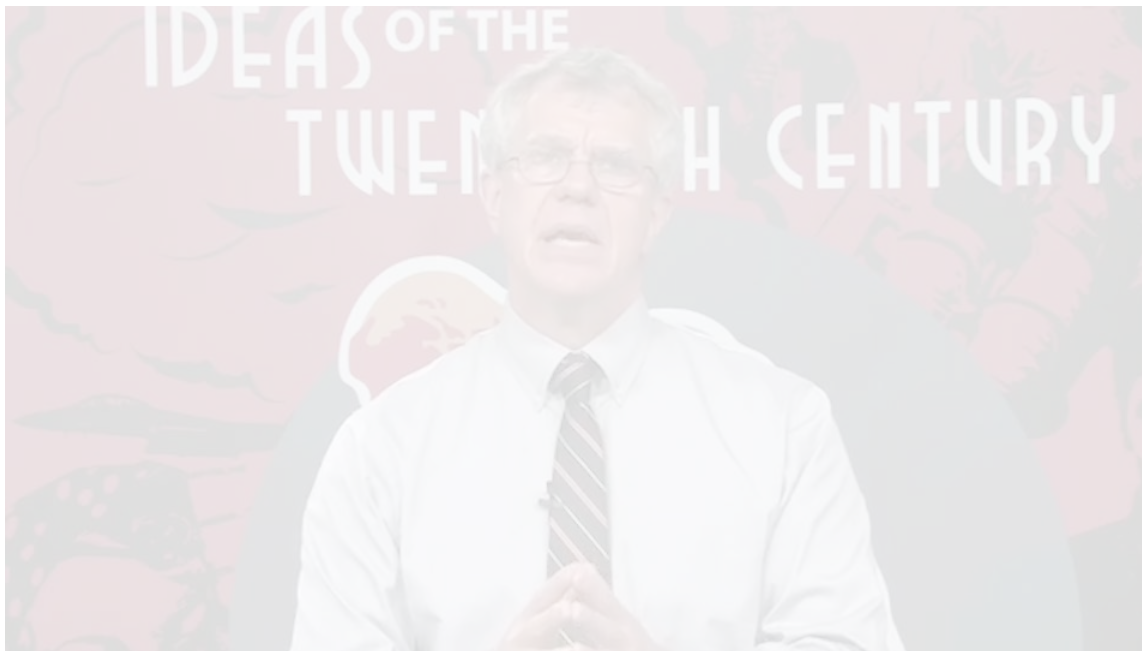


**Webinar Presentation**  
**“Knowledge communication in digital education with videos”**



June 16th 2016, on [digitallernen.ch](http://digitallernen.ch)  
Presentation: Jeanine Reutemann, IAEP HGK FHNW  
Research project: „Audiovisual Media Design for Higher Education“

- 1 Project**
- 2 Research Study**
- 3 Focus: Talking Heads**
- 4 Short Survival Guide:  
„In front & behind the camera“**

**FOCUS IN THIS PRESENTATION:**

**(a) Differences in video styles in educational videos**

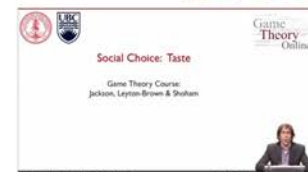
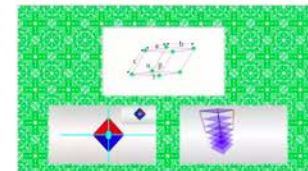
**(b) Talking Head: Performances - Representation - Multimodal Communication**

**...Knowledge distribution with  
Talking Heads (language/ges-  
tures/performance)...Challeng-  
es of knowledge representation  
through the audiovisual media...**

**„Let’s face it: MOOCs promise disruption, and yet most of them to date deliver an extremely traditional learning experience. Basically, it’s the big-lecture-hall format, with an internet-sized lecture hall.“ (David Cox, 2014)**

- 1:1 »Translation« of lectures  
(Analogy: sketches of a textbook)
- Excellence in Research and Teaching?
- Blind spot from AV perspective

