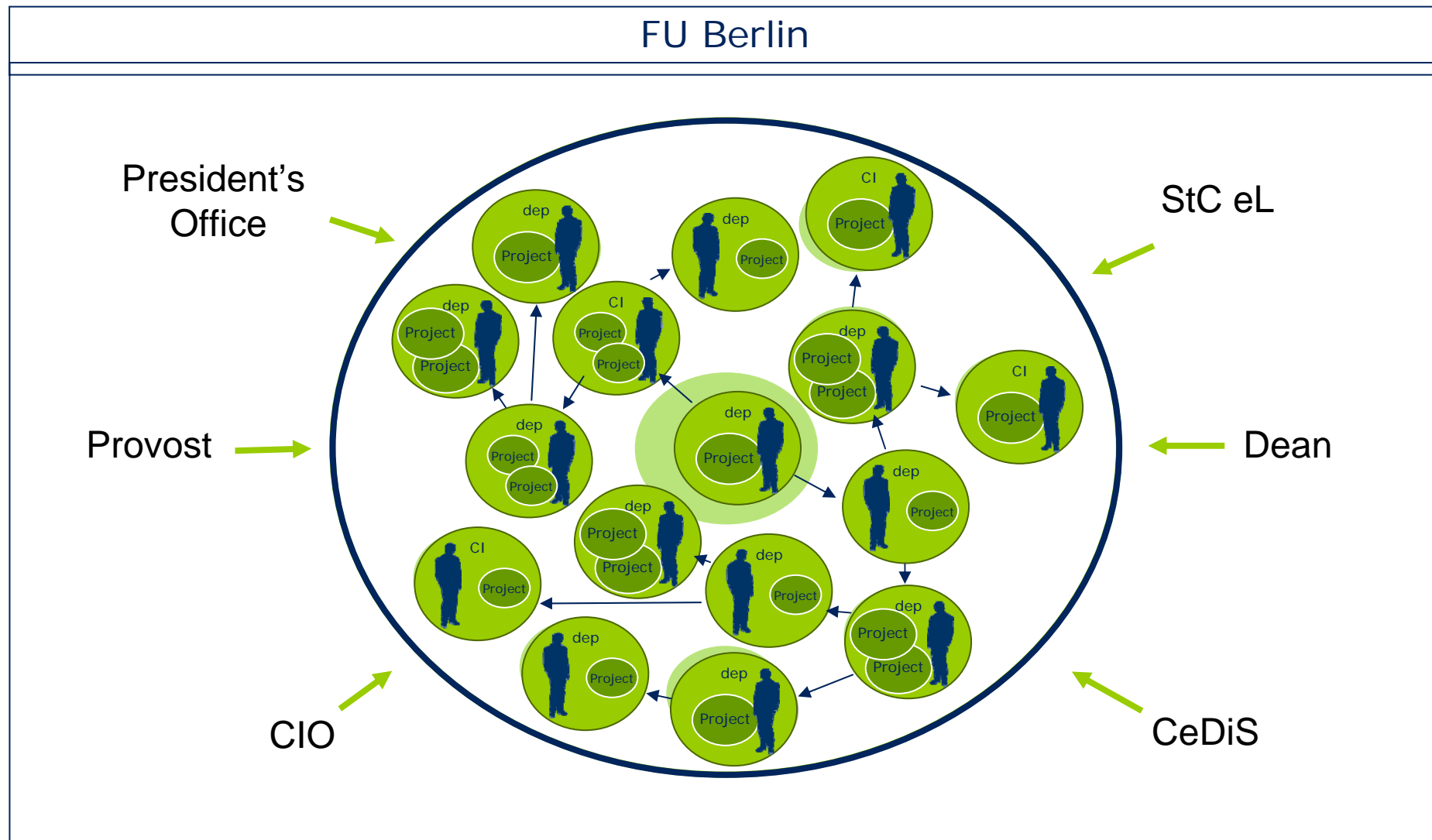




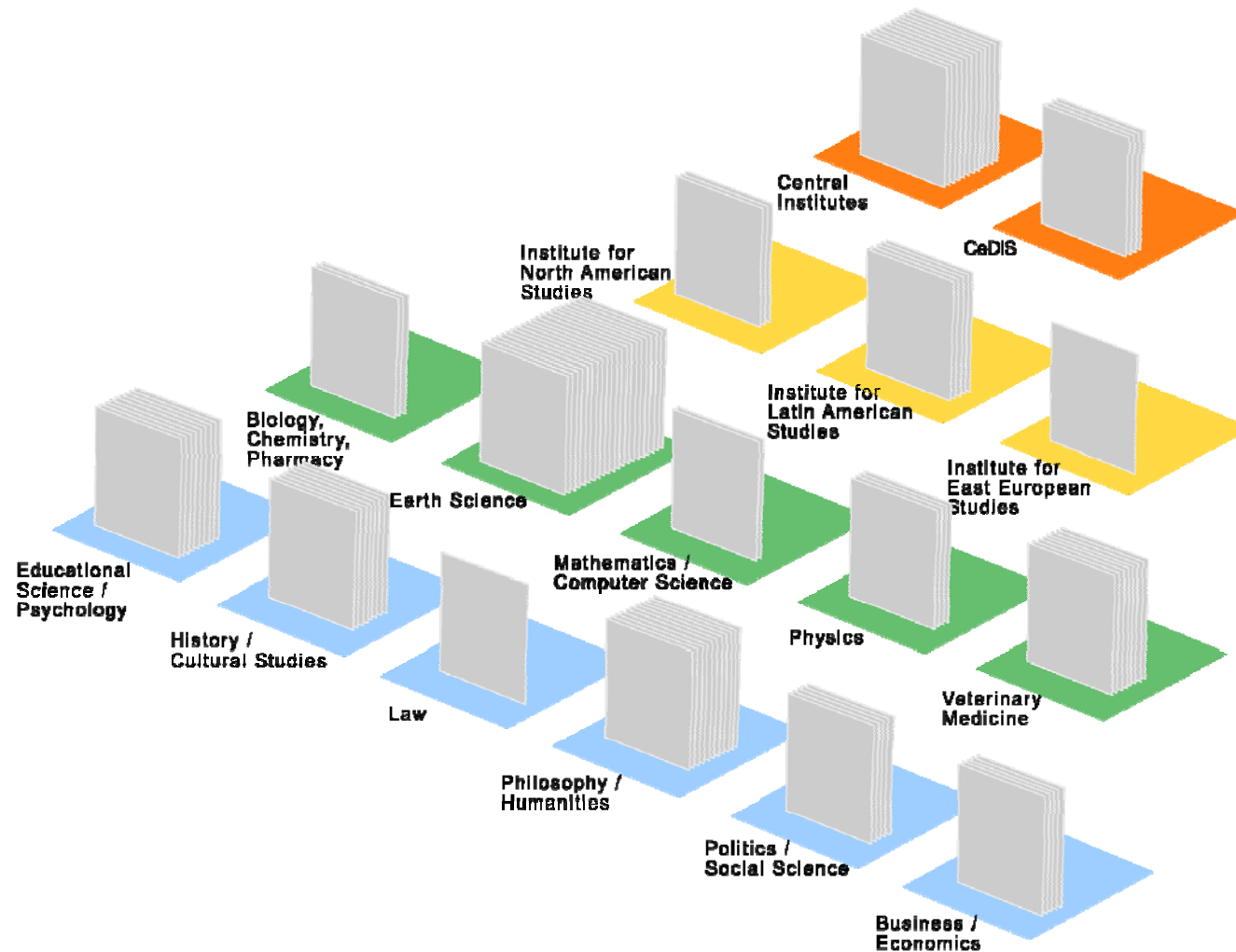
# FU e-Learning Grant Program – Workflow



