Making (use of) Videos for Teaching and Learning

Jonathan Soulé
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What type of video?

• Videonotes
What type of video?

- Video notes
- Tutorials/PreLab/Short lectures
What type of video?

- Videonotes
- Tutorials/PreLab/Short lectures
- Streaming LIVE
What do they have in common?
What do they have in common?

• Focus on the content of your screen
  – > Powerpoint presentation/course material
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• Your voice/text is central
What do they have in common?

- Focus on the content of your screen
  - > Powerpoint presentation/course material

- Your voice/text is central

- Your presence on screen is optional (but welcome).
Recording lectures (Videonotes)
Making videonotes (videonotat)

- Filming your own lectures
  - as support material for your students (pros and cons…)
Making videonotes (videonotat)

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  - as support material for your students (*pros and cons…*)
  - for later use, reuse and abuse
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- UiB’s collection of videos on [http://video.dig.uib.no/engage/ui/index.html](http://video.dig.uib.no/engage/ui/index.html)
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• UiB’s collection of videos on [http://video.dig.uib.no/engage/ui/index.html](http://video.dig.uib.no/engage/ui/index.html)?
• UiA’s extensive collection of videos on [video.uia.no](http://video.uia.no)
Making videonotes (video notat)

• Filming your own lectures
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  – for later use, reuse and abuse

• UiA’s extensive collection of videos on [video.uia.no](http://video.uia.no)

• 2 solutions
  • DigUiB’s videonotes – ask someone to film you
  • Techsmith Relay – film your own lecture
Solution 1: DigUiB’s videonotes

- Automatic recordings of the lectures including:
  - Screencast
  - Voice
  - Camera
  - Index
- [www.uib.no/diguib](http://www.uib.no/diguib)
Where is it available at UiB?

These rooms have fixed recording equipment:

- JU: Auditorium 1, Dragefjellet
- JU: Auditorium 2, Dragefjellet
- MN: Auditorium 1, Realfagsbygget
- MN: Auditorium A, Allégaten 66 (Temporarily out of order)
- MN: Stort auditorium, Høyteknologisenteret
- MO: Seminarrom 234, Overlege Danielsens hus
- MO: Auditorium 1, BB-bygget

- SV: Stort auditorium, Lauritz Meltzers hus
- SV: Lite auditorium, Lauritz Meltzers hus
- HF: Auditorium A, Sydneshaugen skole (Temporarily out of order)
- HF: Auditorium B, Sydneshaugen skole
- PS: Auditorium 129, Bjørn Christiansens hus
- PS: Auditorium 128, Bjørn Christiansens hus

- Egget, Studententeret
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- Egget, Studentsenteret
How to - step 1

- Order it at DigUiB!
- Fill up the form online
How to - step 1

- Order it at DigUiB!
- Fill up the form online
  - Single lecture
  - Whole course*

* Only lectures at locations equipped for recording
How to - step 2

- Show up at your own lecture
How to - step 2

- Show up at your own lecture
- Turn on the projector… (needed to activate audio system)
How to - step 2

• Show up at your own lecture
• Turn on the projector… (needed to activate audio system)
• USE THE MICROPHONE
  – > No mic, no sound!!!
How to - step 2

- Show up at your own lecture
- Turn on the projector… (needed to activate audio system)
- USE THE MICROPHONE
  - > No mic, no sound!!!

Recording starts 2-3 minutes before the lecture and ends 2-3 minutes after the lecture (as defined in the form or the time schedule).
How to - step 3

- Get/give access to your video at:
  http://video.dig.uib.no/engage/ui/index.html?
Solution 2: Techsmith Relay

- Simple solution for screencast
  - Capture (one of) your screen(s)
  - Capture your webcam (optional)
  - Capture your voice
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• «Free» to use at UiB (Uninett)
• «Free» storage of videos on remote server
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- «Free» storage of videos on remote server
- Videos are accessible 24/7 via a link
How to - step 1

• Sign up at DigUiB!
How to - step 1

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- [www.uib.no/diguib/90236/screencast](www.uib.no/diguib/90236/screencast)
How to - step 1

• Sign up at DigUiB!
• [www.uib.no/diguib/90236/screencast](www.uib.no/diguib/90236/screencast)
• Get the software installed on your PC
  – Via BRITA (client PCs)
  – Download it for free
How to - step 1

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  • www.uib.no/diguib/90236/screencast
• Get the software installed on your PC
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• Run the program and log on
  with your new credentials
  – xxxxx@uib.no + new password
How to - step 1

• Sign up at DigUiB!
  • [Website Link]
• Get the software installed on your PC
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  – Download it for free
• Run the program and log on with your new credentials
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How to – step 2

1. set up the microphone
2. set up the webcam
3. choose the display/screen to capture
4. test the setup
5. Push REC
How to – step 3

Once done, submit the video.
How to – step 3

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The video is:

1. Sent to a server for encoding
How to – step 3

Once done, submit the video.

The video is:

1. Sent to a server for encoding
2. Made available via an email
How to – step 3

Once done, submit the video.

