USING VIDEO IN

INITIAL AND CONTINUING VOCATIONAL TRAINING AND DEVELOPMENT

CONTENTS

ABOUT THIS HANDBOOK

This handbook was created to promote the use of video in vocational education and training. The activities of the handbook are based on tried and tested practice in schools, colleges and businesses. This handbook should help you to use video in your teaching and to help your students to learn – whatever the level and sector.

Each chapter begins with learning tasks. The tasks require real activity and you will need some technical tools such as a smartphone or video camera, a computer and editing software. Some require working with a pair or small group. We encourage the users of this handbook to try out these tasks themselves. Those who are vocational teachers or trainers will probably get the most out of tasks by using them as learning activities with learners. We provide some advice on how you might adapt the tasks to different learning outcomes, contexts or types of learner. However, teachers will want to make further changes in relation to their own students and programmes.

If you are just beginning with this kind of activity, do not worry about the quality of your videos. The goal is not to produce commercial quality video. The goal is to get more out of videos and use them in a pedagogically sound way that actually helps you, your students and your colleagues.

After each learning task you will find a section entitled 'Things to consider'. This section explains the thinking behind the task and offers practical advice.

There are also some hints and recommendations regarding the use of technology. We do not go into details of every programme and application. The spectrum of tools, formats and software related to videos changes constantly; something that is available free of charge right now, might not be available one year later. Standards may change and tools become more or less widely available. We recommend searching for new and suitable tools, and trying out different ones to learn what suits you best.

This handbook is based the practical work, research and development of video pedagogy by Oulu University of Applied Sciences School of Professional Teacher Education and Swiss Federal Institute for Vocational Education and Training.

We encourage you to share your practice in video pedagogy with other vocational teachers. You can do this by checking out the European Training Foundation's (ETF) Video Pedagogy Platform and by joining the ETF video pedagogy community or simply by following on Twitter @vidpedagogy #videopedagogy

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USING VIDEO IN INITIAL AND CONTINUING VOCATIONAL TRAINING AND DEVELOPMENT

CHAPTER 1: GETTING STARTED: INTRODUCTION VIDEO

In this chapter we are dealing with very basics of working with video and audio. The goal of this handbook is to get you and your students making use of video pedagogy right away - so that you can learn through doing. The learning tasks will familiarize you to work with a video recording device, talking to a camera and sharing your video.

Learning task 1.1: Introduce a tool or a work item

Learning outcomes:

- Capture images effectively
- Explain a work tool to others using video

Get a video camera or a smartphone and film a tool or a work item that is often used in your profession. The target audience of the video is someone who isn't sure how that tool is used or how to get started with it. Your goal is to show them how it works. Before you start, look carefully at the item and decide in advance what you want to say about it.

If the item is small - place your camera near to it. If you need to show larger space - place it further back. If you need to show both the item and the background, you can alternate between wide and close shots by moving the camera further/closer or using the zoom.

As you film explain with your own voice what is seen and what is being done. Keep it short - 1 minute should be enough unless it is a complex item.

Variations

- Ask one student to record the video without audio and then ask a second student to add a voiceover.
- Specify the exact time duration of the video before shooting.
- Give a focus to the explanation, e.g. ask your students to identify hazards or to distinguish two variants of the same item etc.
- Create the voiceover in a foreign language.

Things to consider

There's a challenge in having people share their knowledge. Whether it is experience, skill or opinions - much information is lost or not really used or shared very effectively. Especially in the field of vocational education there is plenty of information that cannot be studied from books. This is why more experienced professionals and mentors are very important. Digital video helps workers and professionals to share their knowledge and skills - even if they are not working beside one another.

There is also a huge need for videos in different languages. Practices, tools and methods vary from one culture to another. An English language video made by someone in his or her own country isn't necessarily a good piece of advice all over the world. Videos can show and tell. The telling part can be done with subtitle, graphics and voice overs. Video can be fairly easily modified for different cultures, countries, languages and circumstances.

Example of introducing an item on video:

- [How to Use a Vernier Caliper](#)

Learning task 1.2: Ask for feedback

Learning outcomes:

- Give and receive feedback
- Evaluation of explanation
- Communicate using video

Show the video you have made to another student. Ask for feedback: can they see what needs to be seen and hear what needs to be heard?

Variations

- Show the video to a colleague, parent or to an employer.
- Based on what you have learned from the feedback, make a new video explaining another work tool.

Figure 1. You can use a smartphone to record video.

Usually, though, final videos are edited from several takes.