## **1** THE RATIONAL Key Points

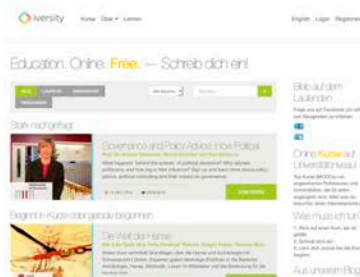




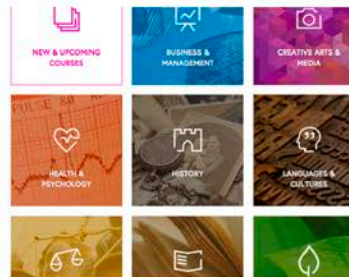
**edX (USA)**



**Coursera (USA)**

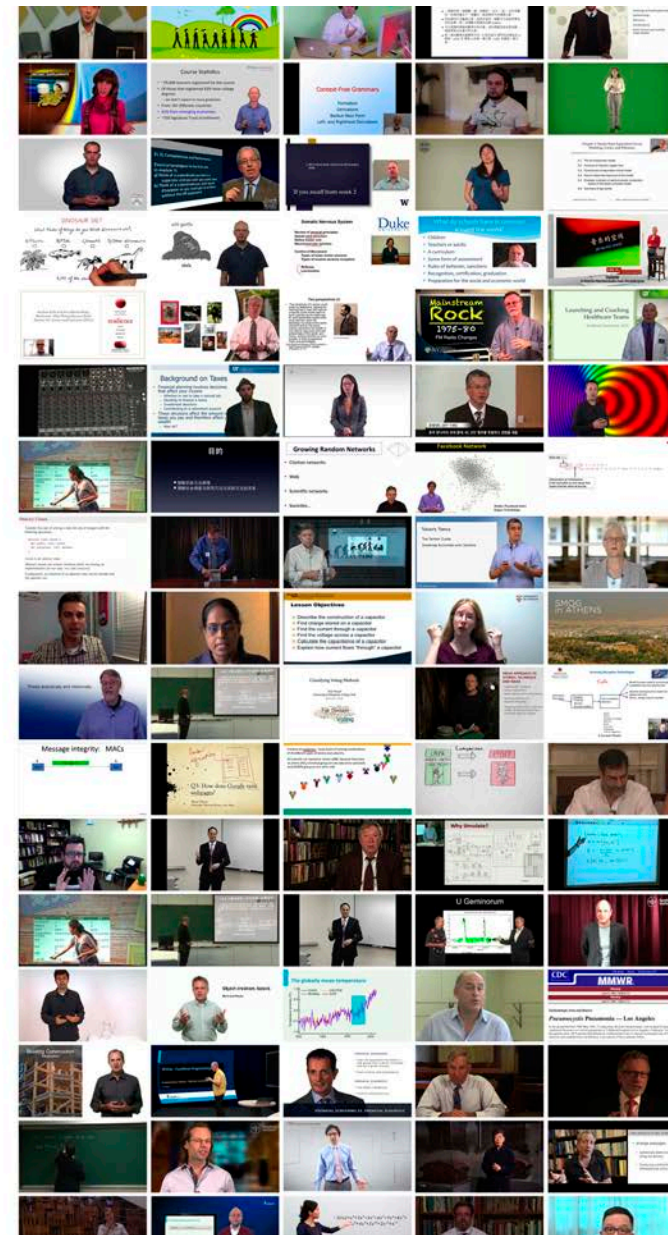


**Iversity (D)**



**Futurelearn (UK)**

- September 2014 till January 2015
- all MOOC Courses from Coursera, edX & Iversity
- overall 448 MOOC Kurse
- Lecture video: First video in every third week (except introduction videos)





## Coding

- 70 variables (e.g. music, time laps, animation, moving photography, length, off-screen speaker, view into camera, several speakers)
- Binary coding (1 if element exists)

