

Creating an Immersive Learning Experience
Using Virtual Reality
at the College of Staten Island

Agenda

- Virtual Reality Committee
- Procuring Equipment
- Pilots
- VR Lab
- Analysis & Assessment



Virtual Reality Committee

- Members included Academic Departments & Upper Administration
- Purpose
 - Budget
 - Equipment
 - Courses for initial pilot



Procuring Equipment

Hardware:

- Google Cardboard, \$5 Headsets
- HTC Vive/Dell Alienware Aurora PC/Samsung 65" display
- Oculus Go
- Oculus Quest
- Insta360 cameras and accessories



Software: VR Apps

- Dell
- CDW
- Procurement Subscription
- Vendor Demos: Ovation, VirtualSpeech, BodyViz



Pilots

- Management: Heidi and Soft Skills (Public Speaking, Job Interviews)
- Geography: Nerve and his project
- Computer Science: Ming Doah (Introduction to CSC/Technology)
- Others
 - Psychology
 - Student and Enrollment Services
 - IT – Testing and Feedback

Pilot on Public Speaking

Students were:

- exposed to the public speaking app, called “Virtual Speech” on the Oculus Go
- asked about their perceptions related to using VR to help prepare a class presentation



Students felt practice in a VR environment would be helpful because:

- They don't always have a good place to practice
- It is difficult to find a real audience for practice
- If mandatory, it forces students to prepare slides and practice