The feedback informs what the viewer actually sees and learns from the video. It is not unusual for the maker of the video to see more in the video than what the audience sees. The maker knows what the video is supposed to be about. It can seem very clear because our brain "fills in" the missing images or hard to hear parts of the video. Understanding the complete message of the video is harder for a viewer who doesn't know the thought process that went into the production of the video.

Things to consider

It is essential to get hands-on experience of learning with videos. Both making and viewing videos is important in order to appreciate the value of this activity. The teacher may like to create or provide an example in order to illustrate what is expected of students.

This task invites learners and teachers to look hard at tools or other work objects and to pick out what is important in general or in relation to particular issues, such as design, cost or use. Making a video provides a framework for a learning activity that includes research, organisation, communication and feedback. The task can be elaborated and adapted in many ways.

To save time it is possible to shoot a continuous video - so that there is no need for editing later.
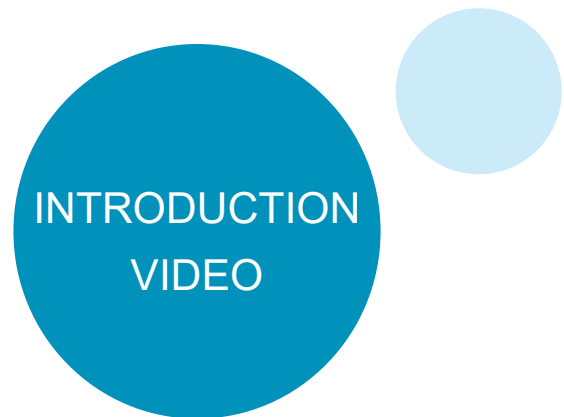
INTRODUCTION VIDEO

Figure 2. An example of framing and the use of a tripod.

CHAPTER 2: VIDEO LIBRARIES

In this chapter we look at existing videos that are relevant to a particular occupation. The task helps you to find videos about your own profession and collect them together into your own video library.

Learning task 2.1: Video occupations

Learning outcomes:

- Use video resources to explore occupations and professional life
- Share and evaluate video information

Go online and search for videos relating to your own professional field. Either use the search tab to select video in your search engine or use a complex search term, e.g. mechanical engineer + video or pastry chef + video + italiano.

Produce a short written review of the best five videos. In each case identify what it is about and what can be learned from the video. Score each video in terms of relevance to your learning programme and also on how much it motivates you to work in that profession.

Provide a link to each video. The whole review should be approximately 150 words long.

Variations

- Task a group or a class to identify videos relating to different occupations within a sector or to completely different fields.
- Task students to upload their reviews to a website or a community so that the reviews can be shared.
- Ask students to comment on one another's reviews online - in order to explore and record different perceptions.
- Task the students to build an archive of videos online - the videos can be classified in relation to occupational fields or "sub-occupation". Ask students to classify videos according to their theme or purpose, e.g. recruitment, selling, educational value, networking. Create a YouTube playlist of the videos found. Example: Lab safety playlist.
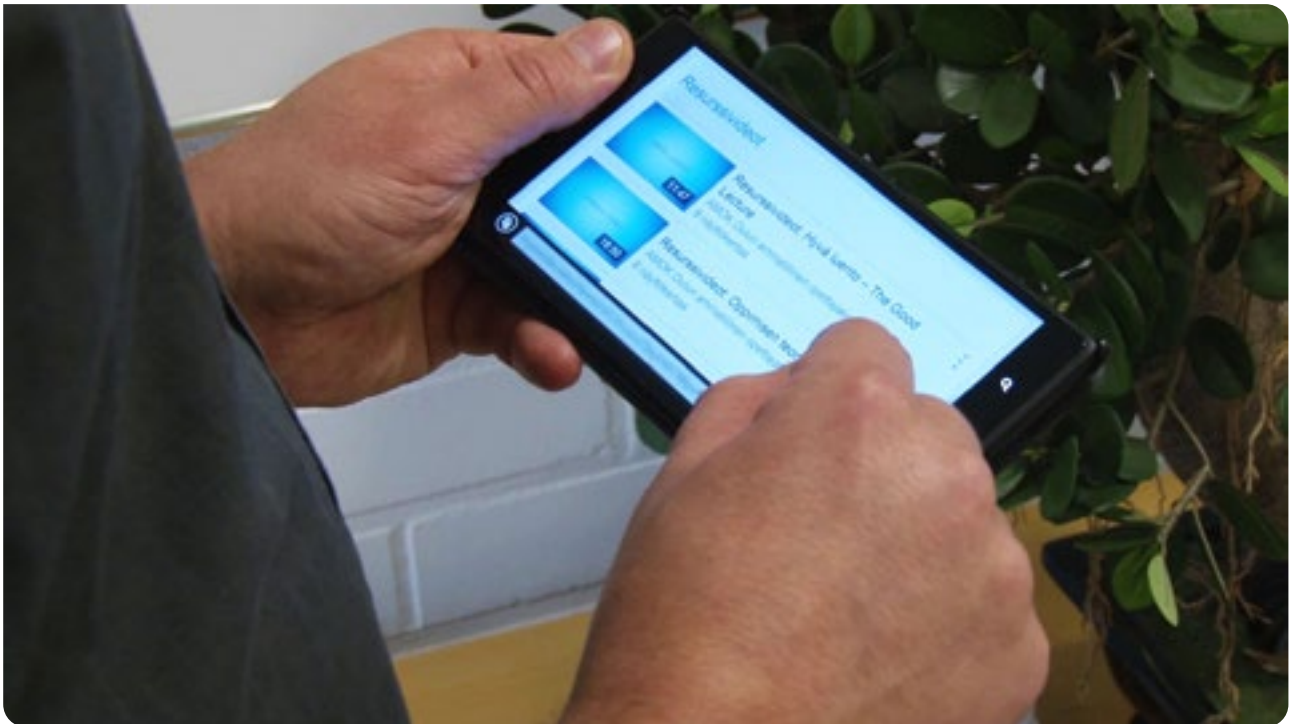

