

GLEESON



WITH ONE HEART

Gleeson College VR Overview; 2021



Gleeson College

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Making Connections using Virtual Reality at Gleeson College

Gleeson College is a Catholic Co-Educational Secondary College located in the north eastern suburbs of Adelaide. Our school of approximately 800 students recently took part in a trial using virtual reality kits borrowed from The University of Adelaide, Computer Science Education Research Group (CSER) and CESA's dynamic STEM XR Challenge. This cutting-edge technology included either Oculus Quest virtual reality headsets, hand controllers, iPad and Insta 360 One X cameras or Lumination's VR/AR headsets in a class kit of 30 devices. Our students have benefited in immeasurable ways from the immersive activities, and interactive content delivered.

Virtual reality provides a fun way to learn, which is highly engaging. The ability to visit any place on the globe during a pandemic was a golden moment for our students. Virtual excursions provided dynamic learning experiences and gave them a sense of a different place and time. Our language students actively toured the globe, and thanks to the feeling of presence virtual reality provide, they learnt by living the experience. The emotional reactions to their experiences helped form strong memories. Italian students, for example, were thrilled to experience Florence, Pisa, Rome and Venice all in one magical day while Japanese students rode around the backstreets of Japan, scaled the Tokyo Tower and were part of an audience watching sumo wrestlers in action; all virtually of course.

YouTube 360-degree videos played on the headsets was a game-changer. There is an abundance of free educational videos available, providing clear, immersive explanations of the studied subjects. Students are part of real-life scenes and cultures; senior tourism students used this platform to explore sustainable tourism. It sparked new ideas through the sensory-based platform, and we could see they were invested in their learning and gained greater empathy through this engaging experience. Although virtual reality will never replace actual excursions, it was used as a powerful tool to allow experiences to happen that would have otherwise been impossible, especially during a pandemic.

Gleeson College used the virtual reality kits to deliver new experiences, but more importantly, we created new content. Our students explored numerous applications such as Google Tour Creator, Tilt Brush and Co Spaces to bring three-dimensional work to life. Year 10 Japanese students connected with our international school in Japan by using the Insta 360 One X cameras to take photos around the school. These images were uploaded to Google Tour Creator, and students added audio files of themselves narrating the scene in Japanese. This innovative 360-degree virtual tour of Gleeson College showed a student perspective of a day in the life at school. We were able to prepare visually impressive, personalised content for students who could not participate in our annual International Study Exchange Program. Connecting this bridge during a time when parts of the world were in lockdown gave our connected school in Japan a rich experience and feeling of being at Gleeson College.

The visually impressive nature of virtual reality also lends itself to numerous artistic applications. Students eagerly created stunning designs using an app called Tilt Brush VR, and we could share each headsets vision by casting the unit to our interactive whiteboard for the class to see. Students produced life-sized virtual art, and the immersive experience allowed

the viewer to be part of the art, moving around and within the masterpiece from all angles. A dragon breathing fire curled in space, and Van Gogh inspired Starry Nights showed the unique possibilities of virtual art and gave a new dimension for student expression.

STEM Society students who took part in CESA's STEM XR Challenge worked through real-world problems to empathise then ideate a solution. The students became designers, programmers, artists and communicators who created their virtual world using CoSpaces. This program allowed the users to think in 3-dimensions using different sizes and scales to demonstrate their creative skills and model their thinking. One group chose to explore how they can deliver vaccinations to promote health in impoverished communities. Using laptops and CoSpaces to code, they used VR to enter their 3-D world to walk and transport within the virtual world they created.

There's no doubt that virtual reality is a great tool to support education. Student engagement was high. A curious approach to learning suited our students. The flexibility of taking part in virtual excursions with no lag time of travel allowed us to increase the number and types of adaptable experiences. We could share information in a new way and shift our students from being simply consumers of technology to being the creators. Virtual reality provides an innovative platform of artistic creativity and multi-sensory experiences to complement the curriculum's delivery.

We thank The University of Adelaide, CSER Department, for allowing us to be the first school in South Australia to borrow the Oculus Quest Kit and the Catholic Education Learning and Technologies Department and Lumination at Kent Town for their inspiring program. Through direct experiences, virtual reality has engaged our 21st-century thinkers in authentic learning activities allowing them to make deeper connections as empathic global citizens.



Year 10 Japanese student exploring CoSpaces with the Oculus Quest VR. Students coded their own 3D interactive world then explored this new dimension using the immersive and powerful 360-degree tool.



Year 9 STEM Society student mastering the art of Tilt Brush VR. Life size virtual art was created that allowed the user to be part of the art, moving within the field to appreciate the art from all angles.



Year 7 student exploring Antarctica in a virtual canoe using National Geographic Explore VR.



Year 8 STEM Society student exploring the virtual world.



Year 9 STEM Society student creating a 3D Marvel superhero costume using Tilt Brush VR



Year 10 Japanese student exploring Tokyo.



Year 7 Italian student exploring Florence. YouTube 360-degree videos provided great flexibility to deliver a range of virtual excursions.