## FU-wide e-Learning Dissemination



# FU e-Learning Grants – Project Overview



## Institute for Latin American Studies

### **E-Learning Projects**

Knowledge Production of Latin-American Intellectuals

Digital Sources of Anthropology of the Americas

Student foreign visits (study abroad)

Women and Gender in Latin America



Video example



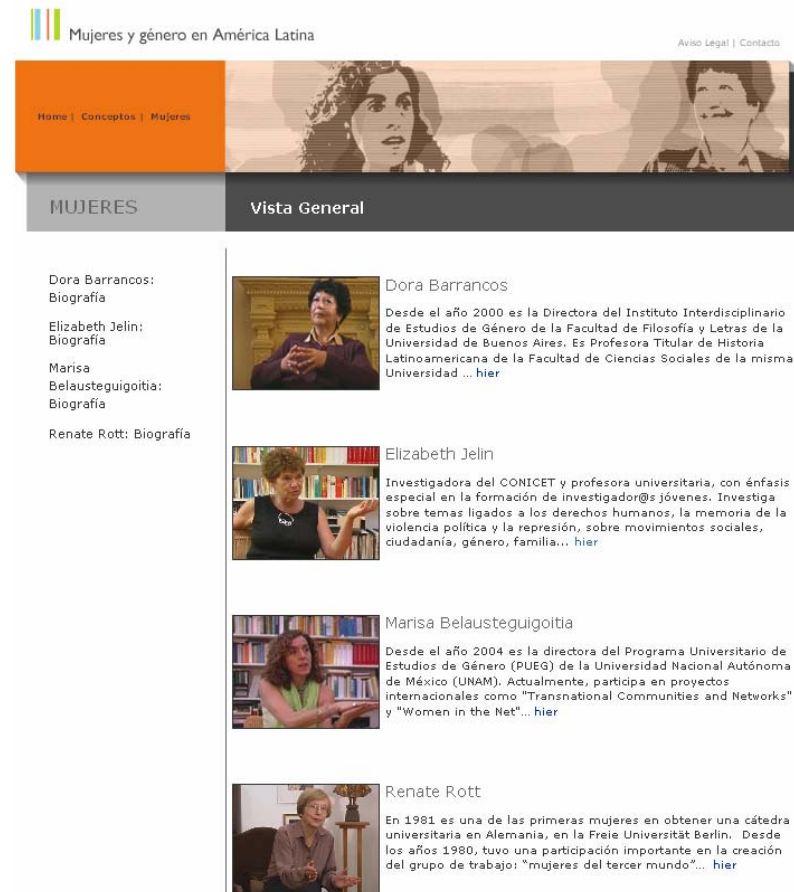
Video example

## Concept for Interviewing

Im Seminar wurden die Porträts von vier herausragenden internationalen Wissenschaftlerinnen entwickelt: Dora Barrancos, Marisa Belausteguigoitia, Elizabeth Jelin, Renate Rott.

Es wurden Fragestellungen für die Interviewführung zu den zentralen Themen und Begriffen in den Arbeiten der Wissenschaftlerinnen erarbeitet.

Nach ihrer Durchführung wurden die Interviews geschnitten, transkribiert und mit Überschriften versehen.



# Student's Experience



Medienkompetenz

Verankerung von Wissen und Praxis

Nachhaltigkeit des Wissens

Selbstverständlicher Bestandteil  
der Lehre



## Advancing e-Learning



The project FUEL  
(FU e-Learning)

## FUeL – Key Issues

Establish Blended Learning in the Departments and Institutes

Integrate the Central Learning Management System within the FU IT-Infrastructure

Create a Central Student Portal

Reuse of e-Learning Materials (Learning Object Repository)