Figure 3. Browsing a playlist of videos.

Learning task 2.2: Video playlist

Learning outcomes:

- Make a playlist
- Share your playlist in social media or website

Search for several videos that feature examples of your vocation / profession / occupation. Collect the links to videos found elsewhere on a single online document or webpage or construct a playlist within YouTube. There are instructions on YouTube how to make playlists.

Share the link to your YouTube playlist or online document/website.

Things to consider

Traditional learning through research focuses on text. The internet not only offers abundance of text but also a wealth of video that enables learning about the professional world. Learners can be taught to search and retrieve relevant video material, to organise, evaluate and share it. This video material may then be retrieved in the future. It may serve as an input for other productions or it may offer a framework for interactions between teachers and learners that results in learning, e.g. critical discussion, explanation.

Video can have a strong emotional impact so it is particularly valuable when learning relates to values, personal decisions and identity. In the task above the focus is on understanding professional roles and activities which is relevant to the development of vocational identify and making occupational choices.

Reviewing video or blogging or tweeting about videos are other ways to engage learners in viewing and learning from video which is relevant to their programmes. A playlist is a popular way of grouping together video material that is connected. Building a playlist can be a collaborative task that extends learning.

Learners can be invited or tasked to curate and highlight material via their own blogs, to embed videos and to create playlists sharing the interesting videos they've found online.

VIDEO LIBRARY

Examples

- British Petroleum video library
- Gardening video library
- TED - Inspirational talks

CHAPTER 3: DEMONSTRATION VIDEOS AND HOW-TO VIDEOS

In this chapter we are dealing particularly with how-to videos and how they can serve as instruction or demonstration of a skill or as a demonstration of competence.

Learning task 3.1: Create a how-to video

Learning outcomes:

- Identify and communicate skills
- Provide an explanation to assist others to learn
- Use technology to make and share a learning resource

Write a simple script for a video that will show viewers how to perform a work task. Try to use only one sentence to describe each scene. Watch video examples online if you are not familiar with this type of videos. Example: How To Change A Bike Tyre.

Decide if you are going to speak on the video while recording or make a voice over narration afterwards. Organize the location and all the items you need for the video. Ask another person to film you or use a camera stand. Film all the scenes you need. Edit the video using simple editing software. Add voice over and titles. Test your video by asking someone to view it and give feedback.

Things to consider

There are plenty of YouTube channels for arts and crafts, physical exercise, repairing objects, gaming, household work and many more. For vocational learning the most valuable videos are those that are directly linked to a particular profession and skills that have to be taught in vocational education anyway. One can find a lot of good demonstration videos about a common occupations like nursing. There are whole channels dedicated to single occupation. Big companies and machine manufacturers also provide help and support about their own products. You will also find channels that are created by one single professional who is willing to share his/her work and ideas.

However, some how-to videos are not very helpful. Quite often the problem is completely technical and

could have been solved easily. Paying attention how the camera is positioned and how image sizes are used to show details has a huge role. Also the quality of audio, titles and subtitles are essential for a succesful how-to video.

Editing is a part in the video production that can take a very long time. These days there is simple editing software available and if you haven't used them before you will probably find the best instructions online on YouTube or on the website of the company that's made the program.

