

# SPOTLIGHT ON

## DISRUPTION BY VIRTUAL REALITY!

**W**hen you work with new technologies, as I do, you get used to being met with expressions of confusion or surprise.

When we first started the Disruptive Media Learning Lab at Coventry University three years ago people would look at me quizzically, scrunch up their noses and ask what I meant by “disruptive”. Now the word is ubiquitous even outside of the confines of Silicon Valley, and most people understand the meaning of “disruption” in the sense of using innovative digital technologies to challenge established markets and economic models and replace them with new ones. So much so that, if you follow the media, everything from housing and health to higher education seems to be in the process of being ‘uberified’ these days. That said, it’s clear to me that, when it comes to education, the next big disruptive technology will be virtual reality (VR).

Before our current toys become teens each school will have a virtual reality classroom or at least a virtual reality pod. I am not talking about the shoddy, stinky, homemade, 360 environments that some have developed in this early stage of VR. I am referring instead to the beautifully shot, creatively crafted and breath-taking VR experiences that are now available from some of the small British high-tech companies, where all your senses are involved and the experience feels totally real.

**‘The best technologies available currently, such as those provided by Vive and Oculus, involve the use of backpacks and headsets, so there are**

**no awkward trailing cables. Instead, movement boards make you think it is the environment that is shifting, while haptic handsets allow you to participate in the action.’**

Having just booted out of WeplayVR, an out-of-home pop-up style VR attraction offering a fully immersive experience set in a temple (think Indiana Jones), I can’t imagine why you wouldn’t want to dive the deepest oceans, step on to the moon, experience the pyramids or visit Pompeii (especially during the earthquake). This technology just keeps on giving and the opportunities are immense, especially in education. Having been involved in games for education for many years I am a big fan of the benefits of engagement that are afforded by experiential, playful learning, and by now I have seen many forms of it. But even if you haven’t played simulation games you will likely have visited a planetarium, looked up and said “Wow”.

Some companies are now expanding the VR experience to physical training and, to be sure, we always used to say in the “serious games” industry that simulations allow you to experience and familiarize yourself with dangerous and complicated scenarios in a safe environment. We all know about flight simulators, but AI Solve, an innovative UK based high-tech company, have been sponsored by Facebook to simulate child resuscitation in virtual reality, and you don’t get more scary and pressured situations than that. This training is being used with remarkable success in the Children’s Hospital Los Angeles. OK, so most

**‘Virtual reality experiences are “Wow” multiplied by a thousand. Hours later the VR experience was replaying in my head even though it was only 5 minutes long. I can still see the temple walls, the scorpions, the pit of fire.’**

training does not need VR. But I know which I would rather choose between a pilot or doctor who had never used the simulation and one who had.

Having developed Mandela27, a hybrid digital/physical exhibition, three years ago, I have been waiting for VR to mature. As part of this exhibition I developed an open source, mobile, pop-up version of Nelson Mandela’s Cell which toured Europe and South Africa. Based around a physical replica of Mandela’s cell on Robben Island of the same dimensions, it incorporated several digital installations including photographs, 360 videos and a “serious” digital game. All the resources were made freely available online for any community to download and use.

Meanwhile, where I work at Coventry University, we have just installed our own micro-museum dedicated to the polymath and engineering pioneer Frederick Lanchester. This exhibition contains physical and digital displays of his life and works, and this time we made use of augmented reality and digital games to bring his inventions to life. For me, the next major step for VR is going to combine with the development of highly flexible and transportable learning spaces that are capable of taking culture out of the museum and into the heart of the community. Even better if the community can decide how to use the virtual reality spaces

themselves, as they could with the Mandela27 open-source pop-up.

**‘Ideally, what I would like to see is this technology being used to democratise learning by means of modular hackable exhibitions that can be remodelled and reordered to suit each community and their specific needs.’**

In this respect, I see virtual reality as having enormous potential for learning. At the moment it is just beginning to come of age, with thousands of small creative companies beginning to produce content as part of the Zuckerberg Galaxy. Within the next two years, however, virtual reality will be at another level. There will be new technology, VR glasses and audio, but without backpacks and headsets. In fact, some of these experiences are already available in the entertainment world now.

While it may be some time before you get to try this high class virtual reality experience yourself, when you do, you will be blown away – really!

**Article by Jacqueline Gawston, Deputy Director, Disruptive Media Learning Lab**