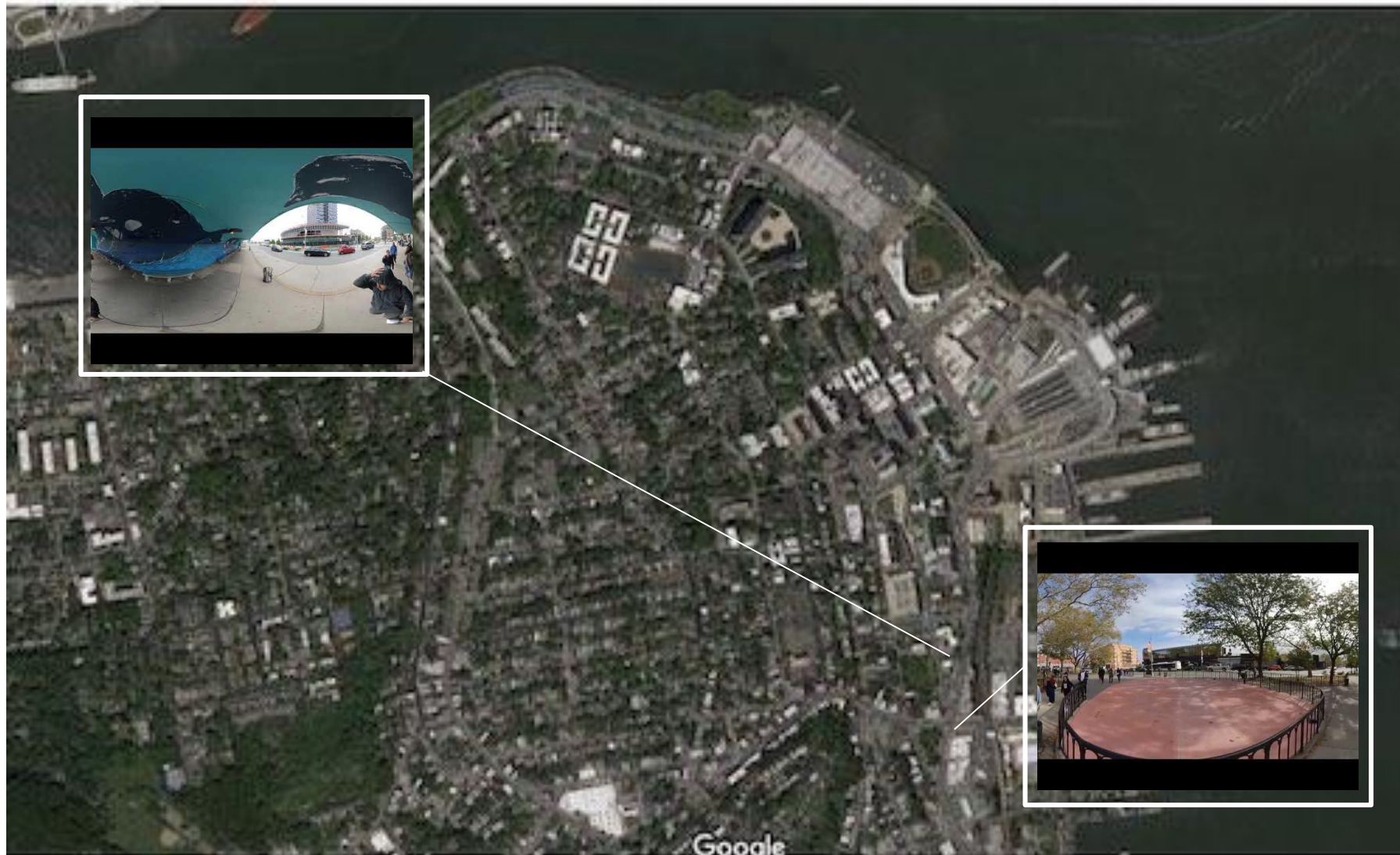


Reduced stage fright

**Improved skills through objective
feedback (filler words, eye contact...)**

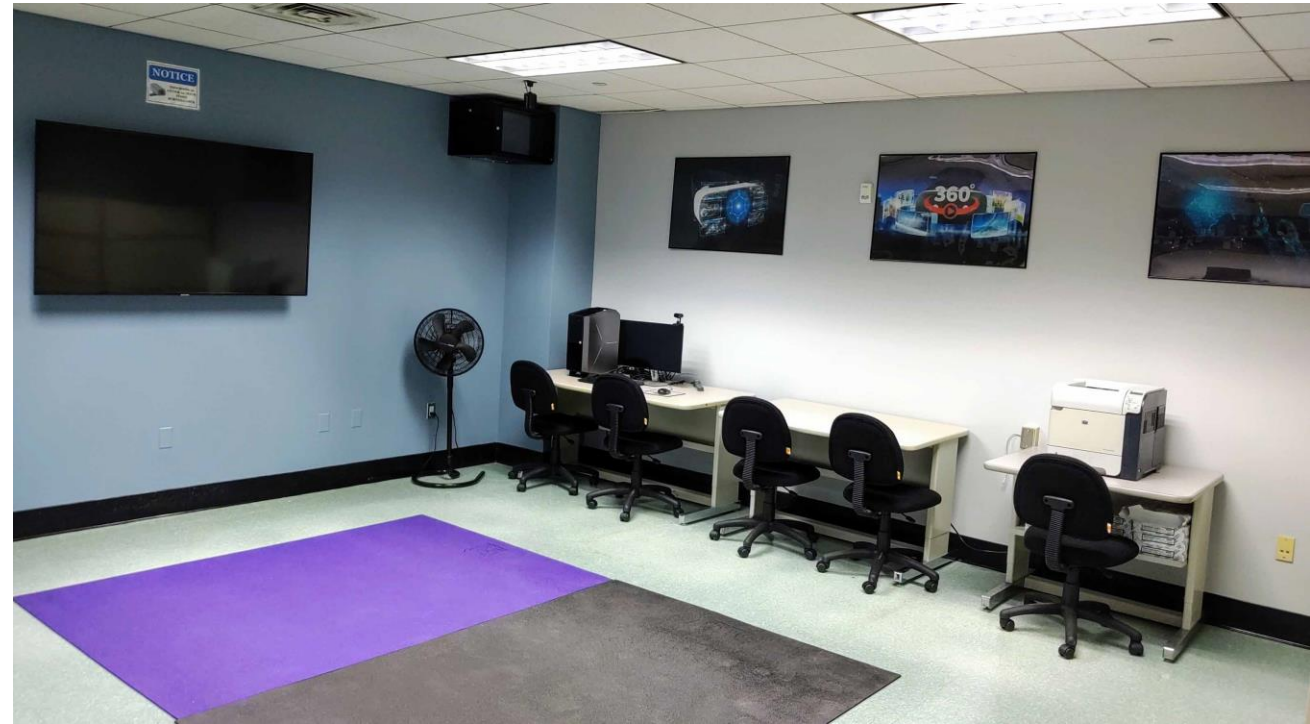


USING VIRTUAL REALITY IN URBAN GEOGRAPHY



Virtual Reality Lab

- Space identified: former 19'x19' computer lab
- Working together with different groups:
 - Buildings & Grounds, Campus Planning, Public Safety
- Renovation: electrical, painting, cleaning
- Security camera system, securing door and access to room
- Installation of Large Screen Display
- Furniture, posters, VR History timeline
- Equipment setup: Vive & Oculus
- Mats to define VR boundaries
- Waiver and Procedures
- Presentation to Upper Administration
- Open House



Analysis & Assessment

- Pilots presentation to VR Committee on how this technology was used in Fall 2019 curriculum
- Student presentations on final projects
- Next steps for Spring 2020 semester

Tech Infusion: VR @ TCNJ



TCNJ's Path

- Exploring VR
- Hardware / Software
- VR User Group
- VR Experiences / TechInfusion Program
- Analysis and Assessment
- Next Steps