Example of a simple free video editing software:

- Adobe Spark | Introduction

Example of a how-to video:

- How to use: Old Singer Sewing machine demonstration

Learning task 3.2: Demonstrating one's own learning or a skill

Learning outcomes:

- Recognize competence
- Demonstrate competence or skill
- Document learning and skills

Technically, this task is basically same as the one before but the is aim is different.

Choose which skill you want to demonstrate on the video. This time your goal is to show yourself as an expert. Use the curriculum of your vocational field. There you will find examples of competence areas and skills that a professional or student in your field should master.

Consider that someone viewing the video is assessing your expertise and the quality of your work. Target audience is therefore your teacher or perhaps a future employer.

Once you have created the video review it and assess if it shows you as a skilled person. Reflect upon your actions on the video and evaluate if you can tell, without a doubt, that you are competent in performing the skill on video.

Variations

- Make a video CV. Make video clips that portray your skills and you as a professional of your own trade. Show the video to your instructor or attach it to your CV.
- Evaluate the competence of another student by viewing a video they have made.

Things to consider

How-to videos are amongst the most popular videos online. How-to videos posted by individual users, professionals, schools and companies can be found on video sites such as YouTube and also on school or company websites.

Take a look at these examples:

- Makita Power Tools

- Kaynen Brown, Registered Nurse

In vocational education and training these videos are very useful. Since the same equipment, materials and methods that are used by professionals are also used by vocational students, the same how-to videos can be used in formal, non-formal and informal learning. How-to videos are replacing manuals and written instructions. Videos are more versatile than only text and still images in showing the process and the details of action. Smartphones enable people to watch a vast library of videos pretty much anywhere.

Whether you are on your own, at work or school you don't always have a person right there to help with everything you want to learn to do and maybe you don't want to bother them with every small question. From the perspective of the trainer, a video can save time and repetition.

How-to videos can also show the model and the quality of a single company. How-to videos can be used make sure that all the employees know the standards and the working methods required at the company. These videos help new employees and they make sure that everyone working for the organisation has access to the same model and learning material.

In competence-based education students need to show and prove their competence. A student cannot prove his competence and and have her skills assessed only by writing or telling about it. The skill demonstration should be as real as it would be in working life. Video is a great tool for documenting competence and skills that are demonstrated at the work, for example.

Example of skill demonstration on video:

- Medication administration checkoff

HOW-TO VIDEOS

Figure 4. A screenshot from the how-to video Video camera instructions Sony HDR AX2000.

CHAPTER 4: INTERVIEWING A PROFESSIONAL

This chapter deals with learning from other professionals by interviews, and how to address demanding circumstances.

Learning task 4.1: A video interview

Learning outcomes:

- Set up, plan and conduct a professional interview
- Video and communicate the perspective of a professional
- Document learning and skills

Plan the questions. Prepare simple questions that are easy to answer and are relevant to your study programme. Three to five questions are enough. Create specific and not too open questions to get good answers. Create a mix of more personal questions, e.g. "why did you choose this profession", and wider questions, e.g. "what is changing in your work?" One or two word answers do not create very interesting material. Let your interviewee know the questions beforehand and you can remind them to answer in a way that will permit you to remove your questions during editing.

Find a professional and interview that person on camera. Set up a place for an interview. The goal is to introduce a specific profession or a workplace.

Setting up the camera

In **Figure 5.** you can see the optimal placement of camera for an interview.

Usually the interviewee looks at the interviewer during recording (not at the camera). If the interviewee looks at the camera, the feeling of the interview changes. You may have to adjust the positions of the interviewee and the camera depending on look direction.

Record the interview

Ask your interviewee to talk to you, not directly to camera. You can stop the recording between questions if you need to. If your interviewee gets tangled with words, re-record that answer. Editing multiple takes is more efficient than editing a single long take.

Keep eye contact and react to the answers even if you won't be seen on the video. Your reactions make the interviewee talk more naturally.

Edit the interview

If you get answers that are clear without the questions, you can edit out yourself asking the question. You can leave your question in if it's needed or add the question as a title text on the screen.

Variations

- The learner may be tasked to interview a worker or an expert with the goal of obtaining information on a particular issue, e.g. Food Safety, or in order to evidence a distinctive point of view, e.g. the customer's viewpoint.

- Students might be tasked to interview individuals practising the same profession in different organisations and then, working as a team, to create a video that uses the video evidence to show that professionals may have a diversity of backgrounds and functions.

- A video blog can be made alone. In that case the maker simply talks to the camera and answers to the questions himself.