Intro des Kurses		Intro Soundtrack		Logo der Universität		Namenszeilen (Quartile)		End Credits		Stillelegte Photos		Bewegte Photos	
des Kurses	des Kurses	Intro Soundtrack	Logo der Universität	Namenszeilen (Quartile)	End Credits	Stillelegte Photos	Bewegte Photos						
1	0	1	1	1	0	1	1	1	0	0	0	0	1
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0	0	0	0	0	0	0	0	0	0	0	1	1	1
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1	1	0	0	0	0	1	0	0	1	0	0	0	1
0	1	1	0	0	1	1	1	1	0	0	0	1	1



Long-shot

Medium-long-shot

Medium-close-up

Shoulder-close-up

Close-up

Extreme-close-up

Indoor

Outdoor

O

0



**MOOC  
PRODUCERS**

- David Cox (MOOC: Fundamentals of Neuroscience, Harvard University)
- Emiliana Simon-Thomas & Jason Marsh (MOOC: The Science of Happiness, UC Berkeley)
- Eric Klopfer (MOOC: Introduction to Game Design, MIT)
- Felix Seyfarth (MOOC: Managing the arts, Leuphana University)
- Peer Ederer (MOOC: Solution & Innovation Skills, Zeppelin University)
- Jon Wardle (MOOC: Explore Filmmaking, Director of Curriculum, National Film & Television School)
- Christina-Maria Schollerer (MOOC: The Future of Storytelling)
- Chris Boebel (Film, MIT Video Productions, MIT MOOC Productions)
- Esther Snelson / Phone Interview (Senior Video Producer, The Open University)
- Sotaro Kita (Professor of Psychology, Gesture Research, University of Warwick UK)

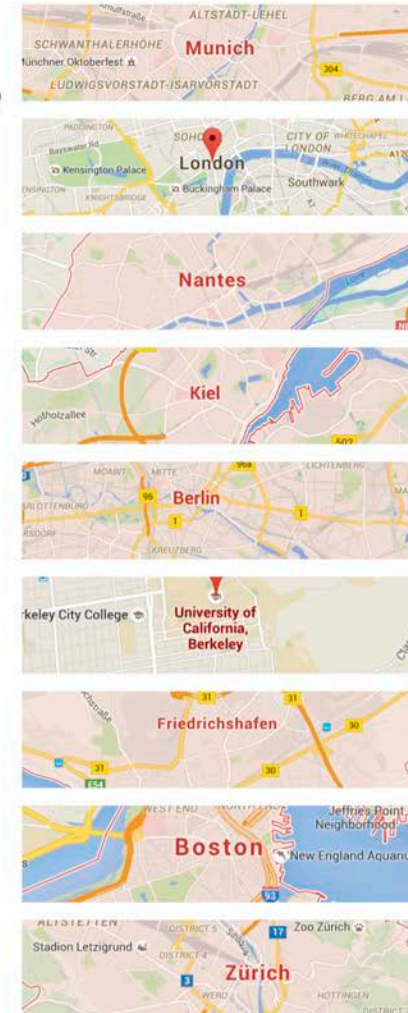
**FILM-  
MAKERS**

- Sandro Canova (Filmmaker, Image Filme, Advertisement)
- Pedro Schloendorn (Filmmaker, Documentary, Television)
- Marina Rosset (Animation filmmaker)
- Peter Hertling (Lecturer FH Kiel, Filmmaker, Documentary, Television)

**PLAT-  
FORMS**

- Nigel Smith (Head of Content, Futurelearn)
- Lara Ruppertz (Head of Didactics & Course Development, Iversity)
- Clayton Hainsworth (Operation and Production Manager, edX)
- >>> Missing: Coursera

