Interactive Video Suite (Moodle-Plugin)

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Agenda

- Market of (interactive) video
- Interactive Video Suite (Moodle-Plugin)
- Why social video learning?
- Examples
- Your use cases?
- Discussion
Video – two sides of a coin

- Videos are a densified, complex and fluid medium.

- Teaching staff should consider three elements for videos:
  1) **Cognitive load** (distractions, complexity, pauses, structure, …)
  2) Promote **student engagement** (i.e. short duration, relevant, conversational style, …)
  3) **Active learning features** > Interactive Video Suite in moodle
Market of (interactive) video
IVS in a nutshell

(Social) Comments

Questions

Editing
Commenting-Mode

Editing-Mode

Question-Mode

Precise positioning of comments & questions

Question-Mode
Add an IVS-activity in a moodle course / videos@SWITCH

- Videos
  - Hosting@SWITCH
  - Special Upload-Plugin
- Upload in Block «Opencast Videos»
- Auto-Transform into needed formats
Social Video Learning – software company use cases since 2007
One view
Assessment: „right-wrong“
Ensure theoretical concepts and handling of objects, things, …
→ Questions

Many views
Assessment: „suited or less suited“
- Explore social practices
- Discuss interpretations
→ Social Video Learning

First Order Viewing
Second Order Viewing

KNOWN ← facts analytical cooperative critical, creative → NEW
Interactive Video Suite – technical principle

1. Stop video, add comments to the video-image
2. Add markings and tags
3. View comments of others and respond to those comments
Interactive Video Suite – technical principle
Example: Development of reflection skills of teaching assistants

Guided reflections of action routines promote thought processes (even among experienced people) by:

• doubt
• a perceived imbalance between discussion partners

(Mezirow, 1981; Dewey, 2002 [1910], S. 15, 39)
Example: Development of reflection skills of teaching assistants
Task for students: Create a video on concept ABC and comment videos of peers

Optional: Label comment with markings & «traffic colors» - set reading access (course or private)
Teachers can insert a «trigger question» as a reflection task.
View of comments & discussions

Show all comments of users

All comments and markings will appear, incl. the corresponding position picture of the video and possible re-comments by other users.
Video as a tool to see differently

Catch reality / “Freeze” a situation/moment

1. Repeat > viewing with a distance
2. Manipulate Video-Speed
   > See in new/different way
3. Set own focus > see more precisely/deeper
4. Change perspective (think being someone else in the video)
5. Explore spaces (360-Degree-Videos)

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Mix of signs

Precise moment and combination of signs makes it more clear for myself, what I see and think.

Iterate and elaborate own text.

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Different levels of observation / Deeper reflections

First Order
Observe things & situations (video)

Question of student
Feedback by peer
Feedback by teacher on BOTH – question and peer answer
Find the common ground

Change of perspectives

Subjective perspective

Exchange of views & perspectives

Subjective perspective

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Focus: Teacher Education / Social skills of students

- Social situations (e.g. coaching, group work, design-thinking workshop)
- Teaching situations (e.g. giving feedback, dealing with questions, collaborative work between faculty and students)
- Documenting teacher education
Potential of video reflection for teacher training

- **Time decoupling**
- Deal with the high **complexity** of teaching situations
- **Authentic confrontation** with real situations and processes
- **Subjective theories** about observed processes become **explicit**
- Find **alternative** pedagogical or methodical options for action
- Closer **link** of obvious **practice to theory**
- Finding a **common language** among teachers and fostering collegial communication
- Bring in **multiple perspectives into the discussion** with documented, real-life recording
- Making **competencies** of individuals **visible** and documenting them

*Dorlöchter et al., 2006*
Needs & Disadvantages

- **Data protection**: All data protection issues must be clarified.
- **Organizational & technical effort** must be minimized. With today’s video recording & editing tools this should be possible.
- Video recordings do not contain the entire reality. **Emotional aspects** that are not captured by the camera **must be addressed** accordingly in the reflection.
- Video recordings are often perceived as **disturbing**, students and teachers can feel exposed & embarrassed. A **safe and a sensitive setting** is required.

Needs & Disadvantages

- The benefit in viewing video recordings of teacher’s own teaching practice will only **gradually** become apparent to the students. A cautious approach is therefore necessary.
- Overall **time effort** is considerable, but the **benefit** justifies it. A careful **planning** of the didactic scenarios is key.