The video is:

1. Sent to a server for encoding
2. Made available via an email
3. Displayed via net browser
Flipped classrooms
Prelab
Tutorials
Producing tutorials/short videos

- Flipped classroom
  - Making videos to teach something ahead of colloquia
    - Theme/subject of the day
    - Exercise/assignment
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- PreLab
  - Making introductory videos to lab activities
    - «What to know before dissecting today’s beast»
    - «What are the dangers of today’s experiment»
Producing tutorials/short videos

• Flipped classroom
  – Making videos to teach something ahead of colloquia
    • Theme/subject of the day
    • Exercise/assignment

• PreLab
  – Making introductory videos to lab activities
    • «What to know before dissecting today’s beast»
    • «What are the dangers of today’s experiment»

• 2 solutions:
  – Techsmith Relay
  – OBS Studio
The concept

• Preparing a video in your office, at the bench, on field…
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• What do you need to capture:
  – Speaker’s voice
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  – Teaching material on screen
    • Screencast
The concept

• Preparing a video in your office, at the bench, on field…

• What do you need to capture:
  – Speaker’s voice
  – Speaker’s face (optional but…)
  – Teaching material on screen
    • Screencast
  – Teaching material from handheld webcam/microscope/loupe
    • Shown on full screen via extra software (webcamviewer)
Solution 1: Techsmith Relay

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Solution 1: Techsmith Relay

1. set up the microphone
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3. choose the display/screen to capture
4. test the setup
5. Push the button REC
Solution 1: quick example

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A couple of examples

Anders Opdal introducing NetLogo on biostats.uib.no

Adèle Mennerat introducing an exercise in BIO201 on biostats.uib.no
Solution 2: Open Broadcaster Software

• aka OBS Studio
• Free, open source
• https://obsproject.com/download
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- [https://obsproject.com/download](https://obsproject.com/download)
- More advanced than Relay
  - more flexible as well
  - Not as simple to set up
Solution 2: Open Broadcaster Software

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  - more flexible as well
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- Encodes the video while recording
  - > need stronger CPU/GPU
Solution 2: Open Broadcaster Software
Solution 2: Open Broadcaster Software

1. Set up your display/scene
2. Set up your microphone
Solution 2: Open Broadcaster Software

1. Set up your display/scene
2. Set up your microphone
Solution 2: Open Broadcaster Software

1. Set up your display/scene
2. Set up your microphone
3. Create different scenes
Solution 2: Open Broadcaster Software

1. Set up your display/scene
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3. Create different scenes
4. Create a transition
Solution 2: Open Broadcaster Software

1. Set up your display/scene
2. Set up your microphone
3. Create different scenes
4. Create a transition
5. Record it!
Solution 2: scenes in OBS Studio

- Scenes allow to alternate between:
  - Softwares, windows
  - Remove an item (webcam)
  - Play additional video material
  - Show a document
  - ...

![Scene selection in OBS Studio](image)
Solution 2: quick example

1. Scene 1: webcam ON
Solution 2: quick example

1. Scene 1: webcam ON
2. Scene 2: webcam OFF
3. Scene 1: webcam ON
4. Scene 2: webcam OFF
5. Scene 3: the french touch
LIVE streaming
Streaming events

- Streaming
  - Live broadcasting of teaching activities
  - Live broadcasting of conferences, workshops…

- 2 solutions:
  - OBS Studio
  - DigUiB’s platform
Solution 1: OBS Studio via server
Solution 1: OBS Studio via server
Solution 1: OBS Studio via Youtube
Solution 1: OBS Studio via Youtube
Solution 1: OBS Studio via Youtube

![OBS Studio settings with YouTube encoder setup]

- **Server URL**: rtmp://a.rtmp.youtube.com/live2
- **Stream name/key**: **********
Solution 2: DigUiB

- Contact DigUiB (via the webpage)
- Fill up the form
- Enjoy!
Solution 2: example
Things to think about...
What it takes to make videos
What it takes to make videos

- **Time** *(A whole lot of precious time)*
  - Setup + duration of the lecture
  - Often need multiple takes
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- **Money** (*A whole lot of spending money*)
  - Most softwares are free/available via UiB/IT-Avd
  - Hardware
    - Sound quality: 1000-4000 NOK
    - Video quality: 500-1000 NOK
What it takes to make videos

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  – Most softwares are free/available via UiB/IT-Avd
  – Hardware
    • Sound quality: 1000-4000 NOK
    • Video quality: 500-1000 NOK

• **Good teaching material** *(…)*
  – Clarity
  – Visual stimuli
  – Keywords, pointer,…
Hardware

• Buy yourself a good microphone, please!

Audio-Technica AT2020-USB  Røde Filmmaker kit
Hardware

• Buy yourself a good webcam (HD), please!

Microsoft Lifecam
In summary...
Software 1: Techsmith Relay

- simple screencast and videonotes:
- Free at UiB, PC and Mac friendly
- File encoding and storage on remote server
- Provides you with a link to the video sent via email
  - NB: email delivery within minutes up to 36 hours

- Limited possibilities (hard to mess up but limited outcomes)
Software 2: OBS Studio

- Advanced screencast and streaming
- Flexible platform with many possibilities
- Free, PC, Mac and Linux friendly
- Weak PCs might suffer…
- Local storage of videofiles
- More complex to use but more possibilities
DigUiB

- Provides support for Techsmith Relay
  (http://www.uib.no/en/diguib/90236/screencast)

- Provides services:
  - Videonotes
    (http://www.uib.no/en/diguib/90227/recording-lectures-videonotes)
  - Live streaming
    (http://www.uib.no/en/diguib/90250/livestream)

- Contact them!
- Check www.uib.no/diguib/
Any interest for:

- Workshop?
  - Techsmith Relay
  - OBS Studio
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• Workshop?
  – Techsmith Relay
  – OBS Studio

• Website for hosting teaching videos?
  – prelab.uib.no ?
  – flipped.uib.no ?

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www.bioceed.no