Creating accessible videos

This guidance will help you improve the quality and accessibility of your video recordings. A better quality recording and the inclusion of accessibility features will aid all students’ attention and comprehension, but are particularly important for some disabled students’ access to learning, or for those studying in a distracting environment.

There is no need to aim for perfectly produced videos, but taking some time to establish your own recording set-up and routine that is comfortable for you, and makes best use of the space and equipment you have, will save time overall and provide a better quality learning experience. This guidance will cover:

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# Planning considerations

We recommend you get to know the [Panopto manual recorder](https://help.it.ox.ac.uk/replay/manual-recorder) software and explore the [introductory guides](https://help.it.ox.ac.uk/replay/training) that are available.

* **Pre-recording videos rather than livestreaming** is a preferred option for accessibility, as students in different time zones or with poor internet connections can access this option equitably. In addition, pre-recording is not subject to live technical problems such as loss of internet connection or unexpected sound or video problems.
* Enable students to [download recordings](https://help.it.ox.ac.uk/replay/exporting) (this is enabled by default) and allow access until the relevant assessments/examinations have been completed, following [current University of Oxford policy](https://help.it.ox.ac.uk/files/replaylecturecaptureservicepolicy30-07-2020pdf).
* Make available PowerPoint slides and other learning materials connected to the lecture as separate electronic files, as this will enable students to access slides for note-taking purposes and the alternative text for any graphs and images. This can be done within the [relevant Panopto session](https://help.it.ox.ac.uk/replay/exporting#Exporting%20PowerPoint,%20Keynote%20and%20PDF%20documents), although you may prefer to use Canvas or email.
* **Network connectivity** - use a wired direct connection to your network hub if possible. Alternatively, aim to reduce activity across your shared home network when recording.

# Sound quality

Good quality audio is the single most important factor in aiding comprehension and attention. It also improves the accuracy of automated captions and enables viewers to feel a better personal connection with the speaker.

To improve sound quality, consider the following:

* Carry out test recordings and check the sound quality by listening back with headphones.
* Use a good quality microphone. The Replay team has produced the following advice on [recording equipment for home or office use](https://help.it.ox.ac.uk/replay/equipment/home-office). Using a headset or a standalone microphone rather than the built-in microphone in a laptop is likely to improve the sound quality. If using a headset, position the microphone stem to the side of your face rather than close to your lips, as this avoids sound distortions.

There are many things that can be done to optimise sound quality with your existing equipment:

* **Location and minimising disturbances**. Select more enclosed, carpeted spaces, or those with plenty of furnishings to avoid sound reverberation as this has a big impact on sound quality (e.g. a spare bedroom or office with plenty of books rather than a kitchen or laboratory). Just before you record, close windows and doors to minimize external noise, set phones and notifications to silent and close down unnecessary applications.
* **Sit/stand at a consistent distance from your microphone**, and avoid turning away from it whilst speaking (a headset microphone can be beneficial to avoid this). Do not place your microphone close to your computer if there is significant fan noise.
* **Check microphone sound levels and recording quality** in your Operating System and within Panopto. Input levels should be high enough for the speaker to be clearly heard but not so high as to cause distortion in your recording. You can check that the volume levels are appropriate in Panopto in the ‘create new recording’ tab, in the ‘primary sources’ area. If the sound levels bar goes into the red zone while you are speaking, the microphone volume is too high. Ensure that the audio recording setting in ‘primary sources’ is set to ‘ultra’.

# Improving automated captions

Captions provide a way for people who are hearing impaired or otherwise have difficulty processing the dialogue to gain access to audio-visual material. Panopto automatically captions lecture recordings, and students have the option of viewing these by clicking on the ‘cc’ button within the media player.

Captions also benefit students with a variety of needs, such as those with visual impairments who cannot read slides clearly, and neurodivergent students (including those with specific learning difficulties or autism) who cannot follow audio content easily. Captions can also be useful for all students by giving flexibility to turn off the sound, and also as an aid to notetaking and clarifying terminology.

