Virtual Reality – Making it accessible, inclusive and safe for all

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#digifest20
What is Virtual Reality?

“VR is a way to escape the real world into something more fantastic. It has the potential to be the most social technology of all time.”

Palmer Lucky
Founder of Oculus Rift
Benefits of Virtual Reality

- Suitable for different learning styles
- Global teleportation – Breaks down boundaries
- Creates memorable experiences
- Promotes creativity and curiosity
- Develops empathy
Wiltshire College’s journey using VR

• First purchased HTC Vive in 2017
• Event usage 2017 - Present
• Purchased 4 x Oculus Quests - 2019
• Classroom use 2019 - Present
• Blenheim August - Dec 19
• Purchased 1 x Oculus Go - Oct 19
Considerations
### Before you start

#### Device suitability
- Wired/Non-wired
- Mobile
- Battery life

#### Setup and room suitability
- Room size
- Safety equipment
- Moving equipment – Cables and setup etc

#### Awareness
- Host understands experience
- Participants are informed
- Safety information

#### Medical conditions and general health
- Permanent and temporary
- Mental health
- Hygiene
- Mobility

#### Participant inclusion
- Appropriate content
- Screen casting
- Alternatives
VR Side Effects

- Sense of place
- Sense of time
- Changes to the environment
- Disorientation (in/out of headset)
- Eye strain
- Nausea and dizziness
- Exhaustion
- Mental health
- Mistaking in game objects for real life ones
What we did

-risk assessment
-Warning poster
-Supervised play
-Barriers
-Antibacterial equipment

Awareness
-Staff review content
-Lesson plans
-Participant awareness of experience
-Alternative activities

WARNING VR

Please ensure you have read this document before taking part in any virtual reality activities.

-If you have a previous history of epilepsy or seizures, loss of awareness, or other symptoms linked to an epileptic condition, consult your doctor before using the product.
-Do not use the product if you are pregnant, sick, tired, under the influence of alcohol/drugs, or are not feeling generally well as it may make your condition worse.
-Content viewed using HTC Vive can be intense, immersive, & appear very life-like. Some content could trigger increased heart rate, spikes in blood pressure, panic attacks, anxiety, PTSD, fainting, & other adverse effects.
-The product can emit radio waves that can interfere with the operation of nearby electronic devices such as a cardiac pacemaker or other implanted medical device. Consult a doctor beforehand.
-Please let a member of the LT team know, if you have any hearing, visual or movement difficulties. Do not rely on the product's chaperone system a member of the LT team will be able to lead you.
-Do not use for longer than 15 minutes at a time. Ensure you take a rest before continuing.
-While using the product you must ensure you hold the controllers firmly & are using the wrist straps. You must also operate the product in a comfortable posture.
-Only the person using the device should be in the VR area. You must listen to instructions from the LT team. If you don't, the equipment may be switched off.

If you would like to see the full guidance document for HTC Vive or have any questions speak to a member of the Learning Technologies Team.
Advice for educators

- Plan your space carefully
- Vet your activities and use your lesson plan
- Get confident with setup and use
- Inform yourself and participants about the risks
- Think of ways to include everybody
Example VR Activity

Anatomy and Physiology in Sport
Virtual Reality and Sport

- Talked with lecturer to ascertain requirements
- Lecturer came in to try out hardware/software
- Proposed a solution (3D Organon Anatomy)
- Lecturer wrote lesson plan and informed students/checked medical needs
- LT staff supported setup and use in first lesson
- Screen casting used for inclusion
- Lecturer able to confidently use independently after initial use
Virtual Reality and Sport

Feedback from Lecturer

“The experience wasn't isolated to the VR user, having an output to a projector allowed the entire class to see what the user was seeing and therefore opened avenues for discussion around the subject.

Using VR with students promoted a strong learning environment and assisted with improving their long-term retention of information, as students were self-exploring within the VR classroom and were driven to find out more information about an organ/system.”
Before you get started with VR

Before using Virtual Reality in your lessons you need to consider the following below to ensure your activity is suitable for all.

**Medical conditions**
Is everyone going to be able to use the equipment? For example if someone has Epilepsy you need to make sure they are still included in the activity without needing to be in the headset if they can’t use it.

**Mobility**
Are the controls simple to use? Is the headset comfortable to wear? Do you require a different headset for the specific activity.

**Content awareness**
Be careful about what content you use as some may be too immersive for people or may trigger unhappy memories.

**Confidence issues**
Don’t pressure people into using the headset allow them to take the lead. Get them to start using it by themselves and then in front of the class.
Example Virtual Reality activities

Here are some example activities that you can use with your class to get over some of the common barriers explained on the other side of the page.

**Example 1**
- Epilepsy
- Mobility

360 videos enable you to view the content by standing stationary and moving your head around. Some activities allow you to control the content by just using your headset. You can also view these videos on YouTube if you are unable to use the VR headset at all.

**Example 2**
- Visual
- Mobility
- Confidence

Use the headset as a location guessing game, put someone in the headset and ask them to describe to the class what they can see or hear to enable the other students to guess what they are viewing. This really helps students speaking and listening skills and helps improve their confidence.

**Example 3**
- Epilepsy
- Visual
- Confidence

Get students involved in the activity out of the headset working with the other students to help bring their confidence up as well as improving their teamwork skills. This can also help if they are unable to use the VR headset.
Questions?
Thank you

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