**2** EXPERT INTERVIEWS  
**Research Study**



<b>Week 3 – Lecture Video</b>	<b>Overall 448</b>	<b>edX</b>	<b>Coursera</b>	<b>Futurelearn</b>	<b>Iiversity</b>
<b>Classroom with students</b>	<b>7%</b>	<b>12%</b>	<b>7%</b>	<b>0%</b>	<b>0%</b>
<b>Classroom without students</b>	<b>6%</b>	<b>7%</b>	<b>4%</b>	<b>10%</b>	<b>14%</b>
<b>Presentation slides with speaker</b>	<b>33%</b>	<b>26%</b>	<b>46%</b>	<b>3%</b>	<b>36%</b>
<b>Presentation slides without speaker</b>	<b>38%</b>	<b>30%</b>	<b>48%</b>	<b>22%</b>	<b>27%</b>
<b>Computer screen, high-lightening</b>	<b>29%</b>	<b>33%</b>	<b>32%</b>	<b>9%</b>	<b>27%</b>
<b>Green-screen</b>	<b>26%</b>	<b>35%</b>	<b>25%</b>	<b>10%</b>	<b>22%</b>
<b>Talking Head (summary)</b>	<b>74%</b>	<b>78%</b>	<b>68%</b>	<b>81%</b>	<b>91%</b>
<b>- Talking Head / Monochrome</b>	<b>27%</b>	<b>27%</b>	<b>31%</b>	<b>12%</b>	<b>27%</b>
<b>- Talking Head / Book Shelf</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>2%</b>	<b>23%</b>
<b>Animation</b>	<b>20%</b>	<b>19%</b>	<b>21%</b>	<b>19%</b>	<b>18%</b>
<b>Split-screen</b>	<b>10%</b>	<b>13%</b>	<b>14%</b>	<b>4%</b>	<b>5%</b>
<b>Outdoor</b>	<b>10%</b>	<b>9%</b>	<b>5%</b>	<b>31%</b>	<b>5%</b>
<b>Webcam Capture</b>	<b>8%</b>	<b>7%</b>	<b>12%</b>	<b>0%</b>	<b>9%</b>
<b>Several speakers</b>	<b>15%</b>	<b>16%</b>	<b>9%</b>	<b>29%</b>	<b>18%</b>
<b>Off-voice speaker</b>	<b>16%</b>	<b>12%</b>	<b>15%</b>	<b>30%</b>	<b>9%</b>

**The surrounding space  
gets part of the knowled-  
ge communication > cre-  
ates different meaning in  
relation to the TH**



**3** BOOK SHELFs  
Focus: Talking Heads





MOOC: History of the Slave South, University of Pennsylvania US

### 3 BOOK SHELFs – ATTENTION FOCUS Focus: Talking Heads



### 3 BOOK SHELF – DEPTH OF FIELD Focus: Talking Heads

*MOOC: History of the Slave South, University of Pennsylvania US*





# Principles of Electrical Circuits

## L18 Operational Amplifier

Operational Amplifier  
Op Amp



Principles of Electric Circuits by Tsinghua University

presented by Guip  
dubbed by Xinjie





## Teleprompters and gestures

**„Whether or not somebody is reading from a prompter you can tell from the eyes and face but also if somebody is not really thinking and saying, I think it also shows up in gestural communication as well. If you are just reading, you're not going to gesture.“** *Sotaro Kita 2015*

**„And the research has shown that the people saying memorized text tend not to gesture very much, but people who are actually thinking and speaking at the same time, tend to produce more gestures.“** *ibid.*

## Monochrome surrounding space

> Problem of nakedness

> Reduction to the visible speaker: „The center of knowledge“



## Talking Heads and Framing Sizes

- midshot
- shoulder-close-up
- close-up

> Too close?

„I wasn't sure that I wanted to see all the facial expressions. In someways, that was a bit distracting from the content [...] What's good about hand gestures is that they are directly linked to the speech content, what they are saying. So, that's relevant information.“

*Sotaro Kita 2015*



„To simply present power point slides with a picture-in-picture, I’m personally not a very big fan of that at all. [...] If you just present sort of picture-in-picture slides, the small Talking Head does not really add much. In fact, I think in some ways it really detracts.”

Clayton Hainsworth, edX, Expert Interviews 2015

### 3 PRESENTATION SLIDES Focus: Talking Heads

**Surviving Disruptive Technologies**

**Two perspectives (1)**

- The inhabitant of London could order by telephone, apportion his morning tea in bed, the various products of the whole earth in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of the world, and share, without exertion or even trouble, in their prospective fruits and advantages.

