Journal Article

Higher education's role in shaping the future of policing through technology

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INNOVATION:

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Immersive technologies such as virtual and augmented reality are increasingly important in society, as well as transforming how police forces train, adapt, and respond to challenges; Wrexham University Professional Policing Lecturer Darren Jacks – a former police officer with 30 years of experience – believes higher education institutions have a vital role to play in partnering with police to leverage the maximum benefits from these new technologies.

In the evolving landscape of policing, the integration of advanced technologies such as Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR) and Cave Automatic Virtual Reality (CAVE) is no longer just a novel approach but a necessity.

These immersive technologies are transforming how police forces train, adapt, and respond to real-world challenges. While law enforcement agencies across the UK have started to adopt these tools, higher education (HE) institutions are uniquely positioned to take on a pivotal role in developing, hosting, and advancing these innovations.

By fostering collaboration between academia, technology developers, and the police, universities can significantly contribute to the future of policing.

The role of HE in technological innovation

Universities have long been at the forefront of research and development, leading to significant breakthroughs across a range of disciplines.

In the realm of policing, HE institutions are ideally placed to lead the development of cutting-edge immersive technologies. They offer a rich ecosystem of research expertise, technological infrastructure, and collaborative opportunities that can drive innovation in police training and operations.

One of the core strengths of universities is their ability to bring together multidisciplinary teams. By combining expertise in fields such as computer science, psychology, criminology, and law enforcement, universities can create tailored solutions that meet the specific needs of modern policing.

For example, researchers in psychology can work alongside developers to create VR simulations that not only replicate high-pressure situations, but also offer insights into the cognitive and emotional responses of trainees.

This type of collaboration ensures that immersive technologies are not just technical innovations but tools grounded in research that enhance learning outcomes.

Moreover, universities can host technology centres of excellence, providing the space and resources for start-ups and tech developers to collaborate with law enforcement agencies.

These partnerships can accelerate the development of new technologies while offering police forces access to cutting-edge innovations that might otherwise be out of reach due to budgetary constraints.

Immersive technology in police training: The academic advantage

Policing is a profession that relies heavily on experiential learning. Officers need to develop situational awareness, decision-making skills, and emotional resilience to respond effectively in high-stress environments.

Immersive technologies such as VR, AR and CAVE offer the potential to revolutionise police training by providing realistic, repeatable, and adaptable scenarios that mimic real-world conditions. Universities, with their research capabilities and advanced technological infrastructure, can lead the way in developing these training tools.

HE institutions can create and host VR simulations tailored to the specific training needs of police forces. For instance, universities could develop VR modules that simulate crowd control, tactical decision-making, or hostage negotiation situations. These simulations can be adjusted based on real-time feedback, making the training experience more personalised and responsive to the individual needs of officers.

The development of such scenarios not only improves training outcomes but also enhances the psychological readiness of officers to handle complex and dangerous situations.

Additionally, universities can leverage their connections with other disciplines to enhance the realism of these simulations. By working with criminologists, forensic scientists, and psychologists, immersive training tools can incorporate elements of criminal behaviour, forensic investigation, and mental health response.

This multidisciplinary approach ensures that police officers are trained not only to respond to physical threats but also to engage sensitively and effectively with vulnerable individuals in the community.

Collaboration with law enforcement: A pathway to innovation

Collaboration between universities and police forces is essential for the successful development and implementation of new technologies. HE institutions can act as bridges between law enforcement and the tech industry, fostering a collaborative environment where innovative ideas can be tested and refined.

Police forces, for example, can provide valuable input on the practical challenges officers face in the field, while universities can work on developing technical solutions to address these challenges.

Universities can also serve as testbeds for new technologies, hosting pilot programmes that allow police forces to trial immersive tools before adopting them on a larger scale. This arrangement not only helps the police service assess the effectiveness of new technologies, but also allows researchers to gather data on how officers interact with these tools, leading to continuous improvements.

Furthermore, universities can facilitate knowledge sharing by organising workshops, conferences, and seminars where academics, law enforcement professionals, and technology developers can discuss the latest trends and innovations in immersive technology for policing.

These events foster an exchange of ideas and best practices, ensuring that both the academic community and police forces are aligned in their goals and approaches to using technology for law enforcement.

HE as hosts of technological development

Beyond their role in developing immersive technologies, universities are also well placed to host these innovations. Many universities have access to state-of-the-art facilities, such as virtual reality labs, 3D modelling studios, and simulation centres, which can be used to develop, test, and refine police training tools.

By serving as hubs for technological development, universities can ensure that immersive technologies are continually updated and improved, based on the latest research and feedback from police users.

One of the most exciting opportunities for higher education institutions is the potential to integrate immersive technologies into their own policing and criminology programmes.

By embedding VR and AR tools into their curricula, universities can offer students a hands-on experience with the very technologies that are reshaping modern policing. This not only enhances student learning but also provides a pipeline of tech-savvy graduates ready to enter the law enforcement profession.

Moreover, universities are uniquely positioned to explore the ethical implications of using immersive technologies in policing. Research into the psychological effects of VR training, the risks of over-reliance on technology, and the potential for bias in AI-driven simulations can all be conducted within academic institutions.

By leading these discussions, universities can ensure that new technologies are implemented in ways that are ethical, effective, and aligned with the principles of justice and equality.

The future of university-police collaboration in technological innovation

Looking ahead, the role of HE in developing and hosting new technologies for the police service is only set to grow. As the demand for more advanced and flexible training solutions increases, universities will become key players in shaping the future of law enforcement education and practice.

To maximise the impact of these collaborations, universities will need to invest in building stronger relationships with law enforcement agencies and technology developers. This may involve establishing formal partnerships with police forces, seeking funding for joint research projects, or creating dedicated centres for policing innovation.

By fostering a culture of collaboration, universities can ensure that their technological developments are aligned with the practical needs of police forces and are scalable for widespread use.

In conclusion, HE institutions have a vital role to play in the development and hosting of new technologies for policing. By leveraging their research expertise, technological infrastructure,

and collaborative networks, universities can lead the way in creating immersive tools that enhance police training and operations.

These partnerships not only benefit the police service but also position universities as leaders in technological innovation for public safety. As the challenges of modern policing continue to evolve, the collaboration between HE and law enforcement will be crucial in ensuring that officers are equipped with the skills and tools they need to protect and serve their communities.

Darren Jacks is a Lecturer in Professional Policing at Wrexham University. A retired police officer with 30 years of service in North Wales Police, Darren brings extensive frontline experience to his teaching. Specialising in evidence-based policing and immersive technology, he collaborates with the police service and the technological sector to develop practical and innovative learning tools for students. Darren holds an MA in Police Studies from the University of Exeter, and completed his Post Graduate Certificate in Education at Wrexham University.

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