The accuracy of automated captions is dependent on specific features of the video itself, so to optimise the accuracy of captions, tutors can:

* Speak at a moderate and consistent pace, clearly and with a consistent volume.
* Follow the advice in section 2 (above) to ensure good sound quality, especially: using a good microphone, speaking at a consistent distance from it, minimising background noise and selecting the appropriate recording quality settings in Panopto.

For scripted recordings, the script can be uploaded to generate accurate captions. This can be done within the relevant session by clicking Captions> Import captions > Upload or request captions.

It is possible to [review the accuracy of automated captions](https://help.it.ox.ac.uk/replay/captions) and [edit](https://help.it.ox.ac.uk/replay/captions#Editing%20captions) or [export](https://help.it.ox.ac.uk/replay/captions#Exporting%20captions) these where necessary (for producing a transcript or for ease of editing in a text editor), and this can be especially helpful at key points of a lecture and for key terminology. The burden of putting in place an editing service for departments to ensure captions have high accuracy is currently being considered, but in the meantime, the Disability Advisory Service is ensuring that disabled students can gain access to manually edited captions as a reasonable adjustment.

# Describing visual content

Audio description provides an alternative to visual content for people who are visually impaired. It is only necessary to provide descriptions for visual material that is relevant for understanding the content.

If any significant meaning in your video is presented purely visually, for example a visual demonstration of how a piece of equipment operates, then an audio description is needed. For much visual content, the best way to handle audio description is to provide a full and explicit description within what you say in the main audio.

For example, ‘this chart shows that sales increased significantly, from 1 million in the first quarter of 2019 to 1.3 million in the second quarter’, is a full description of the visual information, but saying ‘you can see how sales were affected on this chart’ relies on the user being able to see. A key part of providing good audio description is to refer to objects explicitly, rather than using pronouns that refer to the visual content. For example ‘attach the small ring to the green end, which is the larger end’ rather than ‘attach this to the green end’.

# Video quality

Good quality video content can enhance the student experience by enabling learning content to be seen more clearly and with fewer distractions. Poor video quality can have a disproportionately negative impact on students with visual impairments and neurodiverse conditions.

* **Carry out a test recording and check video recording quality settings.** In-built cameras in laptops (especially on old machines) can provide poor quality images.
* **Check that your room is well lit** so that your face and other learning materials can be seen clearly.
* **Avoid having a window directly behind or beside you** as your face will be silhouetted. If your workspace is very near a window, closing curtains and switching on overhead lights or lamps can be helpful for diffusing light. Experiment with different lighting until you find the set-up that works for you.
* **Face the camera, positioned at or slightly above eye level.** This enables the presenter to ‘make eye contact’ and students to see facial expressions more clearly, recreating a sense of personal connection and aiding comprehension. If a built-in webcam on a laptop is used, place it on a stand to achieve the correct height. Any laptop support should be sturdy to avoid the camera shaking.
* **Avoid visual distractions** in the backgroundby choosing a neutral background for your recording (e.g. a relatively blank wall) and by avoiding highly patterned backdrops and clothing (these can seem to ‘dance’). Panopto does not currently support blurred or virtual backgrounds, although this is due to become available at the end of 2020.
* PowerPoint slides: use large font sizes, minimise the amount of text per slide, keep slide templates simple, use the layout options in PowerPoint rather than editing blank slides, and add alternative text to visual content. For full details, see these [accessibility tips for PowerPoint](https://www.ctl.ox.ac.uk/accessibility-teaching#collapse1852431).
* If screen-sharing, close down all unnecessary windows and [increase the size of your mouse pointer](https://mcmw.abilitynet.org.uk/making-mouse-pointer-larger-windows-10?utm_source=google&utm_medium=cpc&utm_campaign=Dynamic-Search-MCMW&gclid=CjwKCAjwiOv7BRBREiwAXHbv3Kax14YbtZIvznRdg3KIbkFiZkLJprWTz32GfOJFdkIvPaKg3dhdvRoCWZcQAvD_BwE). You may also wish to apply magnification to the screen so that students can see what’s displayed more clearly (Cntrl +).
* If you need to write out equations or draw diagrams during your lecture, using [electronic whiteboards](https://www.ctl.ox.ac.uk/electronic-whiteboards) or pre-prepared slides is preferable to recording a physical whiteboard or flipchart, as these can be more clearly seen by students on a recording.

