

EDUCATION: KnowledgePoint and The Glasgow bringing breakthrough 3D

Equipping students with the latest breakthroughs in 3D technology, The Glasgow School of Art's Danny Buksh and KnowledgePoint's Ray Brown open up about the new UAA partnership, the importance of the 3D Definitive Human project, and what's disrupting the industry

3D, VR and AR: the future for education



Education is changing. The sector now has the technology and tools at its disposal which enable personalisation, flexibility and learner-led delivery. These, when constructed in an integrated manner, and combined with adaptive and immersive learning techniques, have the potential to change forever the way people learn. Anything which requires visualisation of reality, or a 'created' reality, can benefit because these can be viewed together in real-time. Immersive experiences can help recreate the real-time interactions with the vital data companies and individuals need in their roles. It is particularly valuable in scenarios where physical practises embed learning - this can be performed without being in a physical location.

Earlier this year, The Glasgow School of Art (GSA) became KnowledgePoint's first Unity Academic Alliance (UAA) partner in the UK. With Unity, students have been given the skills needed to create new immersive experiences by harnessing the power of real-time 3D. Powering over 60 per cent of all AR/VR content, Unity offers enterprises the opportunity to reinvent the way they adopt these technologies.

The School of Simulation and Visualisation (SimVis) at The GSA is a learning and research environment that exploits the interface between science, technology and the arts to explore imaginative, novel and creative uses of advanced 3D digital visualisation and interaction technologies. The ability to offer its students Authorised Unity workshops looks to enhance their courses and fit in with the programmes they are already running. Students will be able to gain access to high-quality, up to date learning material maintained by Unity and instructors will also be certified by Unity.

Danny Buksh, 3D Modelling & Digital Sculpture lecturer at The GSA said, "the Unity Academic Alliance is an opportunity for the School of Simulation and Visualisation to make the most of the skills it has developed in Unity in education and from our work on applications that have been produced for commercial and research purposes. SimVis can look to offer students specialist education in Unity development by skilled staff on all of our UG and PG courses. We have a number of instructors working towards becoming accredited UCI's while continuing to support our students through this testing time."

Unity eases students into the more demanding technical aspects of 3D, AR and VR development whilst allowing them to concentrate on the creative and artistic aspects of their work. Key to the new partnership is employability and as a result, The GSA has chosen its first Unity Student Ambassadors, chosen based on their achievements. The ambassadors receive training, access to industry events, and join a global community of other Unity Student Ambassadors to further the Unity mission to democratise game development and XR.

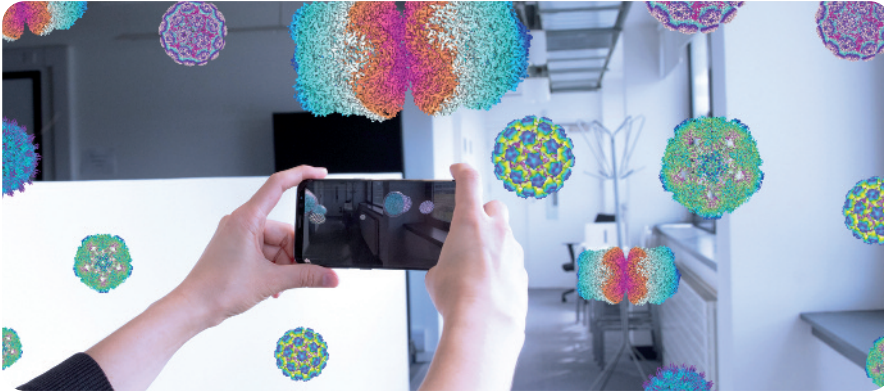
Ray Brown, Sales and Marketing Director, KnowledgePoint said, "we know that digital skills are critical to economic and industrial growth and that there is significant demand for the skills developed through the Unity programs. The Unity Academic Alliance program is for educational institutions who want to embed Unity learning within their curriculum. The Unity Authorised Training Program is for commercial training centres or departments, to train professionals. This training is more likely to be self-contained, rather than within a longer program. Both streams can enable end-users to achieve formal Certification, with the UATP program taking them to higher levels.

"At present, we have three UK educational institutions in the process of becoming/already a Unity Academic Alliance Partner. We are talking to several institutions within the UK and EMEA and we are keen to recruit more. Most are already teaching Unity within their curriculum and see the program as a cost-effective way to embed Unity assets, as well as to work more closely with Unity to develop their programs and enhance their learning."