Provide Expertise on the Market



Departments



IT-Integration



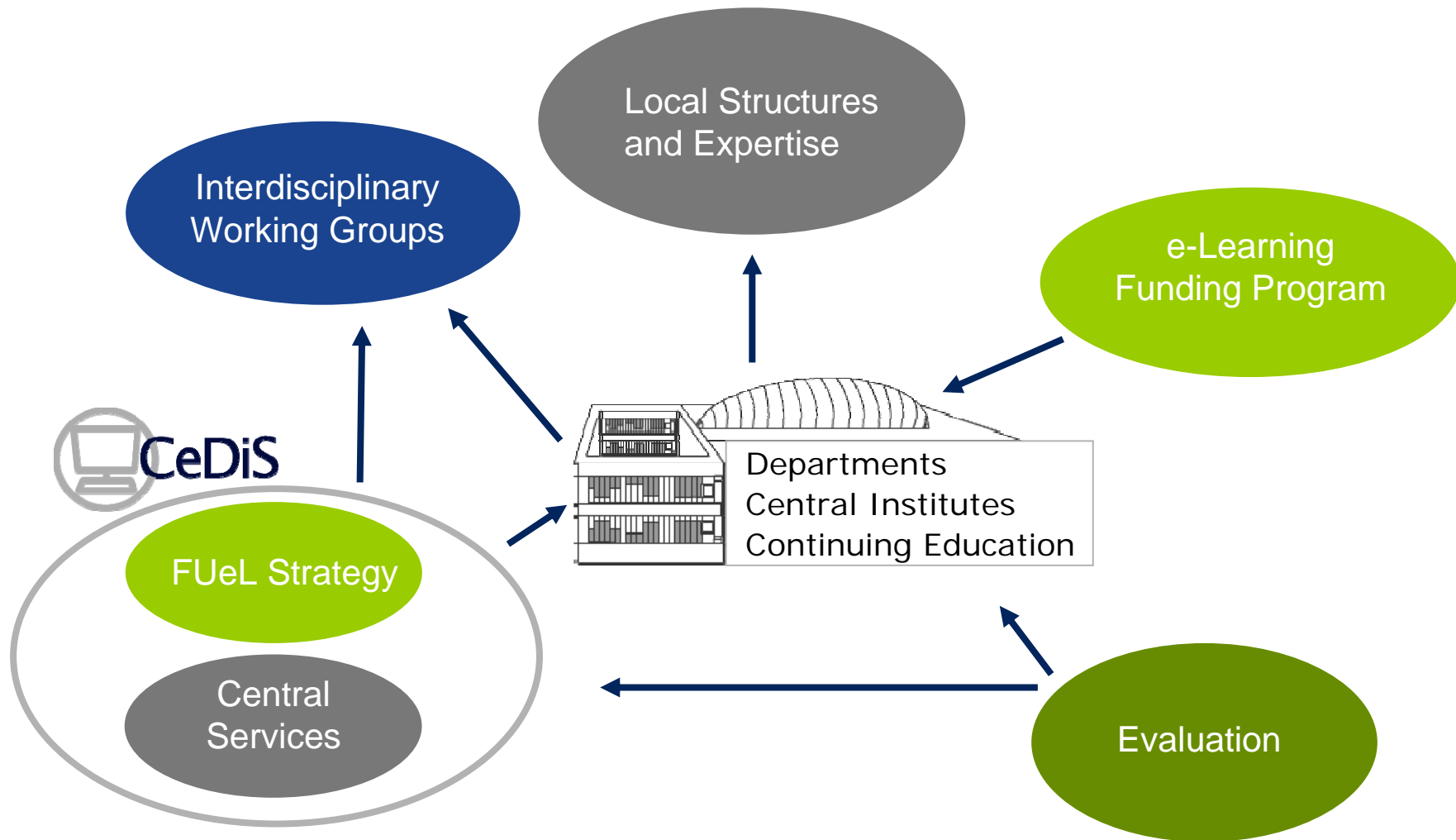
Student-Portal

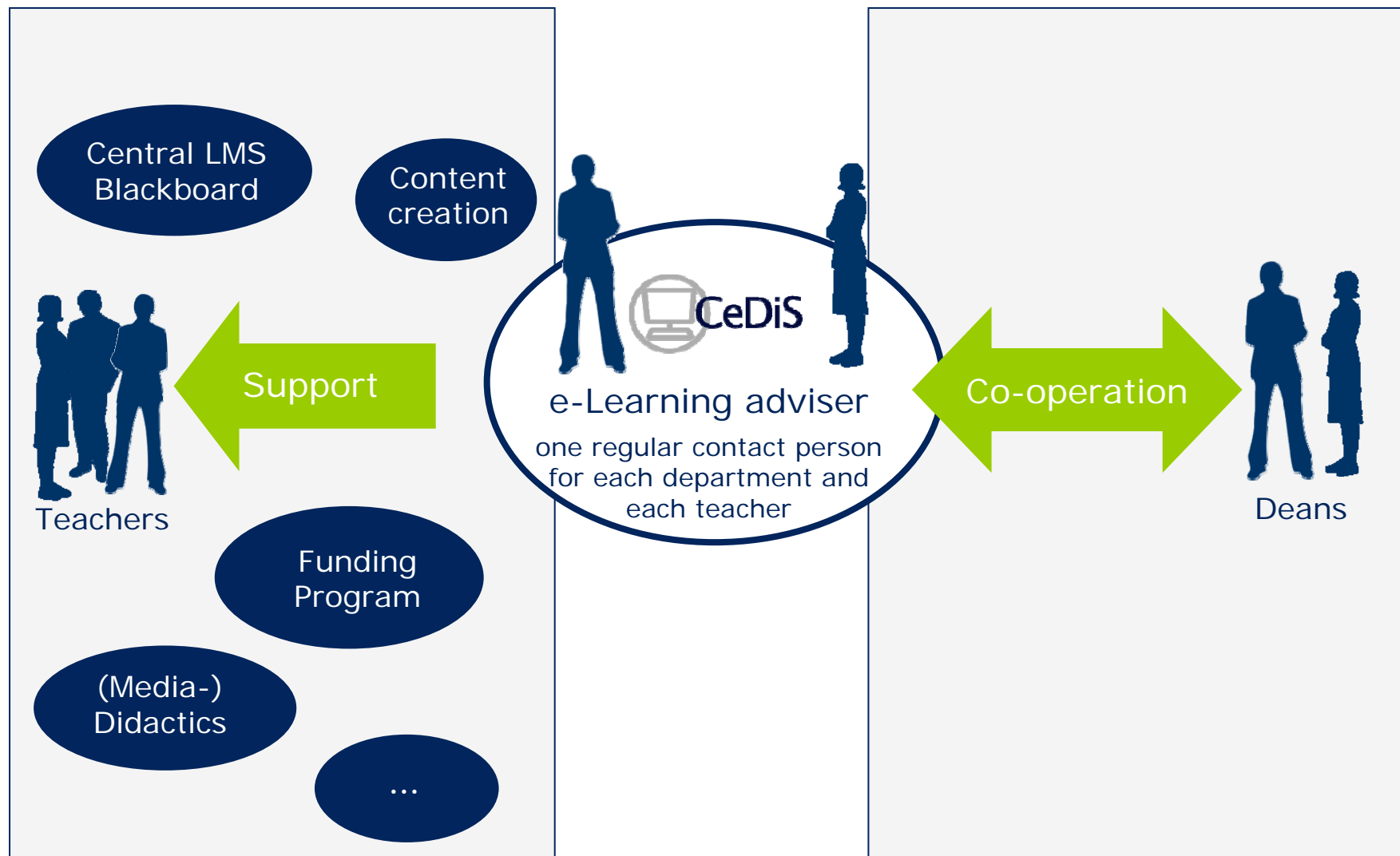