John Maynard Keynes (1912, quoted in Neil Ferguson (2003), *England's Penguin*, p. 316)

**Gene-set Libraries Stored in Gene Matrix Transpose (GMT) files- GO BP Example**

**Global Memory (DRAM) Bandwidth**

- Ideal
- Reality

**Life starts....**

- Likely single haploid genome in single primitive cell
- What would define it as being "alive"? How would we decide it was "alive" rather than "inanimate"?

**Dominated Strategies**

Should Grace celebrate her 91st birthday by jumping out of a plane strapped to this guy?

**T Confidence intervals**

In the previous, we discussed creating a confidence interval using the CLT

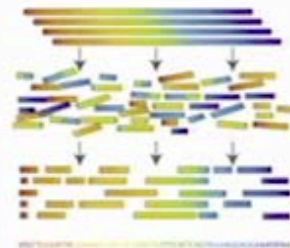
They took the form  $Est \pm TQ \times SE_{Est}$

$Est \pm TQ \times SE_{Est}$

**Growing Random Networks**

- Citation networks
- Web
- Scientific networks
- Societies...

# Reality



*Journal of*  
Universal Rejection



## Characteristics & aesthetics of the audiovisual media

**We never see the same  
thing when we also hear;  
we don't hear the same  
thing when we see as  
well.«** *Michel Chion 1994*

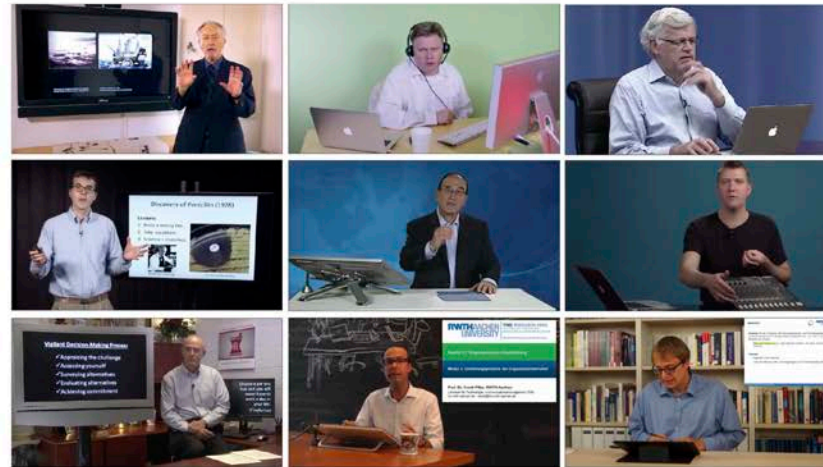


## Characteristics & aesthetics of the audiovisual media

- media specific characteristics

### Challenges for digital education with videos:

- create a „learning experience“ rather than „teaching“ (1x1-Adaptation)
- audiovisual didactical narratives
- sociocultural: recognizing media quality
- experiencing the media as media instead of cognitiv process of content



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  - sociocultural: recognizing media quality
  - experiencing the media as media instead of cognitiv process of content
- > Example: Technical objects



## **Short inputs for educators “in front of the camera”**

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**(4) Practice practice practice**

**(5) Never forget: This videos will be out there in the world, coloring the perception about you as an educator and expert as you’re scientific publications do.**

## **Short inputs on the situation “behind the camera”**

**(1) There is no “one-style-fits-all” approach to video making. The perfect setting for one educator might be miserable for another > educator’s personality**

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**(3) General rule: The closer the framing the less mimic expressions and bodily movements**

**(4) Give truly honest feedback on the performance of the educator > avoid hierarchical structures in the video production (e.g. PhD Student and Professor) If possible include an expert (filmmaker-supervisor) into the process**



— GEBERT RÜF STIFTUNG —  
WISSENSCHAFT.BEWEGEN

Sunrise Semester / New York University / 1957 -1982

**THANK YOU FOR  
YOUR ATTENTION!**

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**[www.audiovisualresearch.org](http://www.audiovisualresearch.org)**