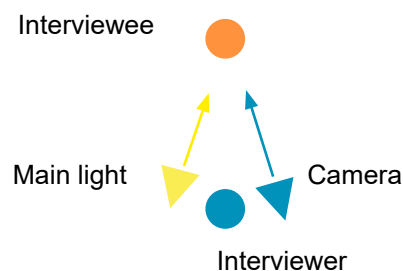**Figure 5.** Camera position in an interview setup.

Things to consider

Interviews are a great way of getting an insight into a profession or a business. Videoing professional interviews also supports other learning: how to plan what to find out; how to approach people; how to talk to people; how to communicate. Video motivates both the learner and the professional to take the interview seriously.

In vocational education the learning should be linked to working life as much as possible. The most obvious way to accomplish this is to go to the actual workplace and cooperate with the professionals who work there. Interviews are a good way to show that you appreciate the insight and knowledge of the professionals. It is also a simple way to make contacts and build networks. Setting up an interview forces you to prepare. It sets an agenda and creates a common task.

Video interviews are a tool to for learning through research. However, they are also a tool to develop communication skills, teamwork skills and reflection. As an internal tool for companies, the video interview helps us to share information on different professionals in a personalised and engaging manner. Video interviews can contribute to careers education and to induction for trainees. Understand how organisations and individuals present themselves can contribute to a critical understanding of image and identity.

Many professionals are happy to share their thoughts but they may have doubts about letting themselves be video recorded.

To gain consent you will need to explain the purpose and the audience for the video. Employees may need permission from their superiors. Interviewees may want to sign off the finished video or suggest edits. Consent is essential and it is OK to refuse consent. On the other hand, there are many professionals who value the chance to describe their own work and to perform on video.

Example of a simple interview:

- 5-Star Hotel General Manager - "Career Perspectives"

The video also gives an example of challenging lighting. Notice how the light direction effects the darkness of the image.

Learning task 4.2: Filming in challenging locations or situations

Learning outcomes:

- Understand safety and limitations of filming in certain places
- Consider privacy and copyrights

List different locations or situations that are common in your profession.

Find out what limitations the context and the physical surroundings of your profession may cause for recording. For example, when filming road surfacing (or laying asphalt), the noise from traffic and the machines might be extensive. For showing how to use a crane, the cameraman might have to climb to the top of the crane. Even an educational setting in a classroom might be very noisy or badly lit. Each environment poses its own problems - most of which can be overcome with some careful planning.

Find out what kind of permissions you might need for filming and publishing your material.

Get to know what kind of tools enable getting video and audio in a challenging situation.

Variations

- Students could be tasked to write a letter to an employer to explain how they would carry out filming on the business premises in order to produce a video that raises the public profile of the company.
- Student groups could be asked to interview various workers and experts in actual work surroundings, creating a set of interviews linked together by trade.

Things to consider

Even if you can manage all the scheduling issues and find the right person for the interview, it can be difficult to record in certain locations. Obviously video shouldn't be used in a place or a situation if it poses a safety hazard. You might bump into issues such as dust, heat, cold or moisture that can be harmful for smartphones or other recording devices. Sometimes you might not have enough physical room to film or there's way too much noise in the background. There are waterproof cameras and other kinds of protection available but safety should always come first. You may be asked to wear safety equipment, such as helmets and safety boots. Some factories or laboratories do not allow their premises to be recorded at all. If you are around hazardous materials or on a construction site, you might need to move away rather than stay at that place.

If you need to have your hands and senses focused on something else, on cooking for example, then the camera should be operating automatically or by another person.

The biggest challenge of filming is often getting permission. There have been legal cases when video material has been recorded and published without proper permissions! Locations such as schools or kindergartens are challenging for filming because you need permission for recording and publishing from a legal guardian of every child. This might mean a lot of work or it may mean that you simply cannot film in this location. It is worthwhile to prepare a permission sheet. If there are people who do not want to appear on your video in any way you can consider this while planning your video shoot. You will find a link to an existing permission slip at the end of this chapter.

Copyright laws have to be taken into account as well. Potential copyright violations include the use of recorded music or other video material. This is important if you intend to publish your video, for example, on YouTube.

Some organisations like hospitals do not generally allow filming whilst in others, such as a workshop or a design studio, there may be health and safety or commercial issues. Some people and organizations simply want to control their media presence. It is critical that video makers discuss their plans and gain agreement with participants.

An example of a simple video combining vlogging, interviewing and some challenging locations:

- Workshop Tour with the Build Team - Marble Machine X #50

VIDEO INTERVIEW

Figure 6. Standing interview setup. A screenshot from the video EDIT2015 – Educational Video Challenge.

CHAPTER 5: ACCESSIBILITY OF ONLINE VIDEOS

This chapter deals with subtitling a video, uploading it to an online platform and making sure that the videos are accessible.

