

Virtual reality CSI – examining crime scenes in cyberspace

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Background:

Simulated crime scene investigations (CSI) in forensic science education has been classically performed 'on the field', which involves setting up physical sites with tangible props as 'evidence'. Published virtual CSI modules require the use of specialised equipment such as virtual reality (VR) simulators, which are inaccessible to home users. The necessity for e-learning platforms in lieu of the COVID-19 pandemic provided an opportunity to run a virtual CSI workshop, in collaboration with Witty Charman CoTS Sdn Bhd.

Method:

Two weeks before the workshop, 70 Biomedical Science and Medical Biotechnology Semester 5 students from the International Medical University were instructed to design virtual crime scenes using online tools such as Smartdraw® and Microsoft Powerpoint® collaboratively in groups of ten. The Microsoft Teams® workshop consisted of 4 consecutive modules: (a) Introduction to CSI (synchronous plenary), (b) Cross-examination of virtual crime scenes, (c) Virtual Reality (VR) CSI (developed using the ImmerseYou360 software), and (d) Discussion of findings. Facilitated group discussions were conducted in separate Teams channels and students reconvened in the general channel for debriefing. The workshop concluded with a live CSI demonstration using the proprietary digitized incident report (DIR) software on an authentic crime scene.

Results

Based on course evaluation data, student ratings ($n = 16$) were generally positive at $3.06/4.00 \pm 0.574$ on delivery and $3.38/4.00 \pm 0.500$ for overall satisfaction of the module. Open comments included '... very interactive, fun and topics-related...', 'Excellent presentation and discussion on DIR and Virtual CSI, really appreciated the insight into the different aspects of modern forensic investigation', '...CSI workshop was a good and interesting idea'. The duration was however inadequate for all groups to present their findings and perhaps should be conducted over multiple sessions, depending on cohort size.

Conclusion:

This immersive workshop merging VR simulation (without specialised technology), coupled with crime scenes designed by students, retained the essence of experiential learning critical for skills training in the forensic science module while addressing the higher echelons of the Bloom's taxonomy.

Keywords: *Analysing, Evaluating, and Creating.*

