

Using digital learning environments to enhance student experience

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The Higher Education sector is grappling with ways to engage students with their learning and improve outcomes. Increased cohort sizes, a widening variety of people participating in education and the increased emphasis on transitioning students successfully to university present challenges when employing traditional learning approaches. In Biomedical Sciences this is a particular issue as students often struggle with the large number of detailed and complex terms involved in this subject area, which are difficult to deliver engagingly via the large scale lecture. One solution is to introduce **new technologies** such as **digital learning environments** to the classroom that facilitate alternative forms of teaching, learning and engagement and are useful for both students and teachers.

This project trialled an online learning platform, McGraw-Hill's Connect, with the first year undergraduate Biomedical Sciences cohort, as a complementary tool to aid learning, explore different approaches to teaching and improve engagement and attainment. The platform was used to provide a core text, with accompanying interactive learning support in the form of quizzes, labs and anatomy animations. Accessible on and offline, the platform's features included **adaptive learning technology** that reformulates questions in different ways until the student has both learned the topic and is confident in their answer. Connect was used for formative learning throughout the module, with **weekly assignments** to allow students to study before and after lectures and encourage them to grasp concepts and terms that might be more challenging for first year students. Connect was also utilised to **monitor student engagement** throughout the trial, with the possibility to email less active students directly through the Connect dashboard. This was followed up in Brunel Tutoring sessions, enabling communication with learners struggling to use the platform, and the opportunity to address these issues. Additionally, the platform was employed during **near-peer teaching sessions**, where third year students devised and led workshops with the first year students. Lastly, the tool was used in **marketing** the course, demonstrated to prospective applicants at open days to show the university's commitment to leading edge technologies.

Student feedback on the sessions suggested that 84% of learners agreed that Connect made it easier to understand basic concepts. Feedback particularly stressed its relevance for revision. Monitoring revealed usage of the tool varied through the year, with many students engaging less with formative tasks in term 2. However, this was offset by increased usage during exam revision time. Improved student outcomes were difficult to evaluate year on year, as new examination methods had been adopted. However, there was a zero per cent failure rate for students who participated in the exam. Qualitative feedback from students on Connect gathered as part of Your View surveys reported high levels of engagement with the tool. Many students identified it as one of the most positive things about the course.

For students, Connect proved to be a more engaging learning environment, and an effective tool for revision. For teachers, it complemented learning in the classroom, worked effectively to enable more active learning approaches and offered dashboards and tools to manage workload and evaluate learning. Going forward the limitations of the platform around its one year licensing model and the inability to quickly create more curated textbooks across the programme should be addressed. The Teach Brunel trial offered a positive insight into this tool and its possibilities for learning. The success of the project was such that the platform has since been adopted by other departments and an extended trial is underway.