Future-proofing your videos for learning

In this guide

- Design principles for learning and engagement
- Checklist: Tell a story through the stages of learning

Design principles for learning and engagement

Unlike other types of video, educational videos are not meant to sell or entertain; they are intended to foster learning. There has been substantial research in the area of video design that can inform the planning and production of educational videos.

The table below synthesises principles for designing effective educational videos. Your learning design may require different approaches, but these principles are a starting point for most circumstances.

Design goal	Better learning & engagement take place when…	Recommendations
Simple ⭕	Extra sensory material is excluded.	Leave out sounds (including music), images, and effects that are not directly relevant to the topic.
	Cues are used to signal the organisation or structure of the material.	Use signals like highlighting, circles around relevant parts of the content, or short headings to help focus learners' attention.
	Graphics and narration are used more than text.	Minimise text on the screen, especially if you use graphics and narration at the same time.
	Related words and images are presented together.	Ensure that all images are relevant (not distracting) and any descriptions are presented simultaneously on the screen.
	Drawings or animations are used—they are more engaging than PowerPoint slides.	Introduce motion and visual flow, along with narration / lecturing.
Short ⏱	Material is presented in short segments.	Invest time in the planning stage in order to break content into logical sections.
	Learners are familiar with key terms before approaching new material.	Introduce key terms and definitions to learners before presenting the main theory or concept.

		Learners can control the pace of new information.	Provide opportunities for learners to stop, review, test their understanding, and resume when they're ready. Keep in mind that some learners will watch the video again for review purposes.
Real		A conversational or personal style is used rather than a formal style.	Use 'I' and 'you' rather than the third person when narrating. Informal settings like an office or outside may be more effective than formal production studios or lecture-style classrooms.
		A human is used rather than a machine generated voice. The more enthusiastic, the better!	Use your own voice whenever possible to create a connection with your learners. Practice bringing out enthusiasm rather than reading from a script.
		Learners are encouraged to generate their own explanations during learning.	Incorporate quizzes, commenting functions, or question prompts in videos.
		Tasks or problems are worked through before learners are asked to approach them.	When discussing a skill or technique, provide examples of completed tasks, or partial completions with hints, to scaffold learning.
		Dialogue and demonstrations are included rather than just monologues.	Incorporate questions, possible answers, and explanations from 'real people' (experts or learners).
		Misconceptions are addressed directly using dialogue.	Prompt learners to think about what they already know about a concept and explore some of those pre-conceptions in the teaching of the topic.
		A presenter's face is interspersed with slides or other graphics.	Invest time in post-production editing to intercut slides and video of the presenter.

Checklist: Tell a story through the stages of learning

Videos are an excellent way to enable learning through storytelling. The checklist below can be used to ensure you have an effective design for a video or series of videos that tell a story as well as guide learners through the stages of the learning process (from Koumi, 2015).

Hook	☐ Capture attention, sustain interest ☐ Shock, surprise, appetise, delight ☐ Create suspense, entertain, fascinate/captivate
Signpost	☐ What's coming later ☐ What's next ☐ Focus: what to look out for ☐ Rationale: why are we doing it?
Facilitate thinking & engagement	☐ Pose questions ☐ Encourage prediction ☐ Establish relevance to personal life
Enable knowledge construction	☐ Words that don't duplicate images ☐ Pause so that learners can contemplate ☐ Invent visual metaphors
Sensitise	☐ Use a consistent style ☐ Personalise the learning leader (lecturer) ☐ Vary tempo to differentiate content
Elucidate	☐ Minimise density in words and images ☐ Alleviate cognitive complexity ☐ Make text readable and images clear
Reinforce	☐ Repeat key content from a different angle ☐ Provide more examples ☐ Compare/contrast ☐ Synergy between words and images
Conclude / consolidate	☐ End the section ☐ Summarise key points ☐ Connect the video content to other materials

Credits and references

The first table is modified from University of British Columbia. (2016). Documentation: Design principles for multimedia. Retrieved from http://wiki.ubc.ca/Documentation:Design_Principles_for_Multimedia. The table incorporates findings from:

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The second table is from Koumi, J. (2015). Learning outcomes afforded by self-assessed, segmented video–print combinations. *Cogent Education, 2*(1), 1045218. doi: 10.1080/2331186X.2015.1045218. Creative Commons Attribution (CC-BY) 4.0 licence.