A guide for making videos

Bachelor Earth Sciences

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Preface

The making of videos is something that can be daunting at first. However, with the guidelines stated in this document and some practice, everyone can learn the skills to make a professional looking video. Throughout the Bachelor's program of Earth Sciences, there are various moments during which you can train and show these skills. Videos can be a crucial and easy way to get your message across, not only to the general public, but also to your peers.

This document aims to provide concise guidelines and instructions for the preparation, recording and editing of scientific videos, with examples of do's (in green) and don'ts (in red). Videos can take the form of a knowledge clip, animation or a narrative video, which all share some basic general 'rules', but feel free to be creative and deviate (somewhat). Students are encouraged to use this document to structure and evaluate their videos. For teachers, this document may be useful to give consistent instructions, feedback and grades. Please note that all instructions should be interpreted as guidelines and not as absolute laws; because videos are a creative outing, feel free to be creative and deviate somewhat from the stated guidelines. In case you have ideas that clearly deviate from the guidelines, it is advised to consult your supervisor. All guidelines come together in a rubric at the end of this guide. Using this rubric, you can see if your own creative idea follows the guidelines.

This guide builds on the Guide for Scientific Writing by Marcel van der Perk, input and feedback from Joris Veenhoven from Educational Consultancy & Professional Development (Onderwijsadvies & Training UU), Henny Ram and Martin Cohen from the university's FSC AV media and from lecturers and professors of the Bachelor's programme of Earth Science at Utrecht University.

Elisabeth Addink and Ewoud Cornelissen 2021

1. Introduction

1.1. Why make a video?

Scientists make videos to communicate their research results and findings with peers, students and the general public. This way information can be shared in an engaging way that is understandable to everyone. Also, some new processes may be hard to interpret from a written document alone, a video can help eliminate this problem. However, a video alone is most often not enough to communicate your scientific findings, so a video is often complimentary to a written document. For guidelines on scientific writing, please refer to the guide for scientific writing of the Bachelor Earth Sciences.

1.2. Types of content

There are three main types of content that can be distinguished for the making of scientific videos: a knowledge clip, narrative video or an animation. The three are equivalent, share most of the same basic general rules of video making and are used to convey your message. However, they also differ in some respects which will be highlighted below. Which type of content you choose mainly depends on the message you are trying to get across, your targeted audience and your assignment.

1.2.1. Knowledge clip

A knowledge clip is a short video of 5 to 10 minutes that deals with one specific topic and where the presenter talks directly into the camera. The presenter is limited to talking into the camera, often behind a desk with a medium shot. This makes it very clear for the viewer, but it is also easy for them to get distracted and harder to keep your audience engaged. To avoid this, the use of graphs, animations and pictures in your knowledge clip is recommended.

Utrecht University has a couple of DIY (Do It Yourself)-studios across different buildings where you can record and edit your knowledge clips. For more information on DIY-studios and manuals on how to use the software, please refer to the website of Educate-IT¹. For an example of a knowledge clip, refer to the YouTube channel of the university, or check out this video².

1.2.2. Narrative video

A narrative video is a type of video you are probably most familiar with, e.g. a news report, explanatory video. It tells a story with multiple shots and angles and can be of any length. This type of video is often regarded as the most scientific, as specialised techniques and theories can be better discussed. For examples on scientific narrative videos, please refer to the website of JoVE³, which is a platform where scientists can publish and review scientific videos.

1.2.3. Animation

An animation is best in place when your subject calls for visualisation and can be defined as any short video with drawn people, objects or text. The subjects most often used for animations include procedures, narrative themes and complicated ideas. Of the three types of videos mentioned here, animation is the least scientific one. It is most commonly used to explain something briefly and engagingly, so be careful that your information is not too specialised or detailed. An animation can support but not replace a full written article. Despite this, it is an effective way to get your message across in a brief and concise way.

