



VR gets real



No longer just for games, virtual reality is altering our views on learning.

By John Burgin

Virtual reality (VR) is set to change the teaching landscape in Australia. It will be the tipping point for innovation in education.

VR can revolutionise education through immersive learning in both primary and higher education, with subjects such as medicine, midwifery, astronomy and architecture having the ability to be significantly elevated and taught more effectively through 3D graphics and 360-degree videos.

This immersion of experience and these higher levels of engagement will supercharge what we teach today's children.

And we're only just beginning to discover its potential.

A NEWLY ACCESSIBLE PEDAGOGY

VR was once shafted to the realm of science fiction, or to only the most cutting-edge and well-funded universities. This is no longer the case. As the technology becomes more sophisticated, it also becomes more accessible. As VR becomes ready for mainstream use, and the headsets that power the technology become better and more affordable, opportunities will open up for schools to tap into this technology for the first time.

There's a new breed of teacher too — better equipped than ever before to use this technology. Computers in classrooms are now ubiquitous, and this has made teachers much more digitally savvy than they were even five years ago. As they look for fresh ways to engage students, they will invariably turn to VR.

VR eliminates the need for a person to be physically present in the environments that once depended on 'hands on' expertise, meaning that new concepts can be introduced to the four walls of a classroom that were previously impossible. Teachers can now

encompass the role of many different professionals as they open up new worlds to their students, including those of surgeons, astronauts, architects or historians.

USING VR TO ADDRESS STEAM SKILLS

Earlier this year, the National Scientific Statement showed that participation in science, technology, engineering and mathematics (STEM) subjects in Australian schools was at its lowest level in 20 years. The skills shortage in employment in these areas has also been well documented, and it is time to consider VR within education to address the skills requirements of the future jobs market.

VR is particularly suited to STEM subjects because it helps students bring to life what their teacher is speaking about, be that other planets or parts of the human body. It makes a hitherto passive experience an active one, and assists students in understanding the more complex theories and subjects that STEM often encompasses.

But the technology goes even further beyond that. VR incentivises students to take up not just STEM, but STEAM (A for Arts) subjects. To be more digital is to be more human, and this is never more evident than in VR, a technology that puts people first. VR allows people to experience anything and everything first-hand. It's this democratisation of experience that will allow people to cross borders, or virtually visit other planets, tapping into a deeply held ideal that to learn from experience is the most effective way to learn.

This facilitation of better communication across the world will lead to a new enthusiasm for STEAM subjects, and ultimately provide a key means to address the skills gap that has long been a pain point in the Australian employment landscape.

DELIVERING VR INTO AUSTRALIAN UNIVERSITIES

This new enthusiasm for STEAM subjects will catch on as more and more incredible VR initiatives in schools and universities are shared with the world.

Australian higher education is already making impressive inroads into the use of VR in its courses. Earlier this year, the University of Newcastle announced a VR initiative in its School of Nursing and Midwifery, simulating a real-world delivery room.

The experience provides midwifery students with a virtual emergency neonatal resuscitation scene — something that would be difficult to replicate safely without the use of technology. Crucially, VR enables students to experience real-life scenarios, and ensures they are equipped with the skills required to handle these complex emergencies.

VR programs such as the one at the University of Newcastle will continue to infiltrate schools and universities across Australia, as the hardware becomes more accessible, and as teachers become newly skilled and empowered to deploy the technology.

A reimagination of Australian education is sure to occur if schools and universities harness the power of VR. Used effectively, it will become the new tipping point of achieving true innovation in the education sector, propelling Australian educational practices to a new global standard. ■

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