SciLifeLab

Considerations for FAIR video material

Chapter 6 – FAIR Training Material by Design
October 21-22, 2025
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Learning outcomes

- **Explain** why video materials should follow FAIR principles and identify key challenges in doing so
- **Evaluate** how FAIR a given video is, using real examples
- **Apply** minimum FAIR-by-design practices when creating or sharing training videos
- **Generate and use** transcripts or captions to enhance accessibility and interoperability (via Whisper AI or similar tools)

Why FAIR video materials matter

Have you used / are you planning to use video material in your training?

What kind of video material?

Why / why not?

Why FAIR video materials matter

Video media is a great tool for **enhancing & contextualizing learning**!

- **Improved retention and understanding**: combining visual and auditory information engages multiple senses → dual coding theory [1, 2]
- **Supports flexible, self-paced learning**: learners can pause, rewind, or rewatch segments at their own pace [3, 4]
- **Enables asynchronous learning**: learners access materials anytime, anywhere
- **Provides authentic demonstrations**: e.g. when teaching lab techniques, workflows, or software use
- **Increases accessibility and inclusion**: captions, transcripts, and translations make content more widely usable

[1]Paivio A (2009) *Mental Representations: A dual coding approach*, Oxford Psychology Series. https://doi.org/10.1093/acprof:oso/9780195066661.001.0001
[2] Mayer RE (2009) *Multimedia Learning*. 2nd ed. Cambridge University Press. https://doi.org/10.1017/CBO9780511811678
[3]Guo P, Kim J, Rubin R. (2014) *How video production affects student engagement: An empirical study of MOOC videos.* L@S '14: Proceedings of the first ACM conference on Learning @ scale conference 41-50. https://doi.org/10.1145/2556325.2566239
[4]Zhang D, Zhou L, Briggs RO, Nunamaker JF (2006) *Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness.* Information & Management 43(1): 15-27, https://doi.org/10.1016/j.im.2005.01.004

Why FAIR video materials matter

Why FAIR video materials matter

Action!

Find a short video (e.g., on YouTube, Protocols.io, Zenodo, or another platform) that you might want to include in your course.
Once you've found one, take 5–10 minutes to assess:

Links to sample videos

Is it **Findable?** → located at a trusted hust? Does it have a DOI?
Is it **Accessible?** → Is access level/language defined? Is it possible to download a copy?
Is it **Interoperable?** → Are there captions? Is the format standard?
Is it **Reusable?** → Is there a clear license? Is proper attribution given to (non)human creators? Is there versioning info?

Why FAIR video materials matter

Evaluate

Was the video material you chose FAIR?

How easy would it be for you to reuse this material?

If not easy: what information would you need to make reuse easier?