# Adding structure to videos and interactivity

You can recreate some of the interactivity of face-face sessions, and aid student concentration, by:

* Keeping the overall length of videos no longer than the equivalent face-to-face session.
* Providing explicit pause points for students. This can be achieved by splitting lectures into shorter recordings of approximately 5-10 minutes with clearly defined themes. Alternatively, if making one recording, ask students to pause at specific points: to take a break, to reflect on a specific question, or to carry out a task.
* [Polling tools](https://www.ctl.ox.ac.uk/polling-tools) can be used to interact with students asynchronously or you can [insert quiz questions into a Panopto recording](https://support.panopto.com/s/article/How-to-Add-a-Quiz-to-a-Video).
* Detailed pedagogical advice on lecture recordings, including facilitating interactivity, is available in the [Flexible and inclusive teaching resource](https://canvas.ox.ac.uk/enroll/3YWHJD) in Canvas (see the Lectures>Ideas section).

# Captioning livestreamed events and other languages

* What do I have to do to provide captions for live-streamed events?

Automated captions are available to all during live Teams sessions by clicking on three dots icon and then ‘turn on closed captions’. Each individual user needs to enable this. Tutors should point out this functionality to students and encourage them to try it. Note that Panopto’s webcasting feature and Zoom do not support automated captioning currently.

Google Chrome has a new extension which provides automated captions on web-pages and there is a [video guide to turning the feature on](https://www.youtube.com/watch?v=DfXdSLPguX4).

Human captioning may be required as a reasonable adjustment for some students and the Disability Advisory Service can help make the arrangements for this, or provide alternative reasonable adjustments (disability@admin.ox.ac.uk). [Human captioning](https://support.zoom.us/hc/en-us/articles/207279736-Getting-Started-with-Closed-Captioning) is available in Zoom, via a meeting participant typing in the closed captions in real-time, or via integration with a third-party service.

Recordings of Teams meetings will not include the automated captions which appeared during the meeting. However, [recordings uploaded to Panopto](https://www.ctl.ox.ac.uk/recording-teams-meetings) will be re-captioned automatically.

* How can I provide captions if I teach in a language other than English?

Whilst Panopto's automatic captioning service is only available in English, it is possible to import captions in other languages from YouTube into Panopto. Videos first have to be uploaded to YouTube. There is [guidance on how to create the captions in YouTube](https://titaniumhelp.fullerton.edu/m/FAQ/l/498105-how-do-i-export-the-youtube-auto-generated-captions). The resulting caption file can then be downloaded from YouTube and [uploaded into the relevant session in Panopto](https://support.panopto.com/s/article/Manually-upload-Captions). [Screencast-o-matic](https://screencast-o-matic.com/), can also be used to caption in languages other than English, although note that the free version of this software restricts users to videos of 15 minutes and does not capture computer audio.

# Further Information

* Introductory guides to recording videos using the [Panopto manual recorder](https://help.it.ox.ac.uk/replay/manualrecording)
* More information and ‘how-to’ guides on the [Accessibility page](https://help.it.ox.ac.uk/replay/accessibility) of the Replay website
* The [best practice guide for using the Manual recorder](https://help.it.ox.ac.uk/files/bestpracticesforusingpanoptomanualrecorderpdf) advises how to reduce disturbances during recordings and distractions for viewers
* More information on [audio description](https://www.w3.org/WAI/media/av/av-content/#plan-description)
* [Oxford University Panopto Accessibility Statement](https://help.it.ox.ac.uk/replay/accessibility/statement)