

Futuristic experiences bring new dimension to the classroom

Digital worlds where students can learn inside a virtual body or treat a simulator patient which responds to their treatment are bringing cutting edge learning to health, science and social care at Leeds City College.

The department is investing in futuristic learning resources to create life-like real world experiences for students as part of a £6.9 million injection of government cash into West Yorkshire colleges.

Using the latest in artificial intelligence, augmented reality and virtual reality, learners will find themselves in environments which replicate real scenarios and patient responses, bringing a whole new dimension to their learning.

Healthcare teaching teams at Quarry Hill Campus are exploring a multitude of possibilities that the new equipment and facilities will provide for young people going into healthcare professions.

Gen Martin, lead programme manager for teaching, learning and development, said the innovative new equipment will make complex subjects more accessible and enjoyable: "As a teacher committed to digital innovation at Leeds City College, it has been really exciting getting involved with all the recent developments in both Artificial Intelligence and Virtual Reality. We have attended professional development events focused on the potential of both AI and VR in education.

"We experienced firsthand the immersive capabilities of VR exploring how these technologies can create dynamic, engaging learning environments that will transform the education we provide."

The money has been provided by the Department for Education as part of the Local Skills Improvement Fund (LSIF) to create opportunities for more digital innovation in the classroom.

Assistant Principal for the School of Social Science at Quarry Hill, Sheila Lucciarini says the new teaching methods will enable the department to prepare students to fulfil vital roles in healthcare across Leeds: "We are working in collaboration with healthcare providers in the city to fill



Gen Martin tries out the new virtual reality headset which will bring a whole new range of experiences for learners at Quarry Hill Campus.

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roles where there is a skills shortage. This new technology will help us to prepare young people for the workplace now and in the future.”

Investments at Quarry Hill include a Metaverse learning environment for learners to use online, a CPR kiosk where students can learn cardiopulmonary resuscitation (CPR), an interactive mannequin to take the place of a patient, online platforms and immersive rooms.

Gen said: "As we integrate these technologies into our curriculum, I am excited about the new dimensions they will bring to teaching and learning. By embracing these advancements, we are not just preparing students for the future, we are actively shaping it."

The government funding is designed to develop dig-

itised training for key areas including health and social care, creative industries, construction, manufacturing, financial technology and the wider digital development of teaching and learning.

Project Director of the West Yorkshire Consortium of Colleges, which coordinated the bid for funding, Joanne Patrickson said: "This is a fantastic opportunity for the region to advance the skills needed in technology to keep up with industry changes.

"Not only will the funding of new equipment help to improve the learning experience in colleges, the collaboration between our partners will grow the skills and knowledge of the teaching staff who can deliver relevant training to the current and future workforce."

Students step into a simulated world to learn about healthcare

Videogame-style scenarios in hospital wards, doctors surgeries, hospices, care homes and patients' homes will become part of the everyday activities in health science and social care classes at Quarry Hill Campus.

The Metaverse learning platform takes students into realistic work scenarios where they can take patient observations such as temperature, pulse and blood pressure, record them on care plans, decide when it is critical to report concerns to a supervisor and receive online feedback on how effective they have been.

Health science and social care teacher Samantha Harnell said: "From the training I have been on it has a lot of uses including giving second years an insight into what they have to do before they do a task with a patient such as putting on personal protective equipment (PPE). It will help them remember what to do."

Where it is difficult to get enough work placements for all students in sensitive areas of health and care, the virtual environments and augmented reality will enable them to experience realistic work

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places where scenarios can be set in a simulated world.

School of Social Science Assistant Principal Sheila Lucciarini said: "Students can experience the difficult scenarios they will come across in their careers and be able to learn how to relate the theory they are learning in the classroom to a patient scenario. This builds knowledge as well as empathy, critical thinking, communication and working with others."

Teachers can view each student's progress and provide feedback on their achievements and areas for improvement.



T level health students (L-R) Kayden Myers (17) and Khaiyahe Jones (18) learning using the Metaverse learning scenarios with their teacher Samantha Harnell (right).



Level 2 health and social care students Fatima Batool (16), Eniola Taiwo (18) and Treasure Ayodele (17) learn lifesaving skills using the new CPR kiosk with their tutor Stephanie Chan (left).

Lifesaving learners are getting to the heart of the matter

Would you know how to restart a heart?

Leeds City College health students are being trained in Cardiopulmonary Resuscitation (CPR) techniques using an interactive kiosk in their classroom.

The kiosk contains an interactive mannequin which uses innovative tech-

nology to demonstrate the circulation of blood to the brain when effective compressions are performed, giving live feedback to the students.

Level 2 health and social care student Eniola Taiwo (18), who is hoping to become a nurse, said: "I've never done CPR before but this will help me to learn."



Tutor Gen Martin works with level one health learners Celine Chinweze (17), Safiyyah Laher (17), Ella Egbon (17) and Bethany Smith (16) who will soon be able to use new online platforms in their learning.

App-style learning for short courses and revision

Healthcare students will soon be able to use their mobile devices to complete short courses or revise topics for exams using new online platforms being developed by teachers at Quarry Hill Campus, Leeds City College and Shipley College. Topics such as

dementia, psychology and health and safety will be brought to life with podcast-style interviews, audio case studies and quizzes to test learning on a new e-learning platform which learners will be able to log on to anywhere, in or out of the classroom.



Health T level students Melissa Yalcin (17), Charlotte Hetherington (16) and Livia Ahmed (18) prepare to treat a simulator patient at Quarry Hill.

Learning revolution with cutting edge patient simulator

A new interactive mannequin which mimics illnesses and allows students to check their pulse, heartbeat and other vital signs will be able to react to treatment and tell students how they are feeling.

The new patient simulator will offer features such as alternative skins in different tones or even geriatric skin, be able to blink and have a conversation with the learner using Artificial Intelligence (AI).

Deputy Head of Health, Science and Social Care Vicky Meehan said: "It will be programmable using AI and there will be cameras above the beds so that film of the treatment can be broadcast into classrooms for assess-

ment." Students already use mannequins to learn how to look after patients in hospital and other healthcare environments allowing them to apply what they have learnt about person-centred care and explore tasks that a clinician may undertake, before they go out on work placements.

The new one will have more lifelike features including blinking eyes and the ability to answer questions and react using AI.

It will be programmable with specific health conditions allowing the students to work together to put their care skills to the test.

"This equips the students to develop their skills and knowledge," said Vicky. "The

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use of interactive technology supports this fast paced and ever changing sector landscape allowing our students to gain valuable experience

and confidence before they enter the workplace."

T level learners have to complete 315 hours of work experience as part of their qualification so the new mannequin, along with other technological devices in the clinical skills room at Quarry Hill, will help to build a life-like situation and prepare them for their roles in a realistic setting.

Student Livia Ahmed said she thought the new mannequin and how it will be used in their lessons was incredible.

"It means we are doing more than just sitting in a classroom," she said. Student Melissa Yalcin said: "It prepares you for when you deal with a patient."



Teachers went along to Full3Sixty in South Kirby to experience immersive classrooms.

Immersed in learning

A classroom pod where the walls can become the inside of a body will soon become a reality for learners at Quarry Hill.

The fully immersive classroom, where a 360 degree projection creates a range of environments, will allow learners to observe clinical procedures, visualise complex body systems and much more including working

within environments such as a hospital room.

Head of Health Science and Social Care Fran Gouldsbrough said: "This will be crucial for skill development and understanding, which is currently restricted by risk assessments or age within the sector."

It is hoped the new pod will be in place in the autumn.