To build your own animation, Utrecht University has access to a number of Vyond accounts, which is an online platform where you can create your animation. For more information on Vyond and

¹ <u>https://educate-it.uu.nl/en/knowledge-clip/</u>

² <u>https://youtu.be/flTEn3pdrjw</u>

³ <u>https://www.jove.com</u>

manuals on how to use the software, please refer to the website of Educate-IT¹. For an example of an animation, refer to the YouTube channel of the university, or view this video².

1.3. Legal

When creating a video there are a few legal formalities that you must consider. For example, you are not allowed to copy the work of others, and you must get a written statement of agreement of everyone that is clearly visible in your video. The different aspects you need to consider are elaborated below.

<u>Right of Publicity</u>

The right of publicity (in Dutch: portretrecht) implies that everyone who is clearly visible in a picture or video should grant permission to publish it in one form or another. Everyone that appears clearly visible in the picture or video must sign a document, the model release, where personal or privacy rights would otherwise be infringed. The document should also include the purpose for which the recording may be used. For example, just for this particular video or any video in the future.

DO .							DOI	N'T
٠		have	signed	model	releases	of	•	infringe personal or privacy rights by
	ev	eryone	that is cl	early visi	ible in fran	ne		not asking for a signed permission

<u>Copyright</u>

During the making of your video keep the copyright of images, videos, sounds and music in mind. Copying the work of others in your video prevents the ability to share your video outside of personal use. When searching for material, always check if it is free-to-use, needs crediting or if it is copyrighted. If the material needs crediting, do so in the credits at the end of the video or put the credits in the corner of the frame. In case your video does not have a credit sequence, put the credit as a small text in the corner of your video when using the credited material. For more information on copyright and a list with license-free visual material please refer to the website of the Copyright Information Office³.

DO	DON'T
• use license-free or your own material.	• copy material without checking for
Give credit when this is due	copyrights

<u>Plagiarism</u>

Plagiarism encompasses copying of someone else's work or ideas without proper reference and present it as an own piece of work. It is considered as academic misconduct. To avoid plagiarism, do not literally copy any phrases from source materials (article, book, video, or report) and always give a proper reference to the original source from which you borrow insights and knowledge.

More information, further explanation, and examples of fraud and plagiarism can be found on the university website⁴ or the plagiarism.org website⁵.

¹ <u>https://student.educate-it.uu.nl/en/using-tools-yourself/</u>

² <u>https://youtu.be/IrQ j8GZ9fE</u>

³ https://www.uu.nl/en/organisation/copyright-information-point/copyright

⁴ http://students.uu.nl/en/practical-information/academic-policies-and-procedures/fraudand-plagiarism

⁵ <u>http://www.plagiarism.org/</u>

This also holds true for videos, as you should not remake a scientific video shot by shot that you found somewhere else. In practice, you are allowed to copy some images, but not a whole plot or scene from a video. On Youtube for example you are allowed to copy 3 seconds, but officially this is never allowed. If you do copy, it should be in proportion to your own video and allows acknowledge the maker. It is best to conduct your own research and come up with an original video concept.

D0	DON'T
 write in your own words and refer adequately to the literature direct your own video 	 copy entire phrases/paragraphs from existing texts copy a video shot by shot

Location

Only when you are in a public space, such as in nature or on the streets, you do not need permission to record your video.For any other spaces, such as office buildings, homes and any of the university buildings you need permission to record your video. To record in a university building it is best to ask permission at the information desk of the relevant building. For any person clearly visible in your recording, whether in public space or not, you need their signed model release.

DO	DON'T
 … record in a public space and check if everyone in frame has signed a model release … ask for permission to record in a private space 	checking if everyone in frame has signed a model release

2. Preparation

A proper plan of content and process of your video is essential. In most assignments a process report is required and contains the goal, audience, a synopsis, a script or storyboard, all legal requirements of your video and references.

2.1. Story telling

The most important aim of your video is getting your message across. When you have completed your story(board) and script, it is advised to review and check whether your story comes across clearly and contains all elements needed.