Materials



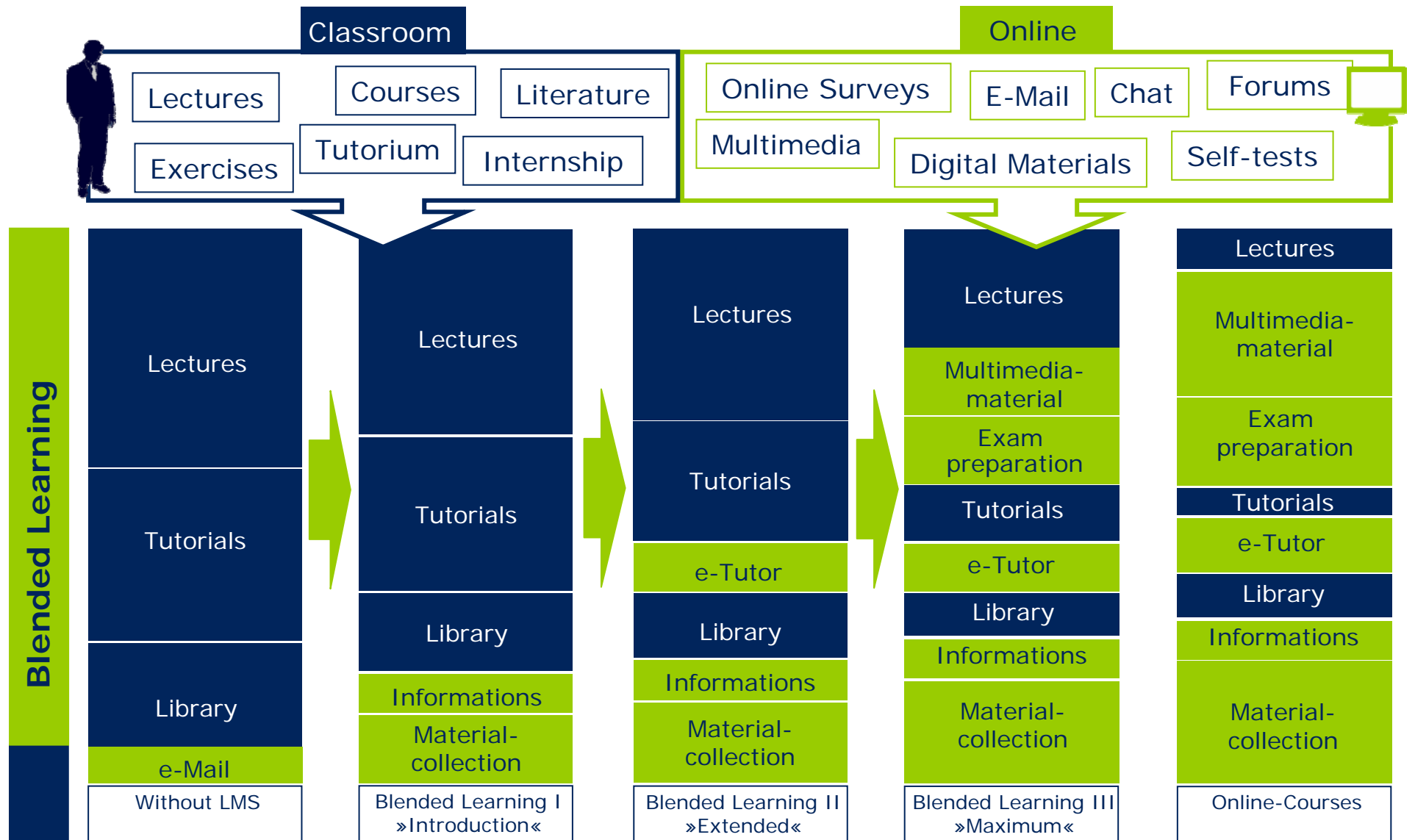
Marketing







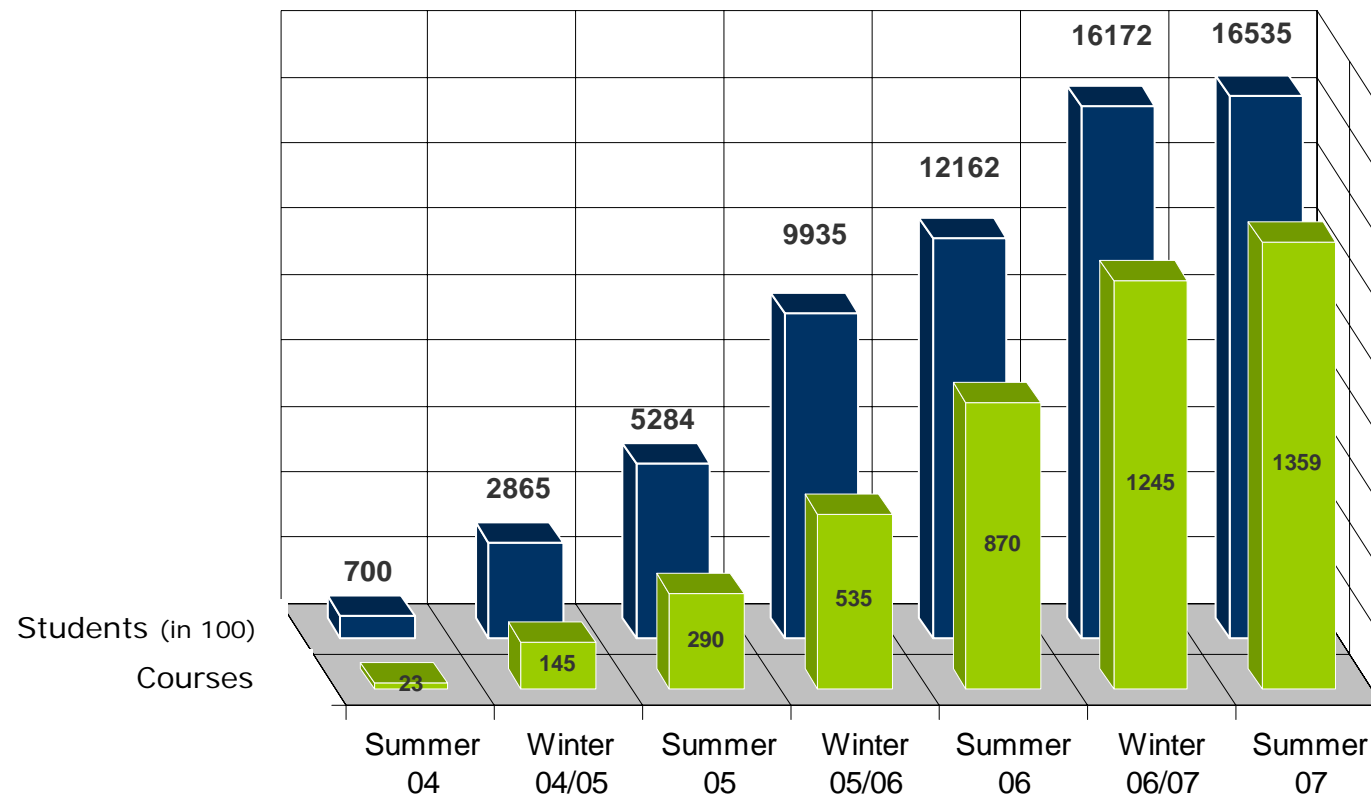
# From the Traditional Classroom to Blended Learning