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Learning task 5.1: Create subtitles on a video

Learning outcomes:

- Creating subtitles on a video
- Uploading a video onto YouTube (or equivalent platform)
- Providing instructions to carry out a work task

View a video which demonstrates how to carry out a work task. Analyse the action and prepare short and clear subtitles that you can add to the video to clarify what is to be done and to address possible misunderstandings. Test out these instructions to be sure that they make sense. Then using an editing tool add the subtitles to the video and upload to a video platform.

Additional instructions

Use your Google account. If you do not have one, set up a new account. A Google account is free and will allow access to several Google's applications and platforms, such as YouTube.

Upload the video you have made to YouTube. Use your YouTube channel. If you do not have one, create a new channel.

If you do not have your own video available you can create subtitles for other people's videos too. In this case you have to find a YouTube video that you can translate and provide subtitles for it.

Make subtitles for the video. Follow the instructions and thousands of youtubers.

Variation

Create subtitles in other languages. Subtitling in foreign languages makes it possible to share videos between countries and communities.

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Things to consider

There are many videos available online but not necessarily in your native language. Especially in the vocational field, much video uses only English. Subtitles are also helpful to make sense of what is shown and to demonstrate understanding.

Accessibility issues are also a concern for those who have disabilities. Sometimes sound might not be loud enough or visual imagery is too small or doesn't have enough contrast. Using subtitles can help to increase access to training resources.

There are also limitations and constraints caused by legislation and regulations in many countries. Not all of the online material can be accessed from anywhere. There are limitations set up by local policy makers and also by property owners. With online videos, the size and quality of the video might be an issue as well. If the online connection is poor or if there are connection costs this will limit access.

In the recent years technical developments have enabled accessibility. For example, companies like Microsoft and Google offer tools that provide automatic subtitles and translations into many languages can be generated automatically and in live situations and then later edited. This saves a lot of time and manpower.

Example about accessibility of online content:

- YouTube Accessibility: Publishing Accessible Content

Figure 7. English subtitles on Finnish language educational video Osaamisen opettajan jäljillä | Seeking for Competence.

SUBTITLES

CHAPTER 6: TRIGGER VIDEOS

This chapter introduces trigger videos which may be used inside and outside of the classroom. The trigger video is designed to prompt a learning activity, e.g. a discussion, problem solving, a case study.

Learning task 6.1: Learning with trigger videos

Learning outcome:

▪ Find a suitable trigger video and use it to "trigger" discussion

Do some research and look for videos and films that relate to your profession. Plan a couple of topics or questions that could be discussed after watching the video. Watch the video(s) and facilitate that discussion with a pair or group.

Variations

▪ Flipped classroom - ask the students to watch the video at home and then lead the discussion in school.

▪ Task students to find a suitable video and then to facillitate the discussions in groups.

The following examples could be used to trigger discussion and reflection:

▪ Reflect on your own practise after watching the video The Value of Practice Reflection.

▪ Discuss the safety of your workplace based on the ideas brought up by the video Safety Videos - 10 Commandments of Workplace Safety.

Things to consider

In this context trigger video means a chain of events or actions triggered by a video. Trigger video is aimed to start or lead into a structured activity after watching the video or a part of the video. The goal of the video is to provide initial thoughts or background for a discussion. Maybe the viewer is expected to do something practical after viewing the video. It depends how the video is used and how the following activity is designed.

Whereas an instruction video or a skill demonstration show a model for a very specific activity, trigger videos seldom give detailed directions. The reactions and activities that are

triggered by the video may vary. They may be specified or they may be left open to the teacher or the learner. The video might challenge the viewer to change the way they work or think.

Any video can be used as a trigger video - a movie, a piece of news or documentary, an instructional video. Trigger videos are more about how they are used than who made the video and why. Still, there are videos that are produced specifically to trigger activity - how-to videos are very clear examples of this. Some videos only state the theme and the questions can be dealt with after watching the video.

Here are some examples from the world of cooking and restaurants and ideas how they could be used as trigger videos:

▪ Watch a film such as The Chef, 2014, directed by John Favreau or Jiro Dreams of Sushi, 2011, directed by David Gelp. Use the film as a trigger to discuss the ethics or value and meaning of your profession.

▪ Out of ideas for a dessert? Make your own version of one of these 25 Easiest 1-minute desserts.

Figure 8. Trigger video AMOK Skits - Digital Teacher.

TRIGGER VIDEOS

CHAPTER 7:
SPECIAL INTERESTS: INTERACTIVE CONTENT AND VIDEO MATERIAL

This chapter deals with the next generation of video technologies in education, such as VR technology and 360 videos.

