Summary

Solihull College and University Centre’s investment in high-tech facilities for a degree course in game design and virtual reality has prompted innovation on a wider scale, as awareness of the value of virtual (VR) and augmented reality (AR) technologies has spread to level 2 and 3 courses. Now embedded in a number of subject areas, the innovative tech is making a real impact on learner engagement.

This case study outlines the value that VR and AR can bring to mainstream education and training but also gives an insight into how effective procurement and resource management can help colleges invest in more costly new technologies.

Organisation

Solihull College and University Centre is a large general further and higher education college in south east Birmingham offering courses from entry level to degrees. Early in 2018, Stratford upon Avon College merged with Solihull to form a new combined college for the region.

Solihull’s campuses offer well-equipped open-access centres for independent learning and the college’s commitment to digital learning extends across all aspects of the curriculum.
The challenge

Learners opting to continue their education in a further education college, particularly those resitting English and maths, need a learning experience that is significantly different from school. But with financial pressures growing on further education colleges, innovative ways of engaging and inspiring young learners have to be achievable and sustainable. So how can colleges make the best investment in technology to improve learner outcomes?

Keeping agile

Solihull College and University Centre’s adoption of innovative technologies on mainstream courses is a story of agile responsiveness to opportunities occurring almost incidentally within a framework of good teaching and learning.

The college does not mandate use of technology. Instead the learning technology team consult with departmental heads over what works best for their staff then monitor how individual tools and platforms are used – a process that enables departments to work ‘smarter,’ ultimately enabling more innovative practice to flourish. The approach taken by the college’s learning technologies team illustrates how this works.

As a newly merged college, the team has worked with both network and IT departments to undertake an infrastructure review which resulted in Moodle being retained as the college-wide VLE, and less well-used subscription systems being earmarked for cancellation or replacement. ClickView for FE colleges, for example, has replaced video streaming services, and non-profit making systems such as Google Classroom have been explored to support collaborative learning and teaching.

Reza Mosavian, head of learning technologies at Solihull College and University Centre, explains how monitoring cost-benefit ratios while putting quality first enables a college to make the right decisions about procurement:

“Many will know the difficulties of balancing cost and quality. Where possible, at Solihull we look for edtech which is open source then compare it with commercial tools to judge which is the most impactful – always with the aim of improving standards and increasing digital skills.”

Reza Mosavian, head of learning technologies, Solihull College and University Centre
Seizing the moment

Keeping agile also means making the most of any opportunities that do arise. Once funding for Solihull’s VR lab had been secured from the local enterprise partnership, staff were keen to experiment with the state-of-the-art equipment. Expecting the cost of scaling up the provision to be made achievable with care taken over procurement in general, the learning technologies team ran a number of training days for staff teaching level 2 and 3 courses, and invited suggestions as to how VR and AR might be deployed to improve learner outcomes on their courses. Among the departments responding were public services, animal care, English and maths, science and travel and tourism.

Experience gained from using VR and AR technologies in the games design degree course enabled the learning technologies team to arrive at the best solution for each department. The more costly and sophisticated tools such as Gear VR, Oculus Rift and Vive™ were not an option for most budgets, but cheaper alternatives, such as Google VR headsets combined with smartphones or 360°degree video cameras such as the 360fly, could spark the interest of younger learners as well as demonstrate a more realistic investment approach.

Teachers attending the training days were receptive to exploring ways in which the new technologies might add value to learning and teaching, and many of the ideas they put forward were implemented. Examples of VR use now in the mainstream curriculum include:

- A partnership with West Midland Fire and Ambulance Service is enabling staff teaching BTEC public services courses to create virtual accident and emergency scenarios in which learners enact roles and experience real-world responsibilities without risk or harm
- GCSE English students are using VR to develop understanding of the fictional world of their literary texts, and to bring a more imaginative quality to their written work
- 360° videos of animals in the college’s animal care centre are enabling learners on animal care courses to monitor their behaviour. Information inserted via augmented reality (AR) aids recall of essential facts.

Further exploration of AR has seen results such as:

- Science students getting to grips with the periodic table
- Improved awareness of systems and services. As an example, the number of learners completing a health and safety awareness quiz has greatly improved since learners could use their smartphones to access an AR experience via a poster. Twelve times as many learners have completed the quiz than in previous years.

Outcomes

Although staff at Solihull do not claim a direct link between VR and AR and improved attendance or achievement, it is clear from learner satisfaction surveys that the technologies increase learners’ engagement and enthusiasm for learning.

In addition, AR and VR resources can provide opportunities for differentiated, self-paced learning and revision which hold the interest of younger learners. The reduction in paper usage also benefits the college as well as the environment – but the real value of the technologies lies in their ability to bring learning to life:
“We see teachers here today bringing the impossible into the classroom.”
Reza Mosavian

Tips

- Good communication channels between senior managers and learning technology staff enable digital initiatives to flourish

- Investment in innovative technologies should not be viewed as luxury – these can be crucial to achieving targets for improved learning outcomes

- The desire to innovate, however, has to be balanced against factors such as the cost of new technology and the willingness of staff to find time to experiment and practise – under-utilised edtech benefits no one

- Ensuring teaching staff have access to expert support combined with ‘time out’ to innovate is the best way to achieve high-quality practice.

Find out more

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