## 1.3 Bereich E-Learning

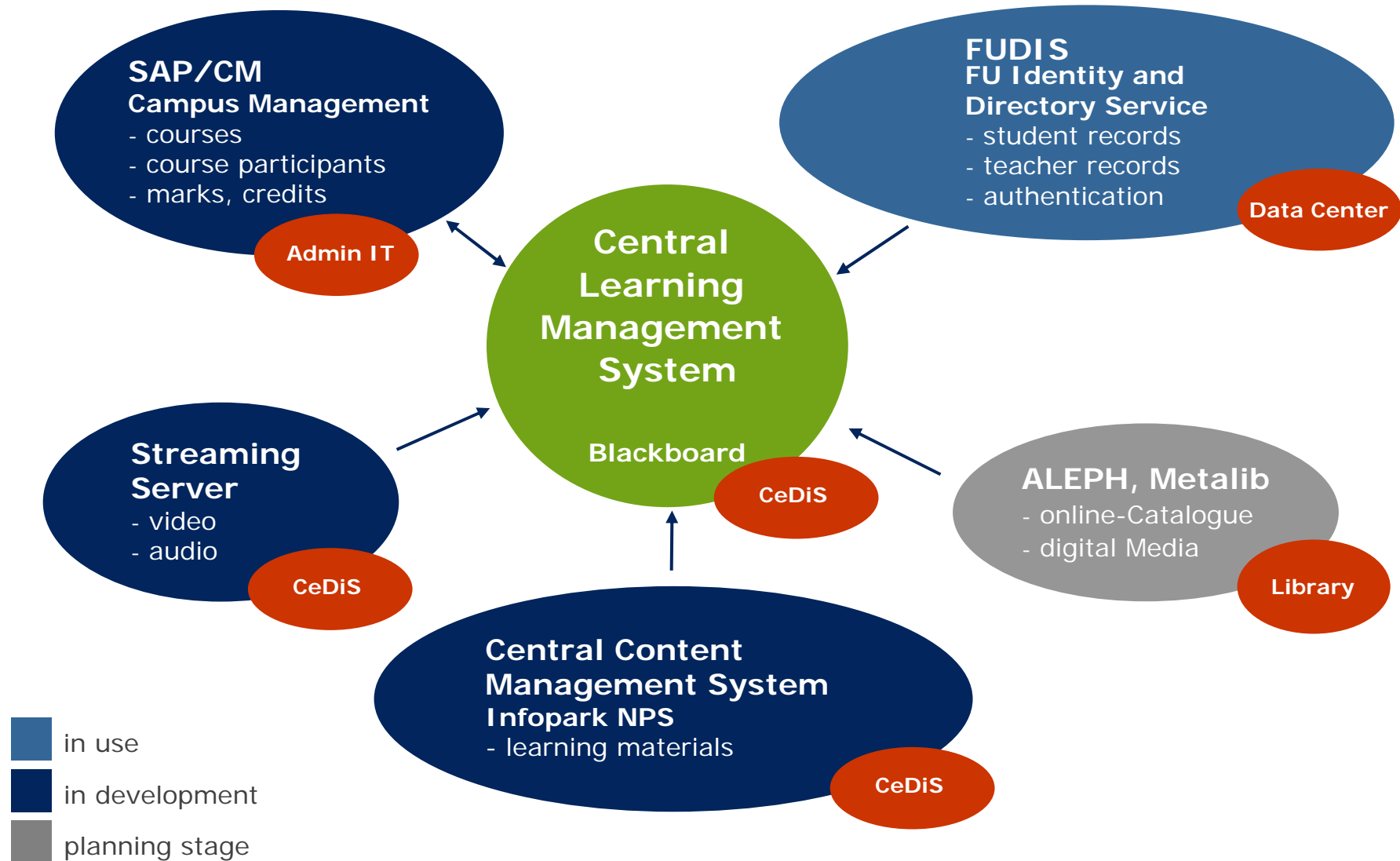
### Degree of Utilization



# IT-Integration

Integrating the Central LMS  
with the IT-Infrastructure of  
the FU Berlin





## Outline V

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- I. e-Learning as an experiment
- II. e-Learning Engineering
- III. e-Learning at a traditional University
- IV. Coordinated action plan
- V. The Web 2.0 Initiative**
- VI. Lessons learned
- VII. Unresolved issues

## Student Portal





For Students...

