Generating Learning Content (Podcasts, Videos) with AI

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Learning objective

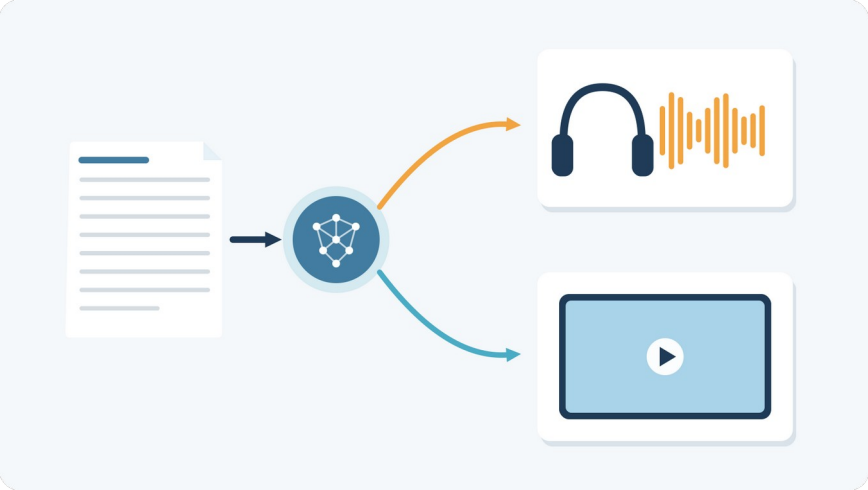
Short audio and video formats fit well into vocational learning: they can be listened to on the way to work, replayed before a practical task, and can make procedures visible. The aim of this material is to show how AI can help teachers create such content – short podcasts, narration texts, video scripts, storyboards, explainer videos and subtitles – and how AI-generated video can support the explanation of concepts and processes. By the end of the material, teachers will be able to transform existing teaching content into spoken or video formats, adapt explanations to different learner levels, choose suitable tools, and review AI-generated media critically for factual accuracy, safety, copyright and appropriateness.

Introduction

Producing a podcast episode or an explainer video used to require a studio, a camera operator and many hours of editing. Today a teacher can turn a worksheet into a two-voice audio discussion in minutes, generate a storyboard and narration for a demonstration video, or create a short clip that visualises a process which cannot be filmed. This opens new possibilities – but it also shifts the teacher's role: less time is spent on production, and more on selecting content, directing the tools and checking the result.

From text to audio and video

Most AI-supported media production starts from existing, checked material: a lesson text, a worksheet, a technical description. The workflow is similar for audio and video:



The same checked teaching content can be transformed into audio and video formats with AI

1. **Select** a focused piece of content (one concept or one procedure).
2. **Define** the audience, level and purpose (introduction, revision, preparation for a practical task).

3. **Write the script** with AI support, in spoken style, then correct it.
4. **Produce** the audio or visuals (AI voice, own voice, slides, generated or filmed footage).
5. **Add** subtitles, a short summary and questions for self-check.
6. **Review** the final product before use (see the checklist below).

Audio: podcasts and narration

A language model can rewrite a written text into a script for listening: shorter sentences, spoken style, repetition of the key points, rhetorical questions and a closing recap. A useful prompt specifies the format precisely:

> **Example prompt for a podcast script**
> "Turn the attached text on refrigerant handling into a 4-minute podcast script for second-year HVAC apprentices. Use a dialogue between an experienced technician and an apprentice. Use everyday language, explain each technical term once, include two safety warnings, and end with three recap questions."

A two-voice dialogue makes explanations livelier and easier to follow

- **Source-based audio summaries:** in Google NotebookLM, teachers can upload their own sources (texts, PDFs, slides) and generate an *Audio Overview* – a podcast-style conversation between two AI hosts that is based on the uploaded material. It is available in more than 50 languages, including Hungarian, and the focus and length can be adjusted.
- **Text-to-speech:** services such as ElevenLabs or the voices built into office and learning platforms can read a checked script aloud in natural-sounding voices and several languages.
- **Own voice:** for many purposes the teacher's own recording, based on an AI-assisted script, remains the most authentic solution.

Keep episodes short (3–7 minutes), focus on one topic, and publish the script or a summary alongside the audio for learners who prefer reading or need accessibility support.

Video: scripts, storyboards and explainer videos

For video, the most valuable AI support is often not the generation of footage but the planning. Ask for a **storyboard**: a table of scenes with the visual, the narration, on-screen text and duration for each scene. The storyboard can then be produced in different ways – filmed in the workshop with a phone, built from slides with narration, or partly generated.