Insert questions
At any point you can insert a question into the video:

1. **Single Choice** (one correct or one best answer)
2. **Click-Question** (find a hotspot in the video, i.e. a dangerous element in a setup)
3. **Essay** (insert free text, i.e. writing «what is the next step here?» or «what happens here and why?»)
Current use cases @ETH
Knowledge-Check (Pre-Knowledge & Understanding)

> SINGLE CHOICE

**Conventional lung:**
2. Bei chronisch rezidivierenden, kleinen Embolen kann die CT falsch negativ sein.

**Feedback**

**Microdamage in alendronate treated bone**

**We are investigating under which conditions no transient period occurs. Think of the energy argument. Which statement is true?**

- In AC systems, a transient period will inevitably occur.
- There will be no transient period if the switch closes at the peak of the source voltage.
- There will be no transient period if the switch closes at voltage zero of the source voltage.
- None of the other statements is true.

**Die müssen exakt 5 mL der Probe auf die Säule geben. Mit welcher Pipette arbeiten Sie?**

- Messpipette
- Pasteurpipette
- Vollpipette

Nein. Mit einer Pasteurpipette können keine Volumina abgemessen werden.
Knowledge-Check (Pre-Knowledge & Understanding) > Click-Zone

3. A compensation mechanism was mentioned, which is probably triggered by a mechanical signal due to a big loss of bone. In the graph showing bone formation rate and bone resorption rate, click on the part of the curve, where you can see this compensation mechanism kicking in.

To answer the question, click directly into the video image. Please note that the click also submits the answer at the same time.
Knowledge-Check (Pre-Knowledge & Understanding)
> Write short text

2. What could be a reason for the significant difference in bone strength between females and males in the C3.8-LitLit strain?
Show overall results of questions

For each question there is detailed information about the users:
- First try correct?
- Number of repetitions?
- Last attempt correct?
Fragenresultate anzeigen

**Fragen ID:** 293  
**Fragen Typ:** Freitext  
**Frage:** Was passiert wenn .......

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<td>69087</td>
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**Fragen ID:** 294  
**Fragen Typ:** Single-Choice Frage  
**Bezeichnung:** Welche Aussage trifft zu?

**Frage:** Welche Aussage trifft zu?

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Overal report about student activity in videos
Focus 1: Operation of devices & machines

Laboratory situations / operation of machines, devices
- show potential dangers & consequences
- in order to show (to "dramatize") the consequences of operating errors, video feedback shall be increasingly used
Special feature: Editing video fast and simply directly in the IVS-Player
Edit Video – Explain & Show (markers, text, zoom, etc)
**Summary: Benefits of Interactive Video Suite**

**For teachers**

- **Actively engage students with a topic** in a video which contains interactive elements, tasks and questions (motivation)

- **View and better understand the prior knowledge, misconceptions & understanding** of students regarding a topic or concept (guide and adapt process & impact)

- **Collect thoughts, ideas, reflections and questions of ALL students** about a topic (foster critical thinking, guide learning process)

- **Gain feedback on the teacher questions**, based on detailed answer patterns – is the question appropriate, helpful, too hard, too easy, just right? (improve format. assessment)

**For students**

- **Become more engaged in the preparation** of face to face lessons

- **Better understand own knowledge, misconceptions & understanding** regarding a topic or concept

- **Compare own opinions and reflections with those of peers**

- **Easy and attractive repetition** and self-assessment regarding topics and concepts by revisiting videos, questions & comments
SUMMARY: Social Video Learning - Method

- **Deep reflection** on content
- It combines the advantages of video learning with those provided by personal and direct **exchange**.
- Structured and guided by assignments, the participants learn to **watch carefully** and **comment on relevant situations** directly in the video.
- These **comments** can be **shared** amongst all group members and be **discussed** directly within the video.
- Goal is to develop real **competences**.
References

Links around good practice for video, interactive videos and IVS-Manual, ETH documents & checklists


Trials / Individual costs

Free trial for 2 months and 35 participants

2 models for individual prices – please contact Rebecca Gebler
rebecca.gebler@ghostthinker.de / Tel. +49 821 – 40821205

1. Use for one course (for xy months)

2. User for all moodle users of your organization (per year)