



So there I was, in Virtual Reality. Last year, the Los Angeles Philharmonic Orchestra produced a 360 degree and 3D video of a performance of Beethoven’s Fifth Symphony. I was hooked. Watching the video through a specialized headset allows you to look around the concert hall in any direction. Layered on top of the video is a visual interpretation of the music using animated lines and colours that burst and stream around the orchestra as they play (laphil.com/orchestravr). It’s been a while since virtual reality has had a technological growth spurt.

Right now, three leading platforms for experiencing Virtual Reality (VR) are the Oculus Rift, the Samsung Gear VR, and Google Cardboard. Alternatively, without the 3D feature or a headset, you can watch 360 degree videos on your hand-held devices and physically move your screen around to explore the footage. You can explore 360 degree videos on your desktop computers and use the mouse to move your vantage point. These are the ways in which you can view VR and 360 degree videos. However, I have always understood myself to be just as much a producer as a consumer of media. This inclination immediately resulted in me wanting to know how to create, not just watch, VR and 360 videos.

Until a few months ago, VR and 360 video footage was only possible by arranging multiple cameras to shoot in all direction. Typically, this involved sixteen GoPro cameras all pointing outwards and attached

together. Then, using software, the multiple pieces of video footage were stitched together to create a continuous viewpoint in 360 degrees. I imagined that it was a cumbersome and expensive process. Now, there are new cameras and apps that make this process much simpler. All that is needed is one camera and one app to make VR and 360 degree videos. I think that students will find such technology—as Michael Fullen envisions pedagogy needed for today’s classrooms in his book, *Stratosphere* (2013)—“irresistibly engaging.”

As I see it, innovation is about creative teaching pedagogy. We don’t just need innovative ways to work in the world, but also innovative and meaningful reasons to work in the world. And so began my thinking about how 360 degree cameras could be integrated into the Film and Video productions course that I’m teaching.

Traditionally, film-making has been concerned with

story-telling through the use of carefully constructed cinematic shots (medium shot, close-up, pan, zoom-in, etc.). The use of new film-making technology that allows for capturing 360 degrees surrounding the camera changes not only *what* is captured, but also *how* such a film is viewed. There are three ways I envision using 360 degree cameras in our classroom.

Project 1: Immersive Videos

360 cameras allow new ways of interacting and viewing footage. Facebook, in its first release of such video footage, called it “immersive” video. This is when viewers control the point of view being displayed during the viewing of the film. For example, while watching footage of canoe trip, a viewer is able to “look-around” by moving a hand-held device to the left or right (or up and down) to reveal different parts of the 360 degree footage. Alternatively, viewers can use a mouse to move around a desk-top display of the video footage. It would be great for students to be able to create “immersive” films where viewers control the point of view.

An immediate possible use of this technology involves the current restructuring of our school. Beginning in September 2016, our school will move from being a Grade 10-12 school, to include Grades 9-12. This means that there are currently two grade levels (the current Grade 8 and Grade 9 students) at a near-by middle school that will be coming to Avon View High School next year. An immersive video is one way that Grade 8 and 9 students could tour the school by viewing a 360 degree film created by students enrolled in the Film and Video Productions 12 course.

Project 2: Re-conceptualizing “the frame”

New technology in 360 film-making is changing how visual story-telling occurs. It may transform movies, music videos, news broadcasting, documentaries, entertainment, educational videos, and all other forms of visual media.

With an increased scope of vision and interactive viewer participation, film-making in 360 degrees will require a new way of considering subject material. No longer is a subject “in front” of the camera and filmed in a particular shot (e.g., medium shot). Instead, the filmmaker must re-consider the entire surroundings of the film shoot, where the actors are placed, and how viewers will obtain visual cues as to which direction to observe. It will stretch students’ creativity to make films

that tell stories that are mindful of 360 degree footage.

Project 3: Virtual Reality

360 filming allows for modification of the footage to be played in 3D virtual reality. The footage is viewed on a handheld device (typically a cell phone) which is attached to a virtual reality headset and displayed with a separate video window for each eye. This creates a virtual reality environment for the viewer. I want our students to be able to create films that use virtual reality playback systems as I suspect that many students will find these films “irresistibly engaging.”

I have found a financial sponsor for these classroom project ideas: Brilliant Labs. They have agreed to provide our students with a 360 degree camera as part of Brilliant Labs’ project-based learning fund available to Nova Scotia teachers. You can imagine my delight! News of this endorsement validates the notion of innovative ideas in our classrooms. It’s an endorsement of creative teaching pedagogy and of creative classrooms. We will all be thinking differently and “outside the box” of a fixed rectangular film screen.

Together, the students and I will be creating immersive videos intended to introduce our school to a wider world. Together, we will be rethinking how to tell a story on film when the viewer controls where to look. Together, we will be creating virtual reality films that blur the lines between our lived experiences and a virtual world from Hants County.

My teaching assignment, my classroom, as well as my daily marking and preparation are all blended spaces existing somewhere between physical and digital worlds. This kind of digital divide is virtually in all of our classrooms. While technological advancements have been occurring at an exponential rate, our pedagogical approaches need to follow suit and help students learn in new and virtual realities. Google’s “Expeditions Pioneer Program” allows for virtual class trips, taking students to places never imagined possible before. How can you resist a virtual tour of Machu Picchu or coral reefs? Our students need us to work towards pedagogies that are irresistibly engaging. While our classrooms are sometimes a shock in reality, our students need us to innovate. For real.

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