Freie Universität

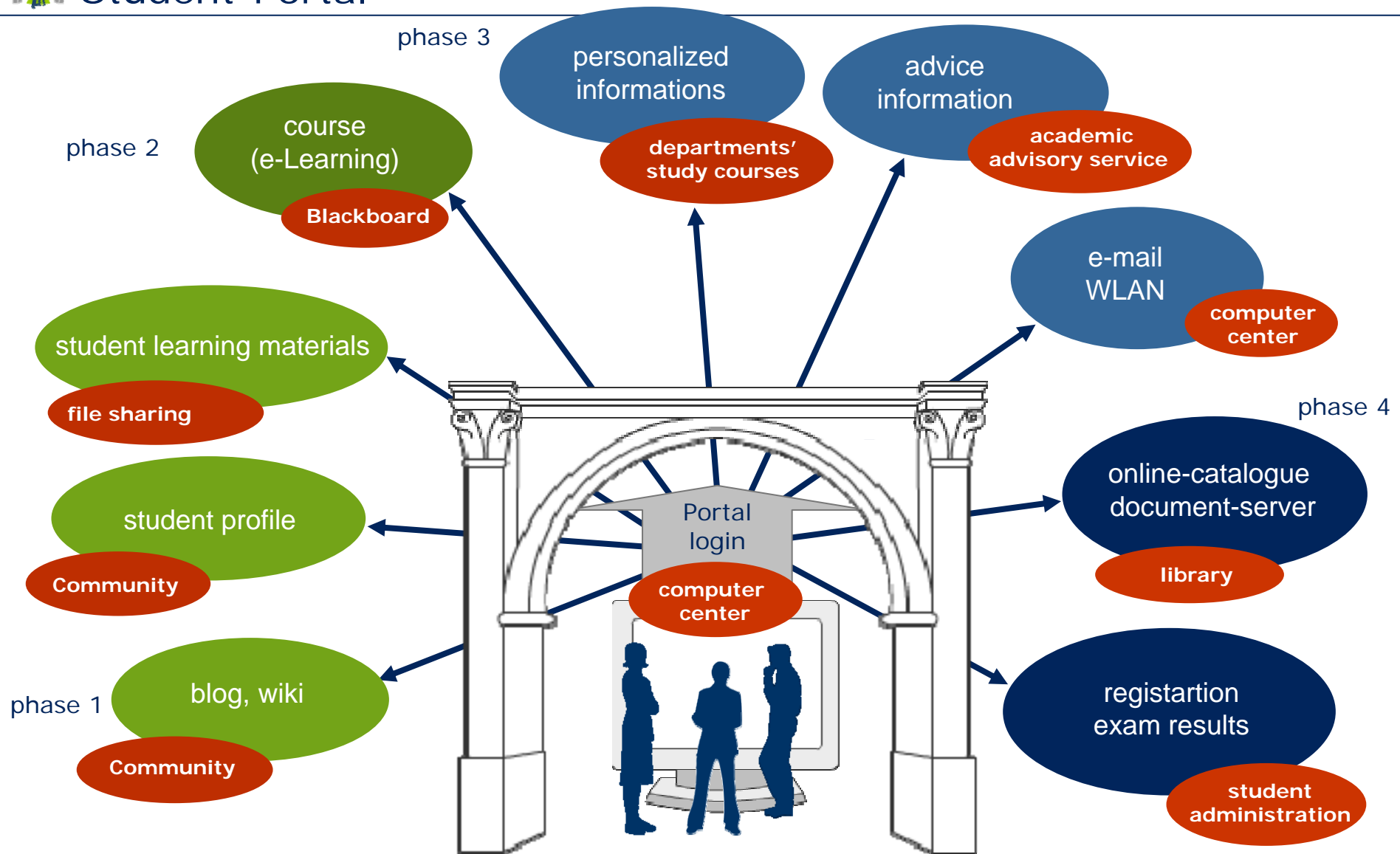


Berlin



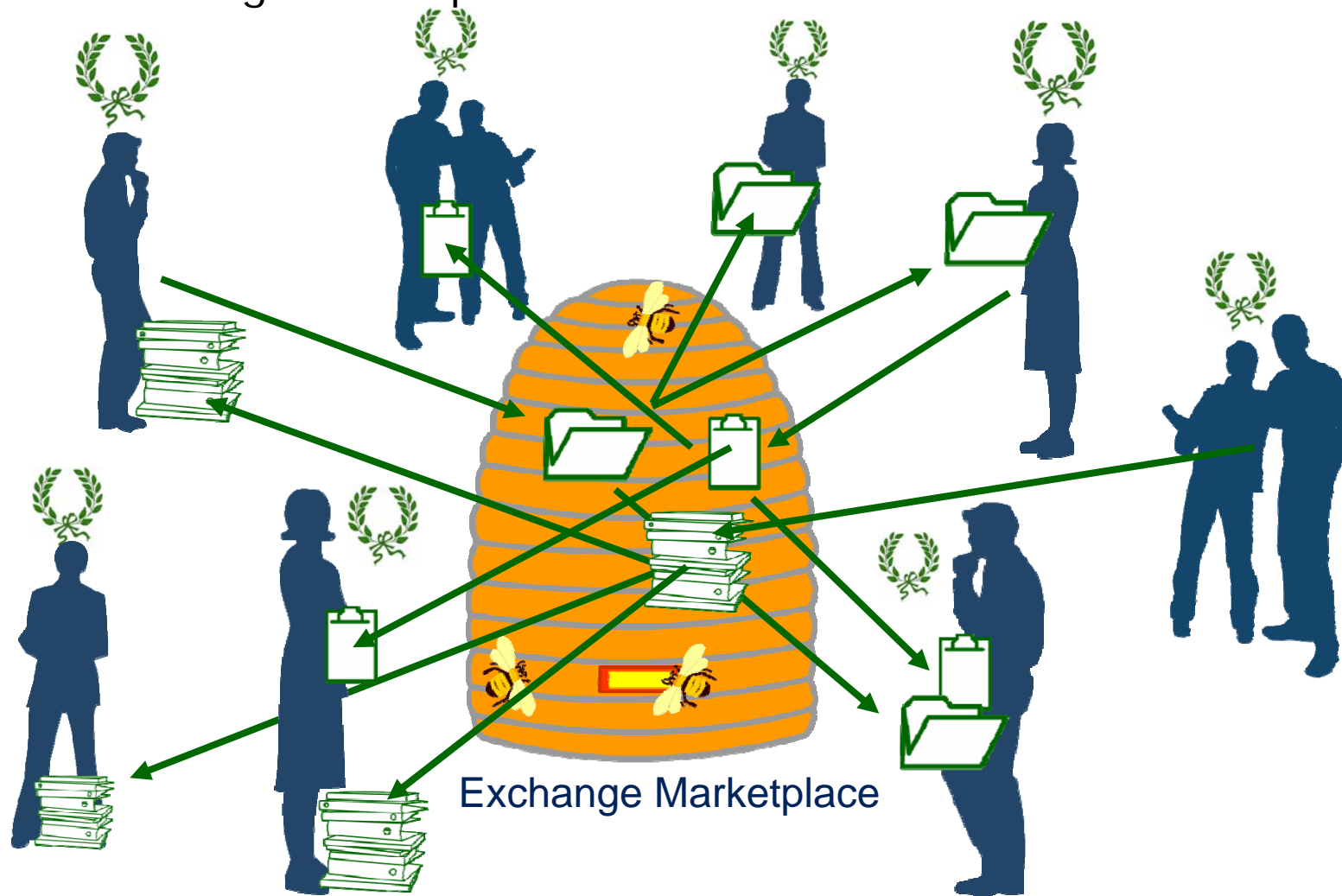


# Student-Portal



## Student Portal

### Material Exchange Marketplace



## Student Portal: Realization

### Involving the students

Online survey (11.12.06 – 15.01.07)

- Feedback: 1530 students, numerous free text field answers
- Introduction of a student portal is welcomed
- Integration of systems already in use is important
- Portal should support one's studies ("not a lifestyle portal")
- Detailed evaluation taking place at the moment



Personal interviews (student representatives)

Beta testers

### Phase 1: Basic functions

Blogs, Wikis (teaching and research)

Personal profile (interests and competence)

Exchange marketplace for students' learning materials

Search (Portal contents)

**Going Public: Summer 2008**

## “Web 2.0” / Social Software

### Social Software

Content produced by users  
Low threshold / easy-to-use  
The Web as workspace  
User self-organization  
Social networks  
Linking of content and services



### Blogs and Wikis in teaching

Simple creation of Web content by teachers and students  
Supporting collaboration and communication  
Discursive writing style  
Peer-to-peer review  
Working together on texts  
Knowledge exchange through networking and linking up

## "Web 2.0" / Social Software

### CeDiS Blog Services

#### Blog availability

- personal blog for all FU members
- (multi-user) blog for Blackboard courses
- Selected System: WordPress

### CeDiS Wiki, RSS Services

#### Wiki availability

- Wikis for all FU members
- Wikis for Blackboard courses
- Selected System: Confluence