This chapter doesn't provide a learning task but teachers are encouraged to seek out more information on the ideas introduced here. There are plenty of examples available online and there is no need for initial investments.

New technologies are emerging every year. Some innovations are here to stay and others may never catch on. However, it is possible to learn from ongoing innovation as well as from established practice. Testing these technologies may provide an additional learning opportunity for a specific vocational field. Trade shows, IT shops and tech related events often provide a chance to test out the new technology.

H5P and interactive videos

H5P technology enables everyone to create interactive web video content quite easily. Neither the creator of interactive content nor the end user need to program the interactive elements. The user interface is simple. For example, with H5P tools one can drag and drop different interactive elements on top of a YouTube video. User does not need to use the YouTube interface or edit the video.

https://h5p.org/interactive-video

Most online videos are relatively short and the longer ones can be easily skipped. This makes it more difficult to trigger actions with a video. This is where H5P tools are handy. With H5P tools you can for example have the video paused and a set of questions are prompted at a certain time point on the video. The viewer cannot continue the video until answering correctly to the questions. This will make the viewing process more interactive and ensure at some level that the viewer is dealing with the content of the video and reacting to it actively.

360 video

There are many cameras that enable the user to record a 360 degree view around them. 360 videos can be published on YouTube. 360 videos can be viewed with a virtual reality headset or a simple Google cardboard box with a modern smartphone inside. Most of the recent smartphone models allow viewing of 360 videos. You change the view you see in the video by turning the smartphone. You can also watch 360 YouTube videos on a normal computer monitor. You change the view angle with W, A, S, D keys or by dragging with mouse on the video.

This kind of technology offers interesting opportunities. 360 camera records everything around it and later, while watching the video we choose what direction we want to look at. This is used for surveillance purposes but it could also be used to investigate work spaces or diagnose problems.

Another example is using virtual tours. We can virtually go to places that are otherwise out of reach. Maybe it is another geographical location or hard-to-access working environment like an oil rig or underground mine. A 360 view can convey visual information the sense of space. And perhaps in the near future, more devices will be controlled virtually from a distance - there are already some well known applications with drones.

An example of 360 video:

- Toyota VR / 360° Factory Tour

Hypervideo

While there is no single definition of hypervideo it is easiest to describe it as a parallel term for hypertext. Where hypertext is an hyperlinked interactive element, hypervideo is video material with interactive links or triggers that allow embedding and linking different elements or applications on a video. One can have for example hot spots, social media handles like Twitter, element tracking, picture in picture or downloadable files attached on a video.
There are a lot of similarities with H5P technology and YouTube already allows floating links on their videos.

Figure 9. 360 video A Typical Lesson – 360 Degree Video in Education.

The widespread applications are probably still to come. You can get the idea by looking at 360 images on Google Tour Creator and even create your own content with it.

Example of hypervideo created with iVideo. education:

▪ Gestione cliente

Register to start using iVideo.education for free.

Augmented and mixed reality

Video is only one element of augmented and mixed reality technologies. When we mix virtual content with physical reality, by viewing through Microsoft Hololens screen or something similar, we can view a layer of instruction video on the top of the actual, physical world. There are already applications where a trigger in the physical space or object can signal that there is added virtual content related to a specific place or object. Perhaps the most well known case is the QR-code. A lot of instructional video or augmented reality content is already shared this way.

The applications of AR (augmented reality) / MR (mixed reality) / VR (virtual reality) / XR (extended reality) technology are exciting. Imagine that you can open the hood of your car and through a

screen you are wearing you see the engine with text titles telling what is what, animated instruction of different engine parts and a guiding voice. This is the kind of AI (artificial intelligence) that will help a lot of people manage tasks that would normally require a lot of time and training or expensive demonstration equipment.

Example showcasing Microsoft Hololens:

▪ Microsoft HoloLens: Mixed Reality Blends Holograms with the Real World

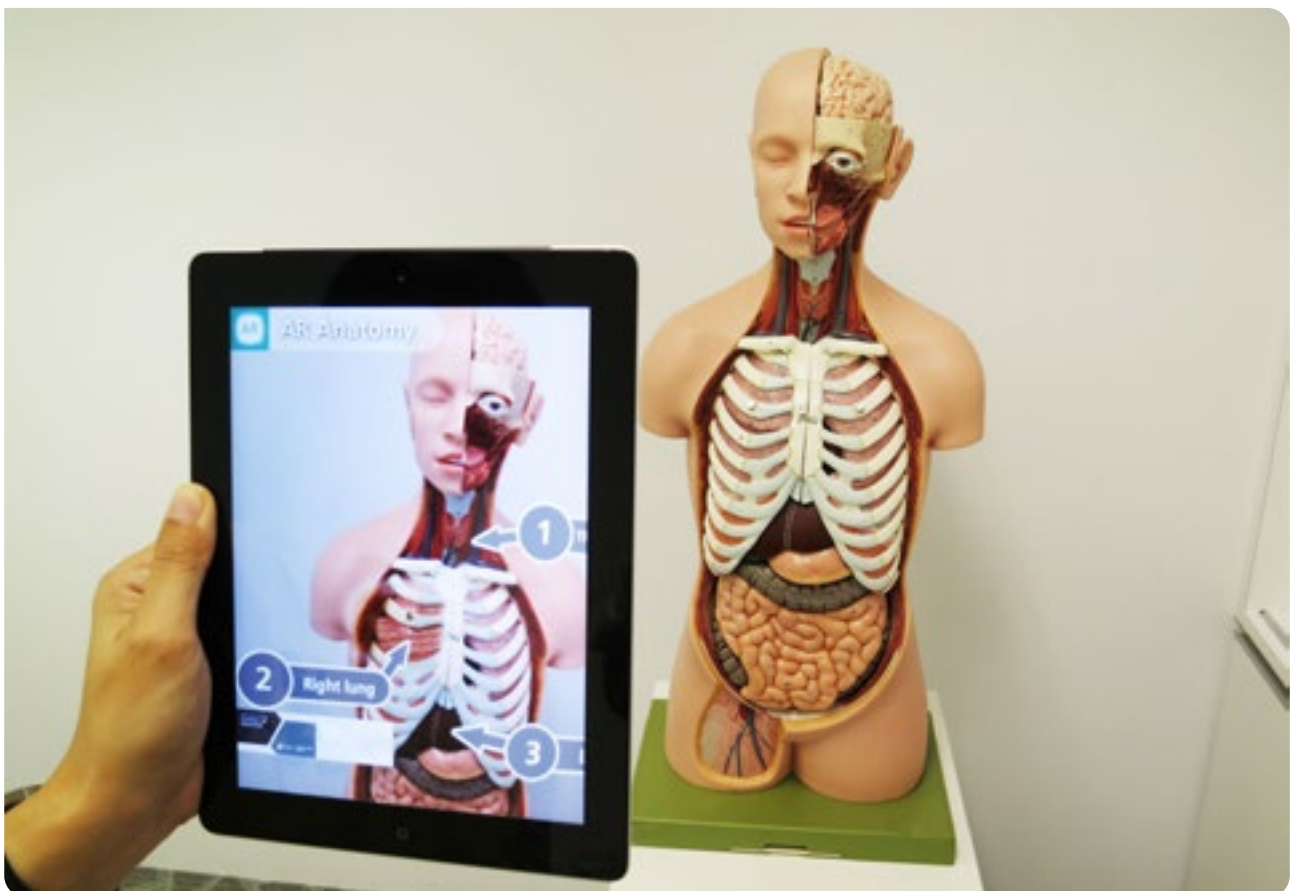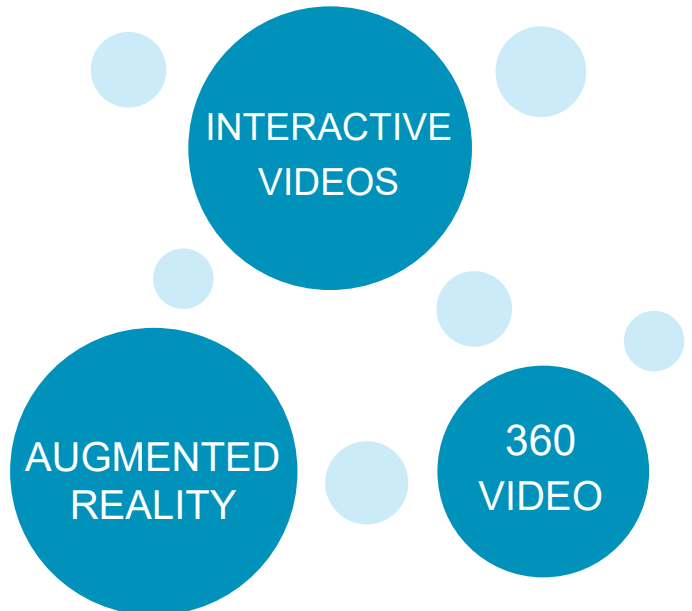INTERACTIVE VIDEOS

AUGMENTED REALITY

360 VIDEO

Figure 10. An example of augmented reality viewed on a tablet. Image from pixabay.com.

Where to find out more

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