

Classics and 3D digital modelling at the University of Reading

Book or Report Section

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The programme continues with the Friday Discovery Series, whereby students interact directly with researchers from the research community. Each researcher delivers an interactive session with the intention of exposing the students to aspects of research where they can hone their analytical and critical skills. An integral aspect of the programme is the Book Club, which allows students to interface with the Humanities. Each student is gifted a copy of the book of choice which is contextual and intentionally provocative. Their remit is to read the book in time for a discussion session with in-house researchers.

Students are required to submit an abstract, poster and slide presentation of their summer research for participation in the annual RCSI Research Day. They are encouraged to submit their work to conferences and for publication. The RSS has also empowered our students to create their own Research Conference: ICHAMS (International Conference for Healthcare and Medical Students; www.ichams.org), now in its fifth year. The concept of the RSS is intentionally flexible, providing a springboard for students to create opportunities that allow them to become more intimately involved in research.

Students benefit by taking active responsibility and ownership of their learning in their own research projects. They manage their experiences proactively, independently constructing their own knowledge. Putting the research they undertake into the context of their studies more widely, they can make connections between different elements of their learning and come to recognise the beauty in the persistence of becoming an expert.

Submitted by Dr Sarah O'Neill, Director of the Royal College of Surgeons in Ireland Research Summer School (RSS) and Senior Lecturer in the Department of Molecular and Cellular Therapeutics.

4. Classics and 3D digital modelling at the University of Reading

3D digital modelling offers a powerful way of visualising vanished buildings and places. A large digital model of ancient Rome created by a researcher, Dr Matthew Nicholls, proved popular with students, who often asked about the research and modelling process underlying the final, visual results. A scheme was developed, funded through the University of Reading's Undergraduate Research Opportunities Programme, to establish the potential for working with students as research partners and for teaching them the necessary software competence.

This series of pilots, which also involved talking to software experts and other 3D educators worldwide, worked well. Undergraduateresearched 3D reconstructions, for example, were broadcast in a BBC TV documentary on Roman Scotland, with the student researcher named in the programme credits.

Dr Nicholls then developed an undergraduate module in which students learn to use simple but powerful 3D modelling software (called SketchUp) to create reconstructions of buildings from the nearby Roman town of Silchester. This connects to the University of Reading's own extensive excavation work and field school at the site. The module encourages the development of advanced computing skills that are unusual within the context of a UK humanities degree, and which have proved useful to more than one student in subsequent job interviews.

Although this module is radically different in its content and assessment from others offered by the Classics department, its leader worked with external examiners and colleagues across the University to ensure parity of intellectual depth and rigour by requiring, for example, a written commentary to accompany the digital work, explaining the aims of each student's model and the choices made in its construction.

The resulting module has proved popular with students and has gathered substantial attention within and beyond the University: this work led to Dr Nicholls winning the national Guardian/Higher Education Academy Teaching Excellence Award in 2014. This educational work also contributes to Dr Nicholls' academic 'outputs': he regularly uses his own digital models in commercial, broadcast, and public-facing contexts.

Case study submitted Dr Matthew Nicholls, Associate Professor and Roman historian in the Classics Department of the University of Reading.

5. Access to research through the virtual world at the Open University

The Open Science Laboratory at the Open University in the UK is an online laboratory that brings practical experimental science to students wherever they are. The laboratory uses a mixture of experiments and investigations based on on-screen instruments, remote-access experiments and virtual scenarios using real data.

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