# Using 360 VR to Relive an International Experience

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### Introduction

There are many benefits associated with students completing a study abroad experience. As the world becomes more globally connected, students will need to be equipped with the skills to connect and engage with international audiences (Doyle et al., 2010). Students become more globally-minded and can significantly increase their intercultural sensitivity by completing a study abroad experience (Clarke III, Flaherty, Wright, & McMillen, 2009). However, many barriers also exist for students to be able to participate in these programs. While student apprehension to explore a foreign country may prevent participation in study abroad programs, the cost is the most frequently cited barrier to participation (Doyle et al., 2010).

While it is difficult to remove all financial barriers associated with study abroad programs, technology may be able to bridge these divides. Virtual Reality (VR) experiences are able to elicit emotions from users and has been called an empathy machine (Constine, 2015). Specifically, 360-degree VR may be able to ease students' apprehension and offer a vicarious international experience. With the rapid advancement of camera technology, creating a 360 VR experience is becoming more mainstream. One simply needs a 360-degree camera and minimal editing software to do so. 360-degree cameras capture a complete spherical image/video of the environment it is placed in. Could this technology be used to relive an international experience and recruit students to participate in future study abroad programs?

### How it Works

A student participating in a two-week study abroad course traveling to Namibia was trained on how to use a GoPro Fusion, a 360-degree camera. The student captured various 360 photographs and video assets to be packaged into a 360 VR tour and 360 video experience for reflection purposes and to recruit future participants. Various 360 images were packaged into a VR tour with Google Tour Creator, a free VR tour building platform. Selected 360-degree videos were edited with Fusion Studio and uploaded to a YouTube channel. A QR code was created for the VR Tour and for the YouTube playlist, printed on labels, and attached to a Google Cardboard headset. The QR code can be scanned with a smartphone and then viewed inside the Google Cardboard headset, providing a sense of presence in the international setting. Additionally, the 360 photographs and videos were loaded on an Oculus Go, a standalone virtual reality head-mounted display (HMD), for viewing and a heightened sense of presence not achievable with the Google Cardboard.

### Results to Date/Implications

To date, 40 individuals have participated in the Namibia 360 VR experience. Students and stakeholders who viewed the 360 footage have had a positive reaction. Students who participated in the actual program noted a strong sense of being transported back to the remote village in Namibia. Seeing part of the experience in the immersive viewer allowed them to be present in the environment and relive their experience. Students who did not participate in the actual trip noted the feeling of presence in the village and could “actually see themselves in Namibia.” Several mentioned wanting to attend the next study abroad program as a result of the Namibia 360 VR experience. Potential study abroad students noted the cultural immersion and blending

between the native peoples and the study abroad students. Viewers appreciated the 360-degree footage as it allowed them to see the main activity in the video, and also the entire surroundings and villagers' reactions.

Students also noted Google Cardboard's ease of use, and transformation of the video. Viewers stated experiencing the video in a Google Cardboard VR viewer was a more immersive experience than the traditional handheld video viewing experience. The lenses within the cardboard and subsequent movement around the video in tandem with the viewer's head movements enhanced the overall experience.

## Future Plans & Advice to Others

The AggieXR Lab, in partnership with the College of Agriculture and Life Science study abroad office at Texas A&M, is working on a 360 VR repository of international experiences. This repository will be used to showcase study abroad programs to stakeholders, recruit students to participate, and as a reflection tool for study abroad completers. Prior to developing a similar program, it is advised that individuals spend time learning about 360 VR production and postproduction. This will assist in designing engaging 360 VR experiences. We recommend reaching out to the study abroad office at your institution as they may have resources to assist in the development of a similar program.

The 360-degree video can be used to promote and recruit for study abroad programs. Past recruitment for the study abroad program used traditional video and photography. The dimension and immersion into a past study abroad experience allows potential participants to gain better insight into their future experience. Students, as a result of viewing the 360 experience, can better place themselves into the study abroad situation that is foreign to them. This can not only increase excitement but also ease the nerves of students who may have never traveled previously. Lack of travel experience and fears associated with foreign countries are common concerns expressed by students that prevent them from considering study abroad opportunities. Immersion in a study abroad experience through 360-video may assist students in overcoming these concerns or can be used as a substitution for actual international experience.

Additionally, these 360 VR experiences may excite and encourage student participation in study abroad programs. Students with various study abroad destination options may also use these 360 VR experiences in their decision-making process. The 360 VR experiences can provide students with vicarious experiences and allow them to see themselves in that particular location.

## Costs

All the equipment used for this project was readily available through the AggieXR Lab at Texas A&M. The specific technology used for this project included a GoPro Fusion ($299), Fusion Studio (included with the camera), Google Cardboard ($2.50 each), and the 64GB Oculus Go VR HMD ($250). There are other 360-degree cameras (e.g., Samsung Gear 360, Insta360 Nano) on the market that are lower in cost. There are also several options for affordable VR viewers as well. Time is an important consideration when developing a similar project. For this project, roughly two hours were dedicated to editing the footage for the Namibia 360 VR experience.

## References

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