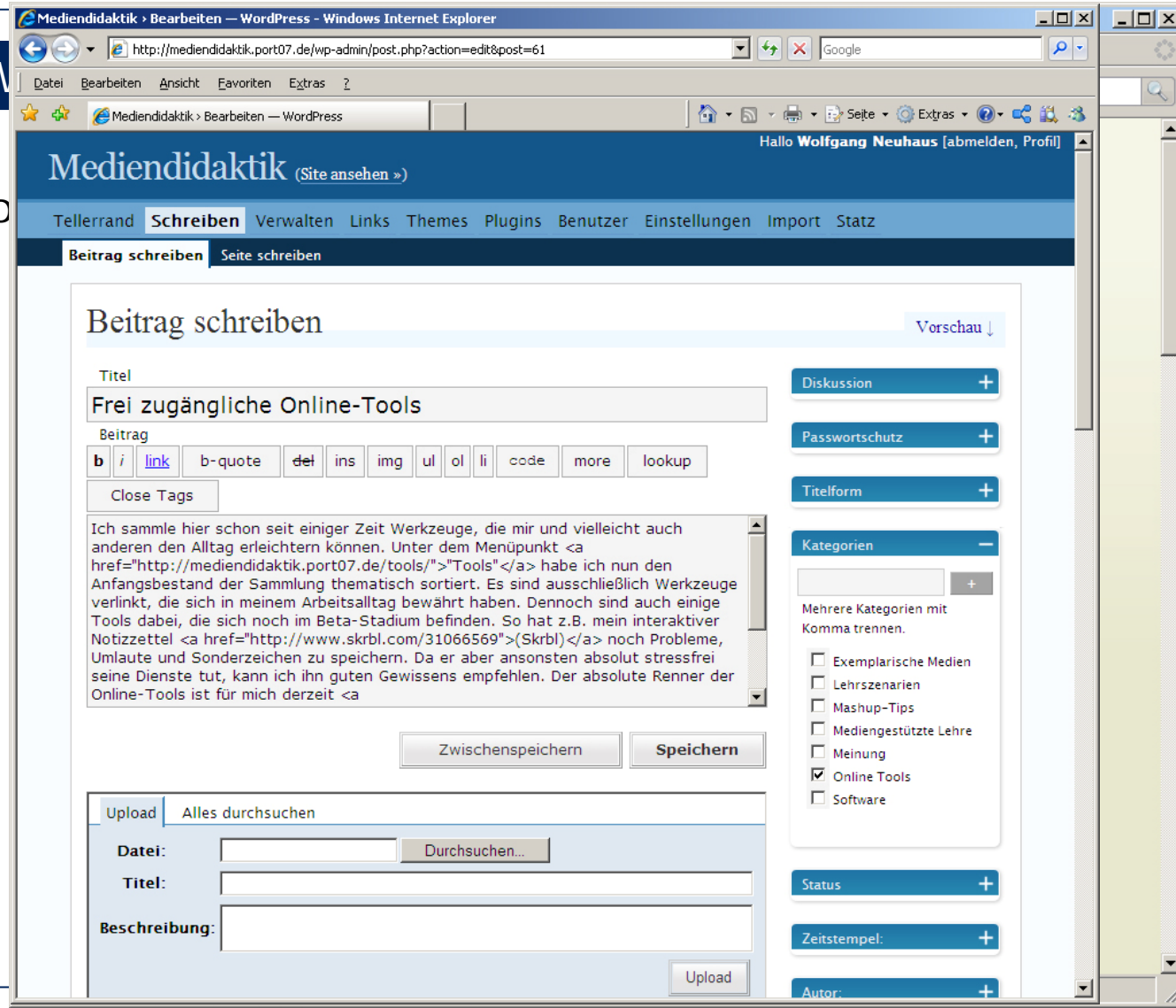
#### RSS feeds

- Announcements from Blackboard courses

(Podcasts, Social Bookmarking, ...)

## „Web 2.0“: Social Software

Blogs (Weblogs)  
Website  
Used more



Mediendidaktik > Bearbeiten — WordPress — Windows Internet Explorer

http://mediendidaktik.port07.de/wp-admin/post.php?action=edit&post=61

Mediendidaktik > Bearbeiten — WordPress

Halle Wolfgang Neuhaus [abmelden, Profil]

Mediendidaktik (Site ansehen »)

Tellerrand **Schreiben** Verwalten Links Themes Plugins Benutzer Einstellungen Import Statz

**Beitrag schreiben** Seite schreiben

### Beitrag schreiben

Vorschau ↓

**Titel**

Frei zugängliche Online-Tools

**Beitrag**

**b** **i** **link** **b-quote** **del** **ins** **img** **ul** **ol** **li** **code** **more** **lookup**

Close Tags

Ich sammle hier schon seit einiger Zeit Werkzeuge, die mir und vielleicht auch anderen den Alltag erleichtern können. Unter dem Menüpunkt [Tools](http://mediendidaktik.port07.de/tools/) habe ich nun den Anfangsbestand der Sammlung thematisch sortiert. Es sind ausschließlich Werkzeuge verlinkt, die sich in meinem Arbeitsalltag bewährt haben. Dennoch sind auch einige Tools dabei, die sich noch im Beta-Stadium befinden. So hat z.B. mein interaktiver Notizzettel <http://www.skrbl.com/31066569/> noch Probleme, Umlaute und Sonderzeichen zu speichern. Da er aber ansonsten absolut stressfrei seine Dienste tut, kann ich ihn guten Gewissens empfehlen. Der absolute Renner der Online-Tools ist für mich derzeit [...](#)

Zwischenspeichern Speichern

**Upload** Alles durchsuchen

**Datei:**

**Titel:**

**Beschreibung:**

**Diskussion** +

**Passwortschutz** +

**Titelform** +

**Kategorien** -

Mehrere Kategorien mit Komma trennen.

☐ Exemplarische Medien

☐ Lehrszenarien

☐ Mashup-Tips

☐ Mediengestützte Lehre

☐ Meinung

☒ Online Tools

☐ Software

**Status** +

**Zeitstempel:** +

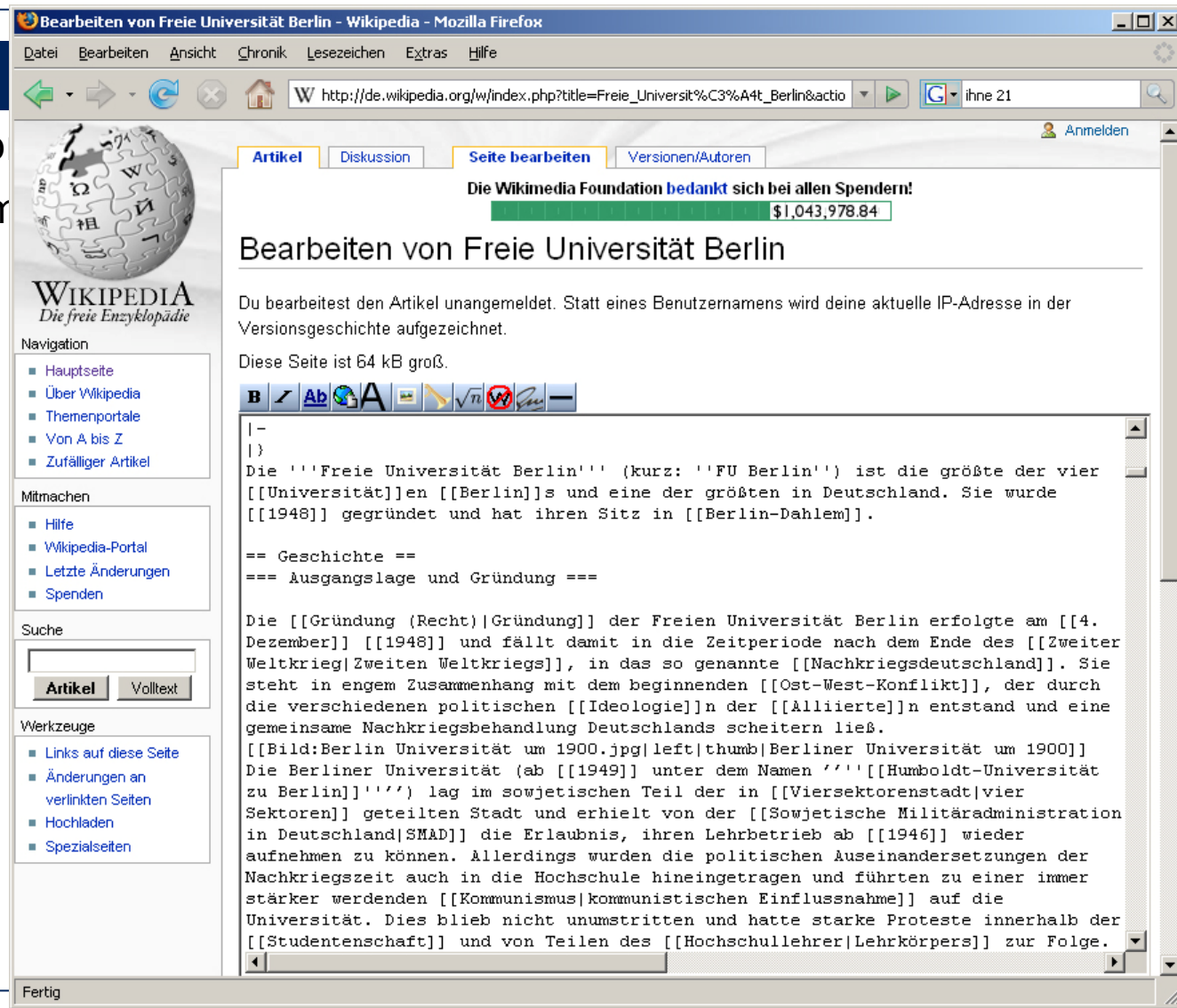
**Autor:** +



# „Web 2.0“ / Social Software

## Wikis

Collectio  
Most fam



The screenshot shows a Mozilla Firefox browser window titled "Bearbeiten von Freie Universität Berlin - Wikipedia". The address bar shows the URL: `http://de.wikipedia.org/w/index.php?title=Freie_Universit%C3%A4t_Berlin&action=edit`. The page is in the editing mode, with tabs for "Artikel", "Diskussion", "Seite bearbeiten", and "Versionen/Autoren".