Exploring VR

- Back burner project
- Custom built PC with HTC Vive
- Rearranged current lab space
- Hired student to work with VR
- Additional VR units
- Best practices for sharing



Current Hardware

- HTC Vive with wireless adapter (Requires PC)
- Oculus Rift S (Requires PC)
- 2 x Oculus Quest (Standalone)
- 3 x Oculus Go (Standalone)
- Custom PC (AMD 1700, Nvidia 1080ti)



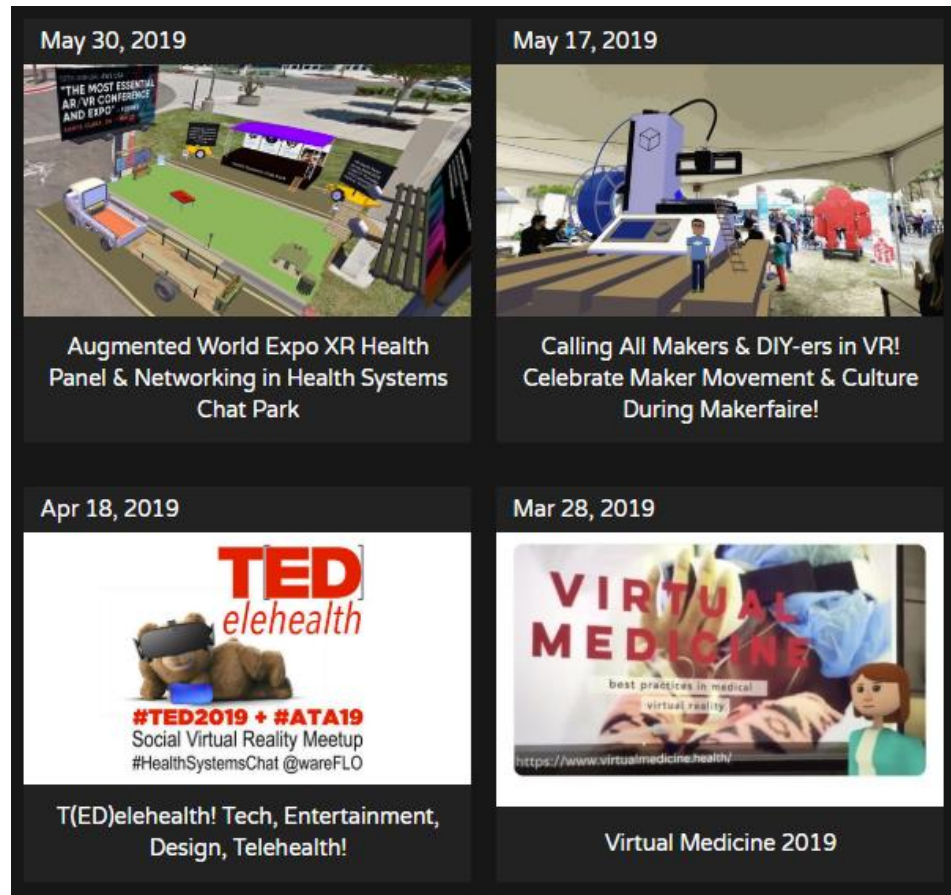
VR User Group

- Invited individuals that we knew or assumed would have an interest
- Met once a month
- Brainstormed what goals would make sense
 - Resource sharing
 - Best practices
 - VR consumption vs creation
 - Projects Instructional Design could assist with

VR Experiences / TechInfusion

- COM345: New Media and Health Communication
- Oxford Medical Simulation Demo
- Faculty Workshops
- Best practices for onboarding users

Public Health Conference in AltSpace



Oxford Medical Simulation



✗	Skin exam In a septic patient it is important to look for skin rashes, skin breaks or indwelling lines as a portal of entry for infection	10:27
	Technical	
✗	Phone senior Discussing unwell patients with your senior can be useful for support and advice	10:47
	Non-technical Teamwork	
✗	Phone oncology It is helpful to discuss oncology patients with the oncologist as they can provide useful information and may take over the patient's care when stable	10:50
	Non-technical Teamwork	
✗	Urine dip It would have been useful to order a urine dip and culture to investigate a potential urinary focus of infection Show rationale	11:00
	Technical	

Analysis and Assessment

- Oxford Medical Simulation participants were surveyed
- Mostly positive. 93% wanted VR integrated into the nursing program
- Students wanted it as an extra learning tool and not to be graded
- Many felt there was less pressure than in a physical sim
- Concerns over VR sickness
- Some struggled with controls

Next Steps

- Support new VR initiatives
- Additional TechInfusions
- Formalize the VR space
- Opportunities to showcase VR (Workshop @ TCNJ on Mar 19)
- Talk more with 3rd party content creators