Danny said, "the 3D Definitive Human Project is an exciting opportunity for SimVis to share the vast information it has researched in anatomical visualisation. The application is a highly detailed model of the human body that has been created to exacting standards of accuracy allowing communication on a number of fronts for the medical sector. We hope that it will be used by many students and professionals in creative and exciting ways. With such a large data set it is key that the method of interaction is easy to pick up and use. The application allows both novice and experienced users to get the most of out the interactivity."



School of Art technology to students



Developed for educational and professional settings in mind, the SimVis strategy for engagement and dissemination is to develop a human dataset that is capable of being viewed by multiple users, through a variety of devices and at different scales. Following an initial development phase, the application has now been distributed to various learning facilities across Scotland.

Danny said, “we are looking to offer the 3D Definitive Human to all students in Scotland and hope that it can benefit them during this testing time. We hope that the Definitive Human Project will continue to develop and become an invaluable asset. A version of the project can be viewed in both AR and VR which allows for very exciting and engaging interaction.”

With 3D technology becoming firmly set in the world of education, and digital and online technologies become the norm, it’s still important to consider what works best for the learner so digitalised learning materials need to live seamlessly alongside live/virtual learning options. In light of this, ‘learning stacks’ are emerging from enterprise systems. These best of breed platforms combine to give seamless, efficient and effective learning experiences. Other key areas for the education sector to invest in over the coming years include VR, AR, and gaming.

Ray said, “Unity has a very strong position in the gaming and media and entertainment industries with around 80 per cent of users coming from these industries. Mastering 3D graphics or real-time 3D skills can provide a boost to early-career professionals. Nearly a quarter (23%) of job openings for 3D graphics

skills and a fifth (19%) of job openings calling for real-time 3D skills are entry-level positions. Mastering 3D graphics skills can lead to a salary premium of 24 per cent over other entry-level jobs – and mastering real-time 3D can lead to a salary premium of 45 per cent above other entry-level jobs.”

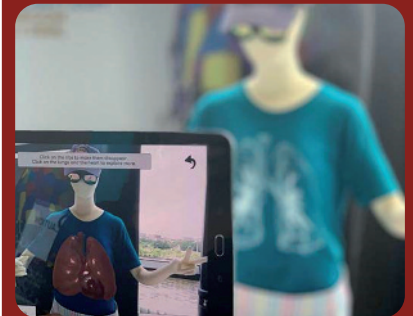
Having been appointed Unity Technologies Learning Services Distributor in Europe in 2018, KnowledgePoint has been responsible for the growth and management of Unity’s network of academic and commercial training partners, as well as associated instructors. KnowledgePoint also provides support services for the learning industry including print services and digital services. Within its digital services business, MyLiveBook offers the benefits of traditional learning materials in digitised form. MyLiveBook works seamlessly alongside other learning platforms to deliver the same benefits of traditional learning materials, but through an enhanced, digitised experience.

Ray added, “our business has evolved over the last 20 years, continually developing and delivering solutions to help our customers and partners to meet the needs of their learners and learning networks. We like to think we allow our learning industry partners to focus on what they’re good at, developing and marketing software, designing and developing training sessions, for example. We take the pain away by providing a range of complementary support services which we believe make the whole/overall learning experience better. At the end of the day, what’s important to us is ensuring that learning experiences are enhanced, and people are better able to achieve their goals and progress in their careers.”

What should institutions be investing in now?

The key to success in the future lies in ensuring a curious, or growth mindset across institutions and organisations. Ultimately, learning is about people; it’s about helping them to improve and become more productive. Institutions should be considering how, why and where their students want to learn. They should be considering the role technology plays in supporting this process.

They should be looking at their learning tech stack; a range of different platforms and tools, organised together to support the learning experience for their students. The elements in the tech stack must combine to support different development needs at different stages of the student journey. Institutions need to be embracing the right tools and technologies to support their students and their learning experiences, particularly in what is a highly competitive market.



To do this they need be clear on what they’re trying to achieve - the context, requirements and desired outcomes for the learning. Only when these are clearly understood, can the right technologies be selected, the learning is created and delivered, and the right learning materials delivered at the right time.

For more information

www.gsa.ac.uk and
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