

# Informatics in e-learning to master the digital media upheaval

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# 1. State of the art and motivation

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- The centre of cultural research “Media Upheavals” examines the prerequisites and structures of the media upheavals at the beginning of the 20th century and in the crossover to the 21st century, in terms of their meaning for the emergence and transformation of media cultures, and for the development of media aesthetics – while considering the technological factors involved.
- It is promoted by German Research Foundation.
- The formation of these focal points is based on the view that upheavals do not necessarily bring socially positive connoted consequences in their wake. In fact, different factual, temporal, social, medial and spatial consequences result from the media upheavals in different cultures.



## Trans-disciplinary approach to research

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- Therefore, the scientific studies are not only limited to the analysis of a media-related theoretical discourse, but also requires a trans-disciplinary and intercultural approach to research: media science, social science, linguistic and informatics (practical informatics, economic informatics, didactics of informatics)
- The institute Didactics of Informatics is responsible for the research project “Informatics in secondary schools and e-learning to master the digital media upheaval”. Its aim is to develop and verify educational standards of informatics for student assessment.
- Major parts of the world population experience the media society without the accomplishment for a **self-determined participation** and a **participatory construction**.



## Co-operation with international partners

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- This project is part of “The centre of cultural research Media Upheavals” and runs for the duration of 1st July 2005 until 30th June 2009. It has international partners to make sure that we take different digital media cultures into consideration, e.g. University of Sao Paulo, Keio University, University of Johannesburg and Northeastern University Boston.
- **Consequences** of the digital media upheaval:
  - Disadvantage of generations
  - **Reproduction** of the problem in many countries
  - Worldwide disadvantage of whole regions – **Digital Divide**
  - Regional stamped difference in **media competence** of the genders



## 2. Research objectives

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- **Relationships** between Informatics, Media-Studies and E-Learning for the development of concepts and standards of the education in informatics
- **Target group**: Professionals in the age spectrum 30-40
  - Profit of a higher media-competence
  - Professional first-time-education was under influence of the digital media upheaval
- Research will focus on ...
  - A Internet structures
  - B Communication in the Internet
  - C Information security in the Internet



# Research questions

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- **Basic questions:**
  1. What kind of media-systems and -processes are applied by the target group?
  2. Which media competences are related to these applications?
  3. Which of these media competences may e-learning improve for the professionals?
  4. How to design the assessment process connected to educational standards?
  
- **Further differentiation:**
  - a. Specific to application profiles
  - b. Specific to the genders
  - c. Specific to cultural context



## 3. Research methods

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### 1. Exchange of views

- Analysis of applications
- Analysis of research reports
- Description of application profiles

### 2. Didactics of Informatics

- Model of competence classes
- Design recommendations and guidelines

### 3. E-learning

- Development of units of material for self-controlled learning
- Evaluation of learning scenarios
- Reengineering of content and management of content



## 4. Operating schedule

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First steps in 2/2005 & 1/2006

- Analysis and description of state of the art
- Design of educational scenarios and development of e-learning in the areas A-C
- Co-operation partners in small and medium sized enterprises
  - Empirical studies to create the catalogue of competences
  - Evaluation of e-learning (scenarios, content)
- Co-operation with other subprojects
  - Process of translation between the different scientific language cultures of media science and engineering science (Informatics)
  - Research on “recipients in media-upheavals”
- Publications on national and international conferences