A storyboard breaks an explainer video into scenes with visuals and narration

- **Narrated slide videos:** NotebookLM's *Video Overviews* turn uploaded sources into narrated, slide-based explainer videos (available in about 80 languages); presentation tools can also export slides with narration as video.
- **Generative video models:** tools such as Google Veo (in Gemini and Flow), Kling or Runway create short clips from text or image prompts. They are useful for illustrating a scene, a process or an atmosphere. The landscape changes fast: OpenAI, for example, discontinued its Sora video app in April 2026.
- **AI avatars** can present a script with a synthetic presenter – useful for multilingual versions, but they must be clearly labelled.
- **Subtitles and translation:** automatic transcription creates subtitles quickly, which improves accessibility and supports learners with a different first language. Check specialised terms.

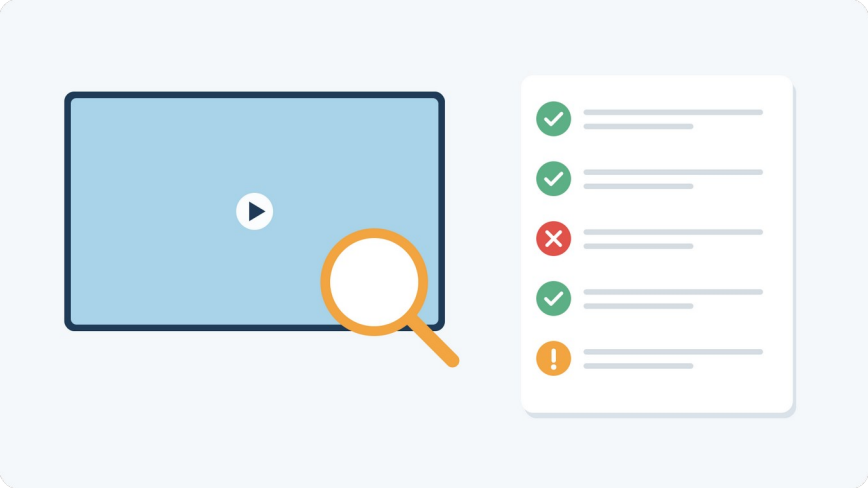
Video generation for explaining concepts in VET

Generated video can support vocational learning where filming is difficult, dangerous or impossible:

- **Visualising invisible processes:** current flow in a circuit, airflow in a ventilation system, heat transfer, what happens inside an engine cylinder.
- **Step-by-step demonstrations** as a preparation for a practical task, which learners can watch several times.
- **Safety scenarios:** showing what can go wrong (e.g. missing protective equipment) without putting anyone at risk – as a basis for discussion.
- **Motivation and context:** short scenes that place a topic into a realistic workplace situation.

However, generated video imitates the *appearance* of the world, not its physics or professional rules. It may show a tool held the wrong way, an impossible movement, missing protective equipment or a balcony without a door. For procedures that learners will actually carry out, real footage or checked diagrams remain the reference.

Limitations and teacher review



Every AI-generated video or audio needs a careful teacher review before classroom use

Recent surveys suggest that people can hardly distinguish AI-generated video from real footage. Initiatives such as the C2PA content provenance standard and invisible watermarks help, but watermarks can often be removed easily. This makes transparency and the teacher's review even more important.

Review checklist for AI-generated media

- **Factual accuracy:** are all statements and numbers correct?
- **Safety:** are procedures realistic and complete, is protective equipment shown correctly?
- **Level and language:** is the explanation appropriate for the learners? Are technical terms correct in the target language?
- **Copyright and likeness:** do the tool's terms allow educational use? No real people's faces or voices, logos or music without permission.
- **Labelling:** is it clear that the content is AI-generated? The EU AI Act introduces transparency obligations for AI-generated and manipulated content.
- **Accessibility:** are subtitles or a transcript available?

Takeaways for teachers

- Start from checked content and a clear purpose; AI accelerates production, not verification.
- Use AI for scripts and storyboards – planning is where it helps most.
- Source-based tools (e.g. NotebookLM) keep audio and video closer to your own material.
- Generated video shows how things look, not how they work – check procedures and safety.
- Label AI-generated media, respect copyright and likeness, and add subtitles or transcripts.

References

- Google (2025–2026): NotebookLM – Audio Overviews and Video Overviews. Google Blog and NotebookLM Help.
- Coalition for Content Provenance and Authenticity (C2PA): Content Credentials specification.
- Regulation (EU) 2024/1689 (Artificial Intelligence Act), Article 50: transparency obligations.
- Lengyel, Zs. (2026): Concrete applications for content generation. VITA training presentation.

Links

- NotebookLM: notebooklm.google.com
- Audio Overviews help: support.google.com/notebooklm/answer/16212820
- Video Overviews help: support.google.com/notebooklm/answer/16454555
- C2PA: c2pa.org

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