STEMSHARE

IMMERSIVE VIRTUAL REALITY

Findings and recommendations from a literature review to guide the implementation of immersive virtual reality in classrooms.

DEFINITIONS

AR — Augmented reality overlays virtual objects on the real world environment.

VR — Virtual Reality is a 3D computer-generated world which can be a highly imaginative or realistic simulation

IVR — Immersive Virtual Reality is delivered via a head mounted display (HMD) - a virtual reality headset. These virtual environments give the user the impression that they are in the environment.

HOW DOES IVR DIFFER FROM VR?

IVR is different to desktop VR (or that displayed on a tablet or smart phone) because there is no intermediary 'reality check'. In other words, you are not looking at a screen or interacting with what is on a screen; rather, you feel you are actually in the virtual environment and, wherever you look, it is surrounding you.

IMPACT ON LEARNING
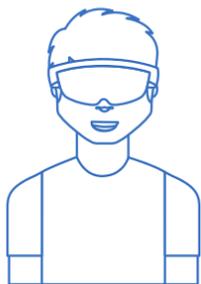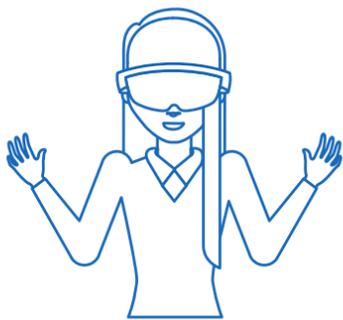
1 IVR may present new opportunities for creativity in learning through role play and mentoring

2 IVR can increase motivation and engagement in learning and lead to richer collaborations.

3 IVR might be useful to engage girls in computational thinking

4 Care should be taken in using IVR with younger children as they can have difficulty in discerning what is real from what is not.

5 IVR may be an 'empathy' machine helping students to challenge stereotypes

HOW CAN WE USE IVR SAFELY?

15 in 3

Limit the use of IVR Equipment for 15 mins at a time within a 3 hour period

age limit

Stick to manufacturer guidelines and recommendation

data privacy

Be aware of the data being collected when students use devices.

Southgate, E. (2018). Immersive virtual reality, children and school education: A literature review for teachers. DICE Report Series Number 6. Newcastle: DICE Research. Retrieved from http://dice.newcastle.edu.au/DRS_6_2018.pdf