At the top, a message from the Wikimedia Foundation states: "Die Wikimedia Foundation bedankt sich bei allen Spendern!" with a donation amount of "\$1,043,978.84".

The main heading is "Bearbeiten von Freie Universität Berlin". Below it, a notice says: "Du bearbeitest den Artikel unangemeldet. Statt eines Benutzernamens wird deine aktuelle IP-Adresse in der Versionsgeschichte aufgezeichnet." and "Diese Seite ist 64 kB groß."

The editing toolbar includes buttons for bold (B), italic (I), underline (U), link (A), unlink (A), image (img), table (table), template (t), and a redaction button (X).

The article content is in a code editor. It starts with a template: `|-
|>
Die '''Freie Universität Berlin''' (kurz: '''FU Berlin''') ist die größte der vier [[Universität]]en [[Berlin]]s und eine der größten in Deutschland. Sie wurde [[1948]] gegründet und hat ihren Sitz in [[Berlin-Dahlem]].`

Below the template, there is a section titled "== Geschichte ==". The first line of the text is: `=== Ausgangslage und Gründung ===`.

The main text begins with: "Die [[Gründung (Recht)|Gründung]] der Freien Universität Berlin erfolgte am [[4. Dezember]] [[1948]] und fällt damit in die Zeitperiode nach dem Ende des [[Zweiter Weltkrieg|Zweiten Weltkriegs]], in das so genannte [[Nachkriegsdeutschland]]. Sie steht in engem Zusammenhang mit dem beginnenden [[Ost-West-Konflikt]], der durch die verschiedenen politischen [[Ideologie]]n der [[Alliierte]]n entstand und eine gemeinsame Nachkriegsbehandlung Deutschlands scheitern ließ."

The text continues: "[[Bild:Berlin Universität um 1900.jpg|left|thumb|Berliner Universität um 1900]] Die Berliner Universität (ab [[1949]] unter dem Namen '''[[Humboldt-Universität zu Berlin]]''') lag im sowjetischen Teil der in [[Viersektorenstadt|vier Sektoren]] geteilten Stadt und erhielt von der [[Sowjetische Militäradministration in Deutschland|SMAD]] die Erlaubnis, ihren Lehrbetrieb ab [[1946]] wieder aufnehmen zu können. Allerdings wurden die politischen Auseinandersetzungen der Nachkriegszeit auch in die Hochschule hineingetragen und führten zu einer immer stärker werdenden [[Kommunismus|kommunistischen Einflussnahme]] auf die Universität. Dies blieb nicht unumstritten und hatte starke Proteste innerhalb der [[Studentenschaft]] und von Teilen des [[Hochschullehrer|Lehrkörpers]] zur Folge."

At the bottom of the editing area, there is a "Fertig" (Finish) button.

## Outline VI

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- I. e-Learning as an experiment
- II. e-Learning Engineering
- III. e-Learning at a traditional University
- IV. Coordinated action plan
- V. The Web 2.0 Initiative
- VI. Lessons learned**
- VII. Open issues

## Digital Technology in Education: Involve...

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- ... »computer specific« features (storing, searching, calculating)
- ... visualization techniques
- ... media enriched contents
- ... extensive use of tutorials & help functions
- ... multiple navigation and tracking
- ... instructor's »presence«
- ... problem based approach
- ... »real« AND virtual (i.e. hybrid) reality
- ... extensive personalization
- ... common sense intelligence (things that teach)?
- ... user controlled privacy and security!
- ... »Create humane applications«



## Digital Technology in Education: Avoid ...

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- ... new incomplete systems
- ... additional complexity
- ... incompatible environments
- ... slow responding applications
- ... poor design
- ... poor interaction
- ... »surprising« features
- ... »faked« security
- ... poor personalization



## e-Learning lessons – Summary

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- e-Learning is a long-term project
- Executive support is necessary
- Competence Center
- Close cooperation with the departments
- Decentralize know how
- Stepwise Migration
- Offer grants and incentives
- Central LMS leads to high synergy effects
- Open content and commercial content helps saving costs
- Multimedia authoring is challenging
- Reuse of learning modules is ...
- Reduce technical complexity (KIS)

## Outline VII

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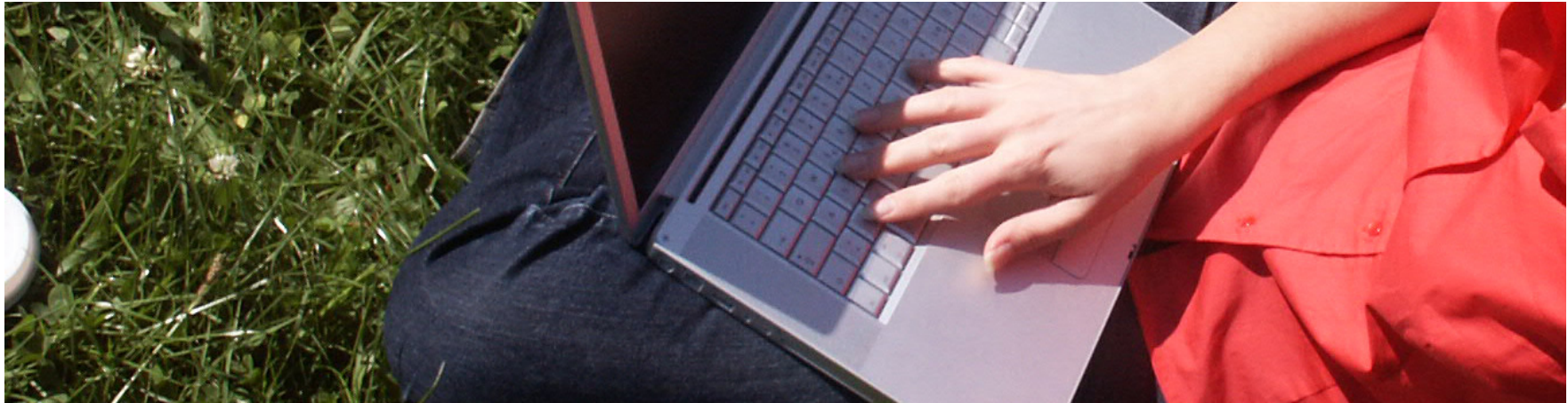
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## Open Issues

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1. Is learning with multimedia more effective?
2. How can we produce 'aha'-effects?
3. Are there simple and good models of evaluation?
4. How to integrate the authority of the instructor?
5. Design reusable content modules
6. Exploit the use of games
7. High level authoring tools for multimedia learning modules?
8. How to build intelligent navigation systems?
9. How to create adaptive learning environments?
10. Are there such things as 'learning-agents' («things that teach»)?



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