2.1.1. Getting your message across

First, carefully check the requirements of the assignment, such as a predetermined target audience or specific course instructions. Second, you will have to determine the message you would like to convey. Lastly, you will have to decide on the story that is going to convey this message.

Make sure that your topic is relevant to *your* targeted audience. When writing a scientific paper your audience consists mostly out of other researchers in your field of study. However, with your video this might not be the case, as it can be for a broader audience. Therefore, it is essential that you know what your audience will be. If your intended audience is not familiar with field-specific jargon, make sure to introduce all concepts and explain field-specific knowledge. Be clear and concise with what you would like to say and *do not* go too far off-topic.

Next, decide on the video style and work on a clear introduction – core – conclusion structure in your video. In the introduction you gain the interest of your audience and state what your video is about. In the core of your video, you give all the information needed. Finally, in your conclusion you recap everything, and it is important that you answer any questions that are left in your video.

DO	DON'T
 check the requirements of your assignment make sure that your topic is suitable to make a video on and that it is relevant for your targeted audience use a clear intro - core - conclusion structure 	 use field-specific jargon if you have a broader targeted audience have a script that is not limited to your subject leave any questions left unanswered in your conclusion

2.1.2. Script and storyboard

After you have come up with a plot for your video, it is time to make a script. In a *script* dialogue and action are written down. It describes what the viewer will see and hear in the video, but does not state emotions and thoughts of characters, as this is not something that is visible. Dialogue refers to what the characters on screen are saying. You can also state how the dialogue is presented, for example, character one shouts "hello!". Action describes everything that will move within the frame, for example "character 1 walks towards the door" or "a tear rolls down the character's cheek". The second example is the only way to state emotion within a script. Be sure that your script serves the message you want to get across and that it is limited to your subject. After completing your script check if it delivers the expected intro – core – conclusion that you came up with before.

The purpose of a storyboard is to get a general visual overview and it is somewhat like a comic. It builds upon your script by adding the frames that you are going to use for your video and is a great way to share your conceptual idea of the video. You can draw this scene by scene to get a clear overview of what your video is going to be like, you can also add specific props if you want. A storyboard template can be found at the end of this document.

DO	DON'T

 write dialogue, optionally write the way how this is presented write visible action within the frame have a concise script that is limited to your subject have a storyboard with the desired frames 	 include parts in your script that are not relevant to your subject have an overdetailed storyboard
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2.2. Technical

To make your video pleasant to watch, it is necessary to keep the following 'rules of thumb' in mind.

2.2.1. Composition and frame

Always try to have some sort of depth within your frame. You can achieve this by choosing the right composition, for example by placing objects in the foreground of your shot. This will make it more pleasing to watch your video. Also always try to keep your background as neutral as possible as it otherwise might distract the viewer from the content.

When framing your shot, there are multiple frames you could choose from. Below the most common frames will be briefly elaborated. For a more elaborate overview of all possible camera shots, including examples, please refer to the website of studiobinder¹. Always start with a wider shot before going into more detail.

Wide shot

A wide shot consists of your subject completely in frame, but not filling it. There should be significant space above and below your subject. This shot is usually used to give a better idea of the surroundings.

Medium Shot

A medium shot is the most commonly used and frames from roughly the waist up. This emphasises the subject more.

Close Up

A close-up is used when you want to emphasise a person or an object. In the close-up shot your subject fills the entire frame.

While framing, check if your subject is not to close to the edge of the frame, since the video may be cropped when viewing on different screens or platforms. Also, make sure that the person does not look directly to the border of the frame, but that there is space between the subject's face and the border of the frame, as illustrated in the figure below.



Figure 1 Framing your video (source: https://mindymcadams.com/tojou/2008/how-to-shoot-video-interviews/)

DO... DON'T...

