

Relax, Reset, and Recharge

A virtual reality experience to improve mental wellness in schools.



A field test by Justine Stewart - MND 613

THE PITCH



I am developing virtual Relax, Reset and Recharge rooms for high school students ages 14 to 18. The goal is to solve mental wellness issues in schools by allowing break times to access an Oculus headset where they can experience 360 videos and scenes as well as engage with augmented reality rooms.

THE PROBLEM

School can be a stressful time for a lot of students. According to the CDC we are in a mental health emergency. The suicidal, depression, and anxiety rate statistics are continuing to increase. Statistics from the CDC's Youth Risk Behavior Surveillance Summary & Trends Report: 2009-2019 shows some concerning trends. To state a few, "more than 1 in 3 high school students had experienced persistent feelings of sadness or hopelessness in 2019, a 40% increase since 2009." The report also highlights that "in 2019, approximately 1 in 6 youth reported making a suicide plan in the past year, a 44% increase since 2009." These alarming trends need traditional and non-traditional attention.

Every school day students walk through the doors of Hamilton High School. We don't always know what they are dealing with. Maybe they don't have a great home life, they might be worried about a sick family member or friend. Perhaps they haven't eaten dinner or breakfast, they didn't study for a test because they had to take care of their siblings. The laundry list is long. Perhaps all some stressed out students need is a safe place to recharge, regain focus, and just calm down. This is where I believe the use of virtual reality through a headset like the Oculus Quest can be used to provide immersive environments in the form of 360 videos and interactive rooms created on platforms like Spoke by Mozilla hubs to escape for 15 to 25 minutes. This technology use could improve the overall mental health of many students.

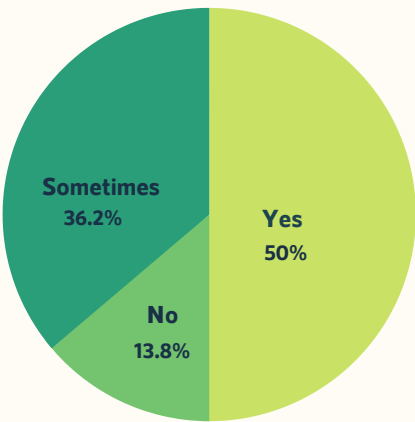
THE FIELD TEST

To get a feel for what students were familiar with when it came to VR and AR technology, I decided to send out survey. This survey went out to about 120 high school students. I received 94 responses. The original survey can be found here: [Initial Reset/Recharge Room Survey.](#)

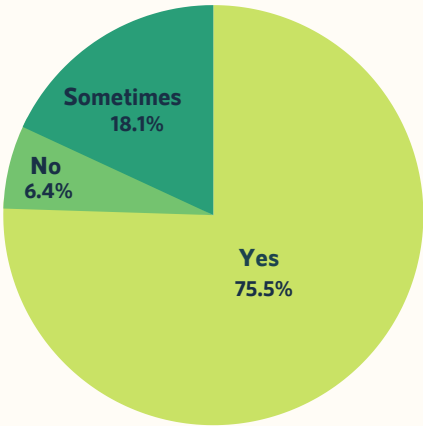
SURVEY BREAKDOWN

.....

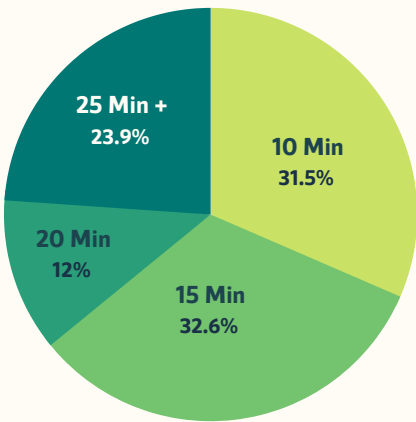
Do you ever need a mental health break while you are at school?



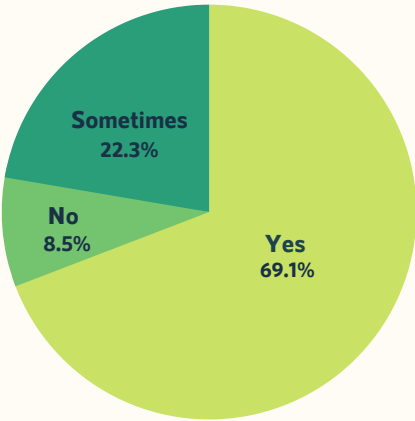
If you are having a bad day, do you find it helpful to step away from the situation?