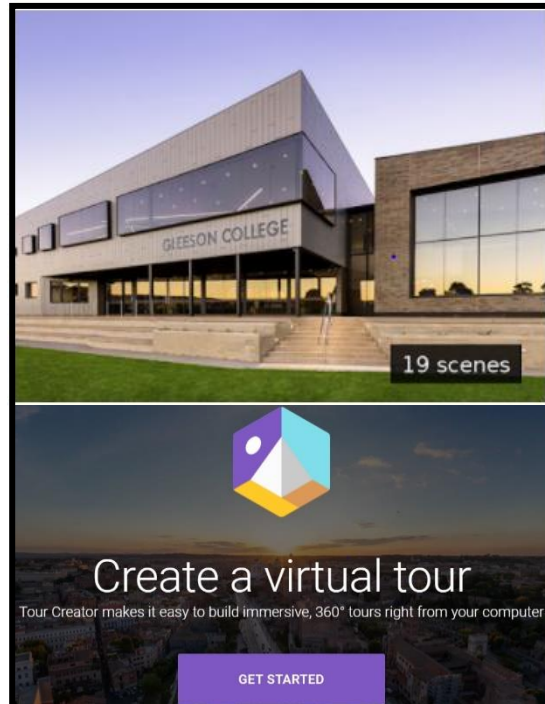


Year 7 Italian students exploring Rome. YouTube 360-degree videos provided great flexibility to deliver a range of virtual excursions.

Creating a virtual tour of Gleeson College using Insta 360 One X Camera and Tour Creator Software.

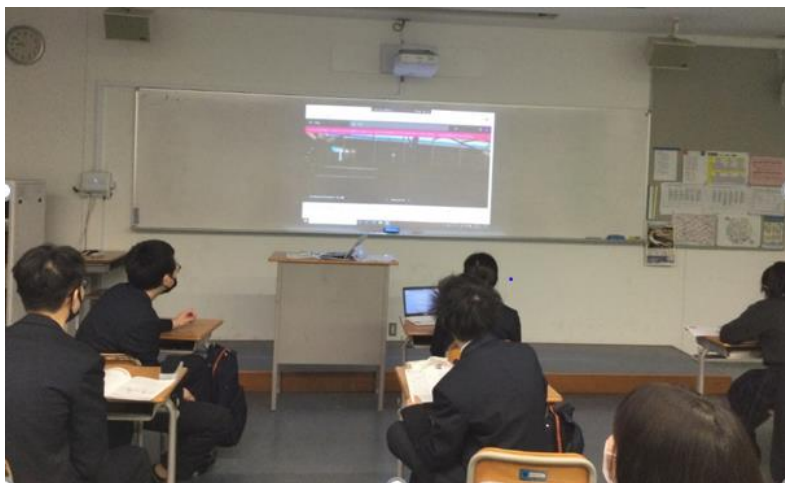


Year 10 Japanese Digital Technology student setting up the Insta 360 One X camera to capture 360-degree photos. Students connected with their sister school in Japan by creating their own personalised virtual tour of the school.



Year 10 Japanese Digital Technology students created a virtual tour of the school using Tour Creator and the Insta 360 One X cameras.

Creating connections during a pandemic; a student led virtual tour of Gleeson College by Year 10 Japanese Students.

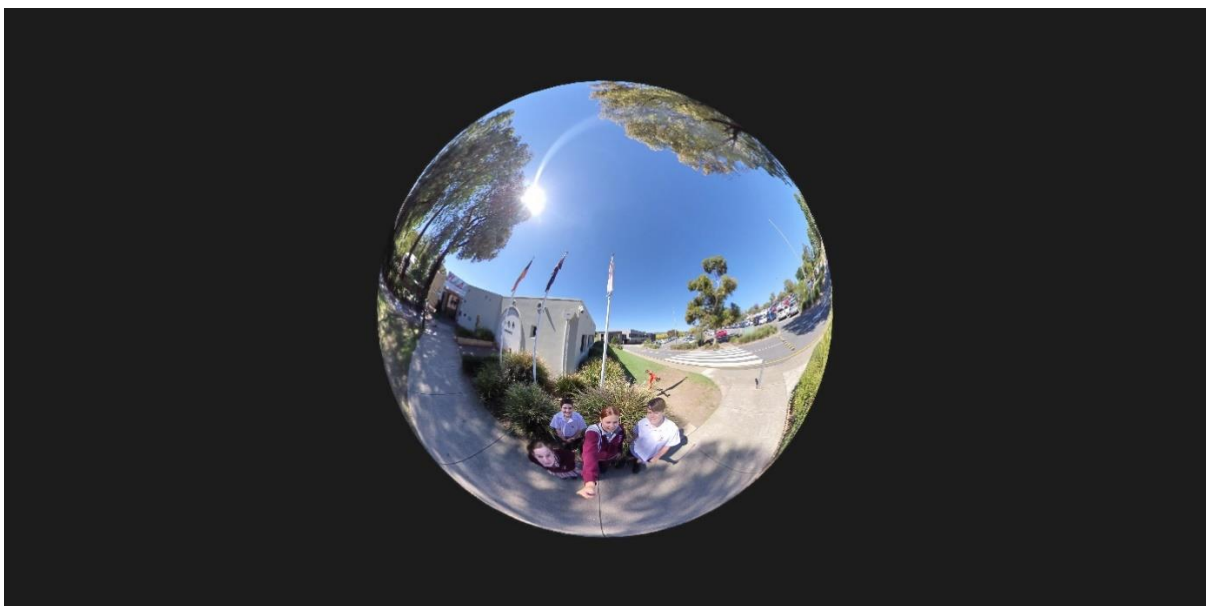


INSTA 360 ONE X Photography

Tiny planet, Crystal ball and specialised photos using Insta 360 Studio software.







Gleeson College Students participating in CESA's STEM XR Challenge using Google Expedition Kits from Lumination.