¹ <u>https://www.studiobinder.com/blog/ultimate-guide-to-camera-shots/</u>

2.2.2. Movement

Movement in your video can make it more engaging. However, too much movement is distracting, so try to strike a balance. In general, there are three types of movement. The first movement is when you turn the camera horizontally from one side to the other, called a pan. The second movement is similar to the pan but vertically, so from the top down, called a tilt. When you move the camera as a whole in a vertical axis, it is called a lift up or down. The third movement is zooming in or out. Whatever movement you choose, try to keep it as smooth as possible. Shaky video can cause motion sickness for some viewers.



Figure 2 Camera movements. (Source: https://www.videoclubimpuls.be/filmcursus/camerabewegingen.html)

During movement or changing frames, always keep the axis in mind. When, for example, you are recording a conversation between two people you can draw an imaginary line between the two subjects. Movements or frame changes should not cross this line as it is confusing for the viewer and makes it unpleasant to watch.

DO	DON'T
• strike a balance in the movement of the camera	cross the axis

2.2.3. Continuity

Continuity is quite simple and can be divided in two aspects. First, when switching between frames of the same person make sure that there is a noticeable difference between the two frames. A difference that is too small, called a jump cut, looks wrong and is often interpreted by the viewer as a mistake made by the creators or as a stutter in the video.

Second, when filming, take into account the surroundings of the frame. For example, when filming outside make sure the weather does not change between scenes, e.g. if in the first frame there is bright sunshine, it should not be raining in the second frame.

When filming inside this also relates to furniture that moves or tv screens that show different shows during different frames. Also take into account personal appearances and clothes.

DO	DON'T
 … have noticeable differences between	 … have an incremental difference
frames … take into account surroundings,	between frames … have noticeable difference in the
personal appearance and clothes within	surroundings, personal appearance and
the frame	clothes within the frame

2.2.4. Location

A visit to your location before your recording day will help you choose the right scenery, which you could take into account when making your storyboard. Check if the location is not too noisy and that it fits the topic of your video. Furthermore, always check on location if everything in your frame is copyright-free. Most art pieces or something that is displayed on a computer screen can be copyrighted. An out-of-focus art piece or computer screen is not an issue. Finally, if filming on location, make sure that it is suitable for filming and that this is allowed, as stated before.

D0	DON'T
 try to visit your location before you start filming have computer screens or art pieces out-of-focus 	clearly visible in frame

3. Recording

Now it is time to record your video. While you are filming your video, regularly check your script to make sure that you are still following the plan you have set out. It is also advised to check your recordings, for example during breaks, to make sure that the sound, exposure etc. are good.

3.1. Technical

3.1.1. Setup

Microphones that are built into cameras or your phone are often of a lesser quality. Good quality audio from an external microphone is a significant factor in making your video more professional. External microphones are available at the FSC service point located in the Educatorium building. When you are recording whilst your camera is static, try to use a tripod or something else that can support your camera. This will improve the quality of your video and will make it more pleasant to watch.

3.1.2. Exposure

Without light there is no image. That is why exposure is very important in video making. Make sure that when you are filming you always have the right amount of light within your frame. Open curtains, switch on lights or, if needed, use extra lighting for the scene. Take the following three risks into account when lighting your scene:

- 1. *Overexposure*. If the object is overexposed, it becomes unnaturally white. A remedy for this is to light the background more so that it is more in balance with the subject. If this is not possible try to find another setting.
- 2. *Backlight.* This often happens when a smaller subject is placed in front of a bright background such as a window, the sun or a lamp, making the subject very dark. To avoid this, always have a light source light the subject from the front.
- 3. *Shadows*. Try to avoid these. If the subject is lit in such a way that it casts shadows on the background, change the distance between subject and background, or light the background to make the shadows disappear.