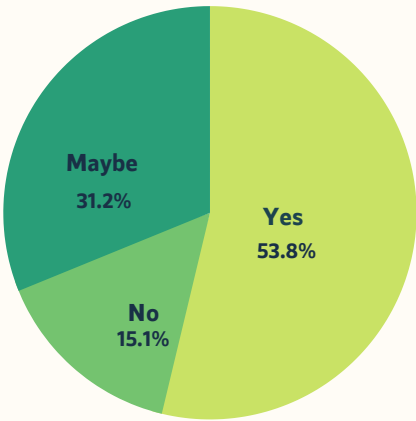
If so, how long do you need to step away from the situation?



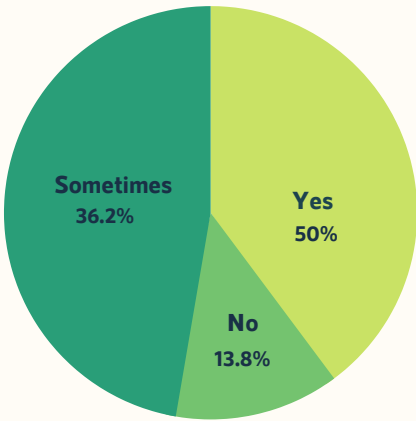
Do you ever use digital technology to relax if you are having a bad day?



If given the opportunity to use a VR headset at school, would you?



If given the opportunity to use AR technology at school, would you?



As the charts show in the first survey it was slightly split on whether students would use VR or AR technology for a mental health break at school if given the change. But I felt confident I could get the 39.4% to jump to the yeses by the end.

Along with a variety of questions I also included videos in the survey to explain exactly what VR and AR technology is. I also provided a video of a basic room I created on Spoke by Mozilla. The original room can be found here: [original Spoke-Mozilla room](#). The feedback on the original room is what changed my direction. My target audience, high school students, are brutally honest. They are not afraid to tell you what is bad, what is worse, and what might be "just ok." What I gathered after going through all the responses was that my AR room wasn't completely terrible, but it was utterly dull.

SOME OF THE FEEDBACK

.....



**"MAKE IT MORE
REALISTIC."**

**"I'D MAKE IT MORE LIVELY
AND ATMOSPHERIC"**

**"IN MY OPINION IT'S NOT VERY
RELAXING. BEING INSIDE DOES
NOT RELAX ME. I WOULD PUT
MORE NATURE INTO IT."**

**"IT SEEMED TO FAKE TO ME, I
DON'T THINK I WOULD ENJOY
IF THIS WERE MY EVERYDAY
LIFE BECAUSE IN AN ODD WAY
THE REAL WORLD IS
BEAUTIFUL THE WAY IT IS."**

**"I WOULDN'T SEE A
ROOM. I WOULD SEE A
WATERFALL, A BIG
MOUNTAIN, A GREEN
OPEN FIELD, A FLOWER
GARDEN AND STUFF
THAT YOU CAN JUST SIT
AND BREATHE IN. OR A
ROCK CLIMBING
MOUNTAIN I COULD
CLIMB, THAT WOULD BE
AWESOME."**

This was my light bulb moment. Make it more realistic. These are Montana kids. They embrace the outdoors, and it is where many of them feel at peace. It was time to regroup. I had just bought an Insta360 along with the Insta360 selfie stick with built in tripod and it was time to put it to use.

Thankfully, I don't have to go far to create some great outdoor 360 experiences. I hiked fifteen minutes from my home to a spot on the Bitterroot River. I set my Insta360 up, found a spot to hide, and hit record. Next, I shot a 360 hike along the river. I mounted the camera onto the selfie stick and held it at eye level as I hiked along the trail. The Insta360 has an app that allows you to record and monitor what you are seeing. I didn't want to have any technology visible, so I operated the camera manually. The great thing about the selfie stick is that it is invisible. While you can still see me hiking, you can't see the stick the camera is mounted to which I am holding. I also created a horseback riding 360 video. Same concept and technique as the hike, just on horseback instead.