Why FAIR video materials matter

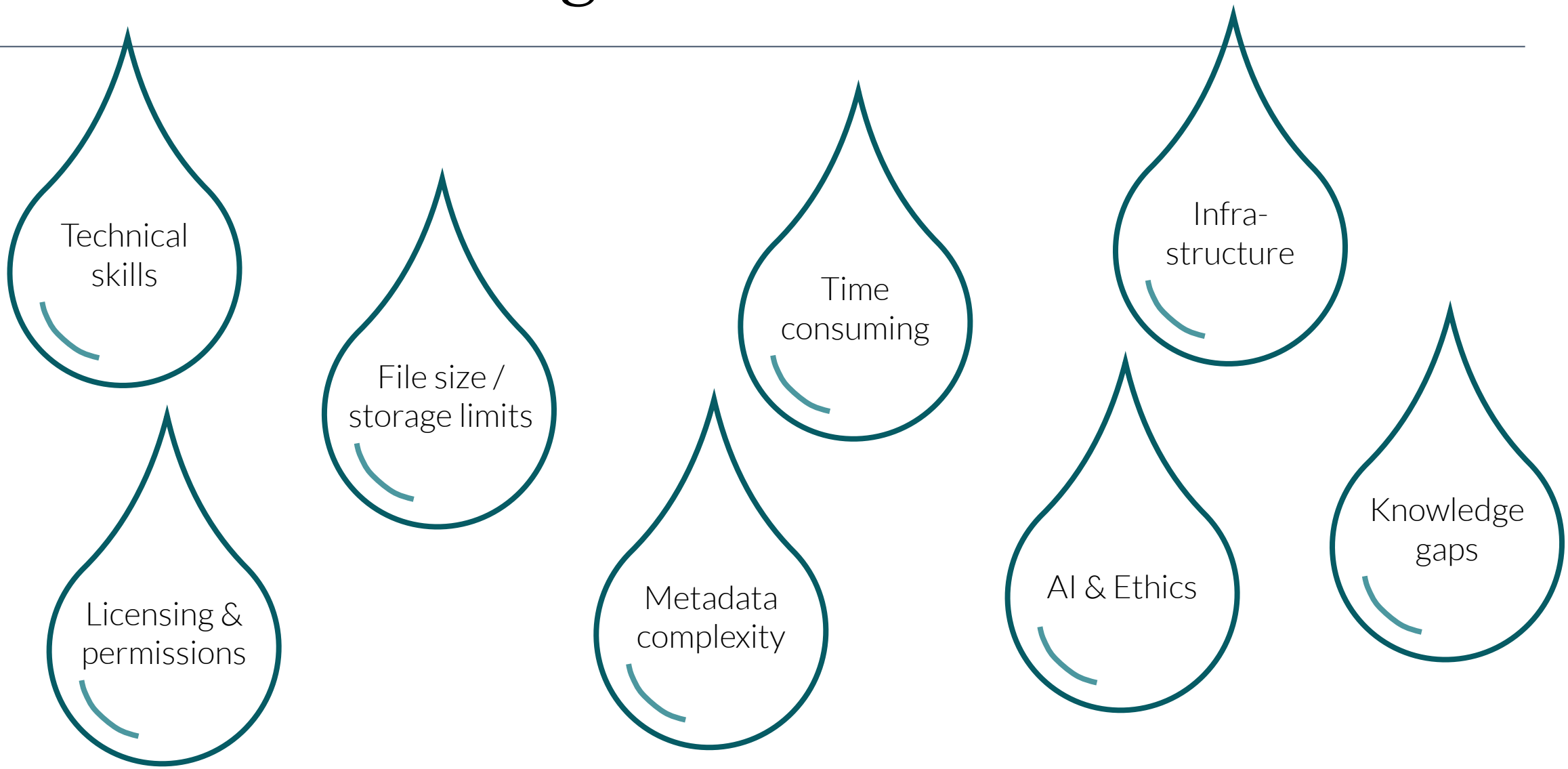
- It makes it **easy to locate** videos
- It **supports asynchronous learning** when videos can be viewed or downloaded anytime, anywhere
- It **enables** using videos **across platforms and tools**
- It allow others to **legally adapt or remix** content
- It ensures videos **remain available and understandable** over time

FAIR video = more impact from the effort you put into creating it

Barriers to creating FAIR video materials

What's the biggest barrier for you in using and FAIRifying video material?

Barriers to creating FAIR video materials



AI and FAIR video material

Create	Record	Edit	Transcribe	Host / Publish	Evaluate
Generate ideas, scripts, storyboards:	Capture lectures, demos etc:	Refine video, combine visuals:	Generate captions and transcripts:	Share with metadata & licensing:	Review viewer engagement:
ChatGPT, Claude, Gemini	Microsoft Text-to-Speech	CapCut, Canva Video	Whisper AI	Zenodo, YouTube, Vimeo	YouTube Analytics, EdX insights

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BUT: Use with caution! Is AI generated content FAIR? How to ensure quality and accuracy? How does AI affect creativity and learner engagement? Who is the author, how should we credit them?

AI and FAIR video material

Crediting and Citing AI-Enhanced Video Materials

- **Crediting AI:**
  For AI tools that had a creative or technical role: “Script generated with ChatGPT (OpenAI, 2025)”

- **Describing the role of AI:**
  Explain how an AI tool was used, e.g. “Voiceover synthesized using Microsoft Azure TTS”

- **Crediting AI in metadata or end credits:**
  “Video created by [Name], 2025.
  Script drafted with ChatGPT (OpenAI, version x.x).
  Captions generated using Whisper (OpenAI).
  Edited in CapCut.”

- **Citing AI in reference lists or FAIR records:**
  Luijten, I. (2025). *Creating FAIR video materials* [Video].
  Script generated with ChatGPT (OpenAI). Captions via Whisper (OpenAI).
  Zenodo. https://doi.org/10.xxxx/zenodo.xxxxx

- **Licensing AI generated content:**
  License with CC BY or CC BY-SA to allow reuse with attribution, state if remixing or AI reuse is permitted.

AI and FAIR video material

WhisperAI: adding transcripts to videos

Findable: search engines and repositories can index the text and help others discover your content.