DO	DON'T
 have subject and background lighting in balance light the subject from the front have no shadows on the background 	 … overexpose subject … place subject in front of a window, the sun or a lamp … have shadows on the background

3.2. Tips for recording

Please take the following tips into account to avoid the risk of a recording becoming unusable:

- 1. If you have a wired microphone, make sure that the cable is free of any friction. Friction on the cable will lead to noise in the audio file, which will make the audio of your recording unusable.
- 2. It is advised to use a wireless microphone if you have one at hand. When using a lavalier microphone, make sure the cable is put behind someone's shirt to avoid friction on the cable.
- 3. Make sure that your subject talks directly into the microphone rather than away from it. This is especially important when using a lavalier microphone.
- 4. It is advised to record a few seconds before and after your shot/scene. These few extra seconds will make adding transitions and editing your video easier.
- 5. Tips on clothing: 1) small stripes will distort on camera; 2) a lavalier microphone and its battery pack need to clip onto your clothing, 3) overly bright clothing and reds could cause trouble focusing for the camera.

4. Editing

Editing software can differ greatly across different operating systems and software packages, that is why in this section only general rules and tips are given. Via MyWorkplace students have access to the editing software Adobe Premiere, but you are free to choose a programme of your liking. In case you are not familiar with Adobe Premiere, refer to the website of Adobe¹. For a more robust experience editing your video, a programme that is installed locally on your PC is advised, yet not necessary.

4.1. In general

While editing your video there are a few things you should keep in mind. First, cut your clip a second after the presenter has stopped talking and do not cut your clip too short to avoid unpleasant viewing. Second, in the software, make sure that volumes of your different clips are comparable to each other, otherwise the viewers will need to adjust their volume while watching your video.

D0	DON'T
• cut a clip a second after someone has stopped talking	stopped talking
level the volume of different clips	have different volumes between clips

4.2. Music

Music can be a powerful tool to make your video more engaging. However, it can also be counterproductive. Try to strike a good balance between the volume of the music and the other audio in your video. Also, the mood of the music should complement the mood of your video. Very upbeat music suits an upbeat video better than a more understated video. Remember to check the copyright when using music.

DO	DON'T							
 … have a good balance between the volume of the music and your video … have a mood of music compliments the mood of your video … use music free of copyright 	 … have the volume of the music overpowers your video … have a mood of music contradicts the mood of your video 							

4.3. Effects

The use of effects and transitions can help getting your message across. However, it should be kept to a minimum to not distract the viewer form your central message.

D0	DON'T							
• have transitions and effects that make your message clearer	 … have too many effects and transitions that distract the viewer from your message 							

4.4. Text

Text is as much a part of videos as any other visual element. It can be the most powerful when it is simple and subtle, whilst it can also be a statement on its own. Text in videos often serves an explanatory purpose, for example stating the name of the person in frame. However, be aware that it is not too distracting. Following the guidelines below can help you with that.

¹ <u>https://helpx.adobe.com/premiere-pro/tutorials.html</u>

If you have trouble finding a style for your video, you could always use the style of the university's corporate identity. To download these, please refer to the website of the university¹.

<u>Typography</u>

The most important rule of typography is that the typeface should match the mood, message and the type of your video. The right typeface will help convey the message of the text, while a typeface that is chosen wrong will distract from message you are trying to convey. As most videos will be of a scientific nature, try to steer away from very decorative fonts. If possible, it is advised to use the same font throughout the video to keep it easier on the eyes. If there needs to be a differentiation between two case uses of the text, try using thin or bold text instead of a secondary font. If you have trouble choosing a font, you can use the fonts of the UU corporate identity, Open Sans and Merriweather.

The font size is also important. Text that is too small becomes hard to read, especially on mobile devices. However, text can also be too large. There are instances when the text can be the most dominant element in a video, such as in the title of your video, but most often text should complement your video, not overpower it. Also try to limit the number of words on screen, as too many words will lead to a smaller font size and your message will be lost.

DO	DON'T
• have a typeface that matches the message of the video	message of the video
• if possible, use the same font throughout video	throughout the video
• have a font size that is readable, but not too big	 … have a font size that is too small or too big

<u>Placing</u>

Separate your text from the background with a colour that fits the mood of your video, while remaining complementary and in contrast to the image behind it. In case the image already contains many colours, you can overlay text in the lower third of a frame (often used to show the name of the interviewee in frame). They provide an anchor for text to separate itself from the background. Make sure that the text is displayed for twice the length it normally takes to read. Otherwise, it becomes hard to read and your viewer will miss it.