After some research I discovered it was relatively easy to adjust my settings on Final Cut Pro to edit 360. But first I had to upload it. To do that I installed Insta360 Studio onto my MacBook. That's where the 360 videos from the SD card need to be uploaded. Once the videos are uploaded to Insta360 Studio they can be shared to the desktop and uploaded to Final Cut Pro.

Great. I had the videos on my preferred editing software and my settings figured out. I was maybe 10 minutes into editing when my computer told me there was no more room. I tried to consolidate everything I could and delete anything I didn't need. Still not enough. Thankfully, I have an external hard drive. I dumped just about everything from my computer onto it and carried on.

Just like nature, music makes people feel good. I felt it was important to add music to the videos and create some atmosphere. The royalty free music I used is from Epidemic Sound.

Once the videos were edited, I was able to get a real look at just how big the files were. The horseback 360 is 15 minutes long and comes in at 50GB. No wonder my computer wanted to explode.

360 VIDEOS
.....



- 360 Horseback Ride
- Bitterroot River Hike
- River Vibes

After editing I was able to get a real look at just how big the files were. The horseback 360 is 15 minutes long and comes in at 50GB. No wonder my computer wanted to explode. Initially, I only uploaded the 360 video experiences to YouTube so they could be accessed on a VR headset like the Oculus or a computer, tablet, and phone. The school district's technology director has concerns about students using an Oculus on campus due to its ties to Facebook which cause security concerns on the district network. The good news is that my personal Oculus Quest has 256GB for storage which meant I had plenty of room to upload my videos.



Shoot
Insta360



Edit
Final Cut Pro



Upload
Oculus Quest

It seemed like an easy task and in reality, it wasn't that difficult. But there are a few steps and steps take time. It took me far longer than it should have to realize the Oculus Quest does not support a MOV file. Once I converted the 360 videos to MP4 files I thought I was good to go. Not quite. Turns out the Oculus prefers to speak to Androids. I had to do a little research and discovered I needed to download the [Android File Transfer](#) software to my MacBook. Thanks to this little interpreter I was finally in business.



STUCK ON SPOKE

.....

While I was extremely excited with the 360 content I had produced and uploaded to the Oculus Quest I still had lingering thoughts about my original Spoke room. I wasn't quite ready to give up on the idea. I also wanted to show my audience I was listening. I wanted to create an "outdoor theme" in an AR way and that's exactly what I did. I created a second "Outdoor Mountain Island Getaway" Spoke room. I increased seating options, brought in interactive elements like ping pong and air hockey, animals, entertainment, boats, water, and more. The revamped Spoke room can be found here: [Reset/Recharge Room Updated.](#)

ANOTHER SURVEY

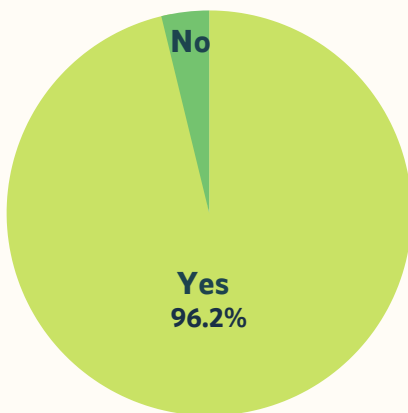
.....

I wanted to present all of what I had created to the students again. This time around it was a bit more challenging. I put together a Calendy event and had teachers and counselors send it out to students. I thought they would be eager to sign up and try out the technology. Shockingly, not one student signed up. So, I put my reporter hat back on and went and found them. I pulled them out of classes and grabbed them during passing periods. I managed to get 53 students to try it out my VR Reset/Recharge 360 rooms, revamped spoke room, and fill out my second survey which can be found here: [Reset/Recharge Room Experience.](#)

