

Best Practices - 360 Videos

Prepared by [Rob Theriault](#) MET, BHSc., CCP(f)

Immersive Technology Manager (retired)

Author of The Future of Education is Experiential ([U.S.](#), [CDN](#)). Follow @ [Bluesky](#), [LinkedIn](#)

Most VR educators and industry experts would argue that 180 degree and 360 degree video are not virtual reality. While they might be viewed in a virtual reality headset, most of these experiences are passive single player experiences with only three degrees of freedom (3DoF). While a 2D video is viewed on a flat screen and a 360 video can be viewed either on a flat screen or in a VR headset without distraction, the participant has limited agency.

180 and 360 videos are best experienced from a sitting position since any forward motion can cause motion sickness. Areas of interest for 360 degree videos in education include context based learning e.g. tourism, history, fitness, perspective taking and tutorials.

While 360 videos are usually a single player experience, some platforms, such as Engage, allow multiple participants to experience 360 degree videos together in VR. This is important in education as it allows the teacher, mentor, storyteller or guest speaker to guide students in their learning journey.

Creation of 180 or 360 degree videos is well within every teacher's grasp. With a 360 camera, teachers can easily produce their own experiences that are specific to the needs of their students.

Viewing 360 videos in virtual reality (VR) and capturing 360 video for VR both require certain best practices to ensure the best possible experience. Here are some guidelines for each.

Best Practices for Viewing 360 Videos in Virtual Reality:

- Use a high-quality VR headset that offers a high resolution and wide field of view. This will enhance the immersion and clarity of the 360 video.
- Find a comfortable space. Make sure the area is well-lit and clear of any potential hazards.
- Adjust the headset properly: Follow the instructions provided by the VR headset manufacturer to adjust the headset correctly. Ensure that it fits securely and comfortably on your head, with the lenses aligned properly for your eyes.
- Some VR headsets have calibration settings to match your interpupillary distance (IPD). Adjusting this correctly can enhance the visual experience and reduce eye strain.
- A swivel chair is a good choice that gives the viewer the ability to look in all directions. Alternatively, the thumb stick may allow the viewer to rotate, but only on some platforms.

- Take breaks when needed. 15-30 minutes in VR at one time is reasonable for most first time users of VR. VR experiences can be intense, so take breaks if you feel discomfort or fatigue. It's important to prioritize your comfort and well-being.
- To fully immerse yourself in the 360 video, use high-quality headphones that provide spatial audio. This enhances the overall VR experience by making the audio appear to come from different directions.

Best Practices for Capturing 360 Video for Virtual Reality:

- Invest in a good-quality 360 camera that captures high-resolution video and has good low-light performance. Research different camera models and read reviews to find the most suitable one for your needs.
- Plan your shots. Ask yourself, what can be viewed in 360 degrees in VR that would be better than 2D on a PC?
- Before capturing the 360 video, plan your shots carefully. Consider the composition, lighting conditions, and the specific story or experience you want to convey.
- Make sure to capture interesting angles and perspectives.
- Stabilize the camera: Use a stable tripod or specialized 360 camera stabilizer to minimize camera shake and ensure smooth footage. This is crucial for a comfortable viewing experience in VR.
- Video clips from a camera that is still, perhaps stitched together with other stationary shots is better than a camera in motion as the latter will cause motion sickness in a significant portion of the viewers.
- Be mindful of stitching artifacts: Most 360 cameras use multiple lenses to capture a full spherical view. During the stitching process, where the images from different lenses are combined, there can be some stitching artifacts. Be mindful of these and try to minimize them during shooting.
- Pay attention to lighting: Lighting plays a vital role in the quality of your 360 video. Avoid harsh shadows and extreme lighting conditions that can cause exposure issues.
- Experiment with different camera positions.
- Edit and optimize the footage using specialized 360 video editing software. Pay attention to the spatial audio and ensure it complements the visuals.

By following these best practices, both in viewing 360 videos in VR and capturing 360 video for VR, you can enhance the overall experience and create immersive content.