D0	DON'T
 have text is clearly visible through colour, a lower third or an overlay graphic have a colour in line with the mood of your video have text in frame two times the length it takes to read it 	 have a placing that distracts the viewer from the content have a colour of text that is not complementary to the video have text disappear too soon, or less than two times the length it takes to read it

<u>Credits</u>

In the credits at the end of your video you can start with the title of your video. State the people that have worked on the video, including your study program and/or course. Here you can also put the references of the articles or books that you used, as well as the content that you used that needs crediting. If you like, you could also thank someone or a company in the credits.

¹ <u>https://www.uu.nl/en/organisation/corporate-identity/guidelines/imagery/video-policy/video-elements</u>

5. Checklist

To check if your video meets the requirements, please check the rubric. A short general checklist, based on the rubric, is given below:

Please note that this checklist is based on technicalities and that your course may have additional requirements.

1) Plan of approach:

- The purpose of the video, what type of video will be used, and the target audience have been described in a clear and concise way.
- A clear and concise description telling what the video is about (synopsis) is given, which makes clear that the video:
 - Serves the purpose of the assignment
 - Is relevant to the subject matter and matches the requirements of the course or client.
- A script is given that outlines the core message of the video including all texts, actions and motions to be used.
- The script has been translated into a complete storyboard that uses images to convey how all crucial moments are to be filmed.
- All scientific sources for substantiating the core message and script are listed using the appropriate reference method.
- A clear overview of all needed permissions is provided, which covers the following aspects: model/extra release form(s), shooting on location, rights of publicity (model release), use of existing video and audio material

2) End product:

- The script and storyboard have been realised and the core message is convincing.
- The technical quality enhances the transfer of the content. Relevant aspects are (a) editing, (b) audio and image quality, (c) use of music and sound effects, (d) camera positions and movement and (e) use of text in the image.
- The video starts or ends with:
 - The title (fitting the core message)
 - Name of the authors and study programme/educational institution.
 - Mention is made of all used sources used (literature, video, audio etc.) in compliance with the corresponding rules and requirements.

6. Useful web pages

- Information on knowledge clips: <u>https://educate-it.uu.nl/en/knowledge-clip/</u>
- Example of a knowledge clip: <u>https://youtu.be/flTEn3pdrjw</u>
- Examples on narrative videos: <u>https://www.jove.com</u>
- Information on Vyond: <u>https://student.educate-it.uu.nl/en/using-tools-yourself/</u>
- Example of an animation: <u>https://youtu.be/IrQ_j8GZ9fE</u>
- Information on copyright: <u>https://www.uu.nl/en/organisation/copyright-information-point/copyright</u>
- Information on plagiarism: <u>http://students.uu.nl/en/practical-information/academic-policies-and-procedures/fraud-and-plagiarism</u> or <u>http://www.plagiarism.org/</u>
- Different camera shots: <u>https://www.studiobinder.com/blog/ultimate-guide-to-camera-shots/</u>
- Tutorials for the use of Adobe Premiere: <u>https://helpx.adobe.com/premiere-pro/tutorials.html</u>
- Corporate identity of the UU: <u>https://www.uu.nl/en/organisation/corporate-identity/guidelines/imagery/video-policy/video-elements</u>

7. Template for process report

Name:	 	
Topic:	 	
Audience:	 	
Goal of the product:		
Key message(s):		
Title:		
<u>Outline</u> Introduction:		

Core:	 	 	
Conclusion:	 	 	

Storyboard:

Title:										Page:
			 ,		 	 ,				
Scene No.	5	Shot No.		Scene No.	Shot No.		Scene No.		Shot No	6.
Scene No.	S	Shot No.	[Scene No.	Shot No.		Scene No.		Shot No	
						1				
Boorc	s						Get your free	storyboard t	template	s at boords.com

Your script should be handed in as a separate document.

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