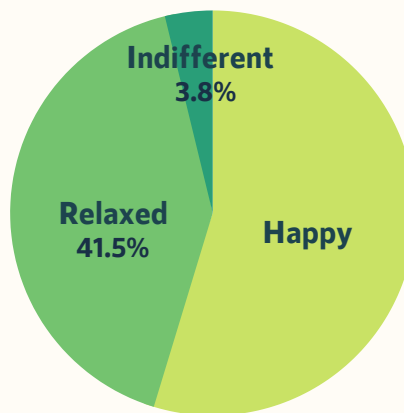
THE RESULTS

Thankfully, the students who tried out my 360 videos on the Oculus Quest and took time to look at my revamped spoke room gave me some great feedback. Overall, it was well received. One thing I did find surprising was how many students favored the horse ride 360 video. I initially produced that video for myself and decided to add the content relatively last minute. I was worried that students it might cause some sensory overload especially if you are not used to riding horses. It was a pleasant surprise to be wrong.

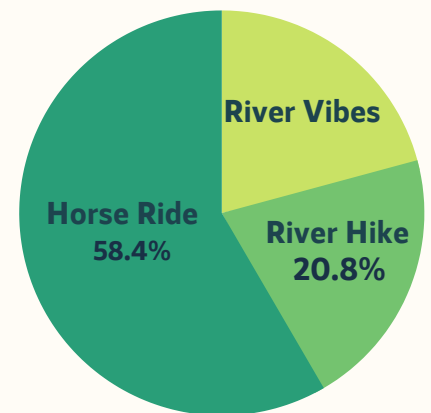
Did you enjoy the VR Rooms?



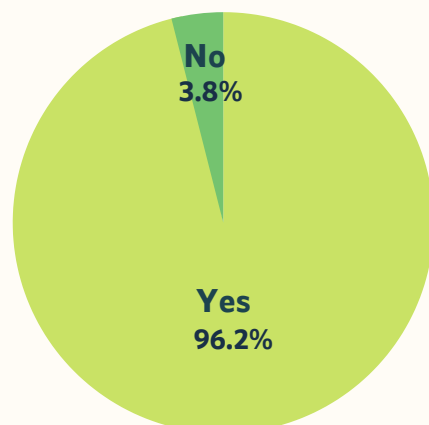
How did the VR rooms make you feel?



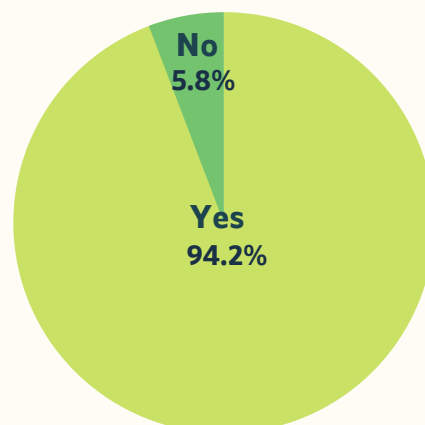
Which VR Room was your favorite?



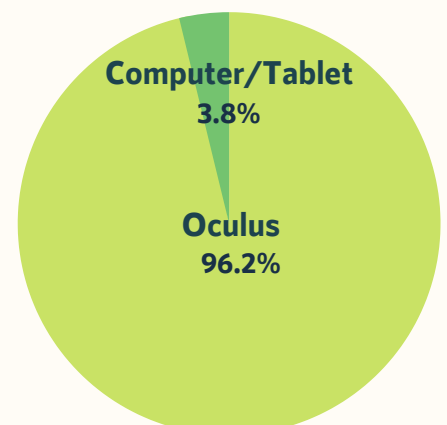
If you had access to a VR headset at school, like the Oculus would you use it?