Accessible: people with hearing impairments or those who prefer reading can still engage with the material.

Interoperable: the content can be reused across different platforms, formats, or languages.

Reusable: the text can be cited, translated, remixed, or integrated into other learning materials, all while preserving the original meaning and context.

AI and FAIR video material

Action!

Generate a caption or transcript to a sample video

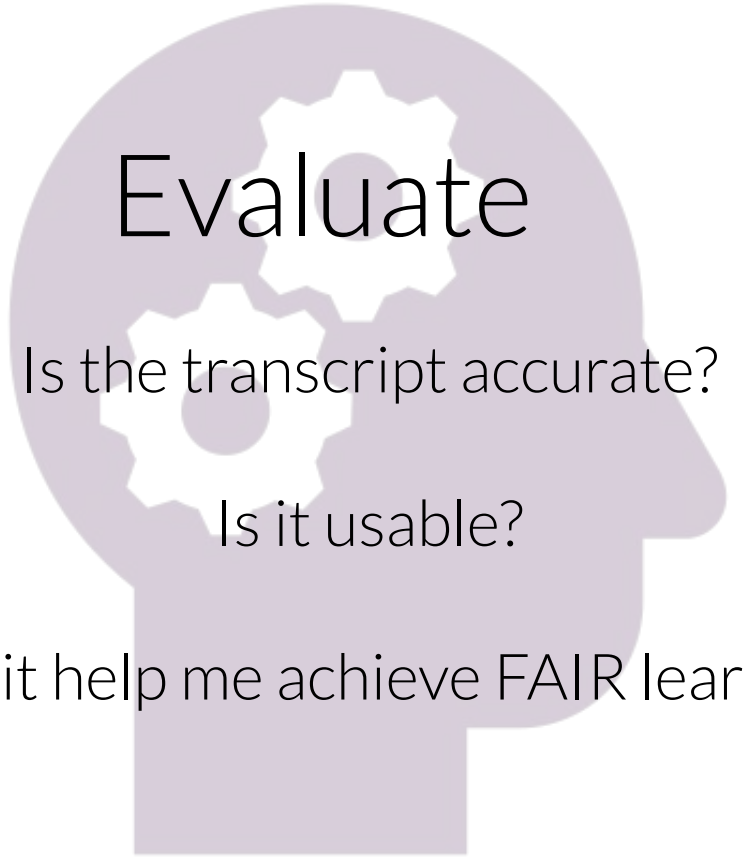
Link to sample video

Recommended: Using the SciLifeLab serve instance of Whisper (recommended, easy)

Independent: Using an on-device GUI such as Whisper Transcription

Challenge mode: Installing your own local instance of Whisper

AI and FAIR video material



Evaluate

Is the transcript accurate?

Is it usable?

How does it help me achieve FAIR learning aims?

The word error rate (WER) for the **large** Whisper model is 4.1% for English and 7.6% for Swedish.

Adding FAIR video & transcript to your sample course

Action!

Publish your own *FAIR-by-design* training video

Links to sample video

Use the sample video to embed or feel free to upload your own video to your host of choice

Attribute the video and choose a license

Add your caption file

You now have FAIR video material in your course!

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More tools for FAIR video material

Create

Capture:
- Zoom
- Powerpoint
- Your smartphone
- OBS Studio

Open material:
- Pexels
- Pixabay

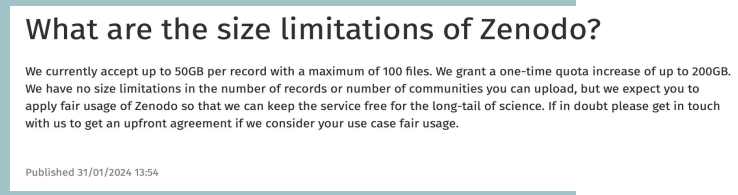
Edit

Open source:
- Blender
- Kdenlive
- OBS Studio

Proprietary:
- iMovie
- Adobe Premiere
- Many others

Release

Hosting options:
- YouTube
- Vimeo
- Nextcloud
- Google Drive
- Zenodo*



What are the size limitations of Zenodo?

We currently accept up to 50GB per record with a maximum of 100 files. We grant a one-time quota increase of up to 200GB. We have no size limitations in the number of records or number of communities you can upload, but we expect you to apply fair usage of Zenodo so that we can keep the service free for the long-tail of science. If in doubt please get in touch with us to get an upfront agreement if we consider your use case fair usage.

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