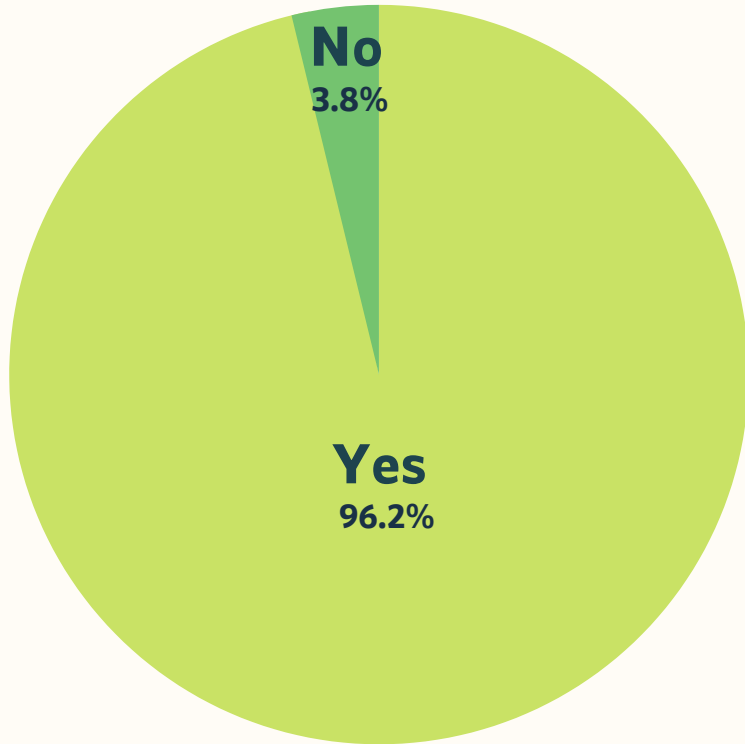
After looking at the revamped AR room, do you like it?



Would you rather interact with the AR room through a computer/tablet or on Oculus?



My final question in the survey which is what led the entire field test was "do you believe VR and AR could be used to promote mental wellness in schools with the use of a headset like the Oculus Quest?" As you can see it was an overwhelming yes among the 53 students who experienced the technology.



**"I LIKED HOW YOU
COULD SEE THE
MOUNTAINS AND IT
FEELS LIKE YOU ARE
REALLY ON A HIKE."**

**"I LIKE HEARING THE
MUSIC AND CRUNCHING
OF GRASS AND LEAVES
AS THE VIDEO WENT
ALONG THE TRAIL."**

**"IT WAS KINDA
WEIRD SEEING THE
PERSON IN THE
VIDEO BUT IT WAS A
FUN EXPERIENCE"**

**"I HAVE NEVER
EXPERIENCED
ANYTHING LIKE
THIS. IT WAS FUN."**

WHAT'S NEXT

The next phase of this project will include field testing this technology at the middle school with students ranging in age from 10 to 14. I believe this is something a lot of our school counselors would like to utilize by setting up designated areas throughout our districts schools where students could spend 15 to 25 minutes recharging, relaxing, and feeling more positive.

If feedback continues to be positive, I will present my findings to administrators and the board of trustees with the goal of purchasing Oculus Quest headsets through special grants or general fund money. The Oculus Quest with 256GB is \$399 USD. To start off, the district could purchase twelve headsets and split them between the High School and Middle School. The price tag would be under \$5,000. Taking into consideration the potential benefits and opportunities these devices will provide; I believe it is a reasonable request.



RECOMMENDATIONS

- While editing 360 video is not as complicated as it initially sounds there are some factors to take into consideration. 360 videos are incredibly large files. Especially if they contain any added graphics, transitions, effects, or music. Not to mention if they are lengthy. If you are going to be editing 360 videos, make sure you have an external hard drive for storage. It is likely you will need to make room.
- Students will need to be trained on how to use the Oculus Quest. During my field test I was taking the headset on and off every single time I needed to change the video. This was frustrating, inefficient, and ate into my time. I would recommend that each school educate students on how to use the VR technology with the controllers. This will allow students to navigate through the experiences on their own.
- Create a secure connection to allow the Oculus headsets to be on the district network. While 360 experiences can be created and uploaded to the device there are an array of therapeutic experiences available through the device. There is also an enormous selection of 360 videos from across the world that are appropriate for students. If we were able to have these devices on the network, it opens more opportunities.
- Depending on what students are trying the device it would be wise to investigate using "real time monitors" which would allow whoever is in the room to see what students are seeing on a screen. Oculus does have a casting feature for Oculus Go. This allows others to see a live view on a connected smartphone of what the person is seeing on their headset. This technology could be utilized to monitor students using the device.

**"MODERN TECHNOLOGY
OFFERS AN OPPORTUNITY
TO SUPPORT STUDENTS
MENTAL HEALTH NEEDS
IN NEW WAYS."**

LearnWell

Thank You!

