

Case Study

Qatar University

College of Arts and Sciences,
Department of Chemistry and
Earth Sciences



About the University



Professor of Biochemistry,
Lakshmaia Sreerama

Founded in 1977, Qatar University was the first established institution for higher education in Qatar and is recognised for its high quality education and research and as a leader of economic and social development. Located in the north of Doha, it is home to more than 12,000 students and comprises nine colleges, the largest of which is the College of Arts and Sciences with 16 academic programmes.

The Challenge

Professor of Biochemistry, Lakshmaia Sreerama was keen to offer a technology-enhanced, transformative teaching and learning experience for his first year Chemistry students. He wanted a course which could be used both for online and blended learning.

“To do this it is very important to understand your students,” explained Professor Sreerama. “Students nowadays are very different from their predecessors. My generation was generally accepting of the traditional lecture method – we would sit down, listen, take notes and build on that. But today’s students, on the other hand, are brought up with technology, are more visual learners and multi-taskers. They want to cut and paste, rather than explore and investigate, and their attention span is very short. They are button-clickers and picture capturers.”

“Certainly we know that during a traditional lecture, with the instructor as the central focus of information transfer, there is usually very little exchange between the instructor and the students. This is further compounded by the fact that while the average instructor speaks at a rate of 120 words per

minute, the average student writes 20 words a minute, so even the best students will typically have to choose between listening or taking notes – and, as indicated above, their note-taking skills are very poor.”

“We also know that students typically have an attention/listening span of less than 20 minutes. So I felt it was important to move away from a traditional model and take a more transformative approach.”

“As Slavich and Zimbardo¹ define it, ‘Transformational teaching involves creating dynamic relationships between teachers and students and a shared body of knowledge to promote student learning and personal growth. From this perspective, instructors accomplish these goals by establishing a shared vision for a course, providing modelling and mastery experiences, challenging and encouraging students, personalising attention and feedback, creating experiential lessons that transcend the boundaries of the classroom, and promoting ample opportunities for perfection and reflection’. So how can we achieve this?”

¹ Slavich, G. M. and Zimbardo, P. G. (2012). Transformational teaching: theoretical underpinnings, basic principles, and core methods. *Educational Psychology Review* 24: 569–608.

The Solution

“I believe the best approach is to use technology in teaching and learning to increase active learning among students.”

“By providing access to content online it is possible to engage students via group work, discussions and problem solving. Students listening more intently will retain more and thus improve course performance.”

Prof Sreerama chose McGraw-Hill Education Connect® – a digital teaching and learning environment that saves students and instructors time, while improving performance over a variety of critical outcomes. It supports students by helping them to test their understanding as they go, building confidence and knowledge every step of the way. Sitting within Connect is LearnSmart – an interactive study tool that adaptively assesses students’ skill and knowledge levels to track which topics students have mastered and which require further instruction and practice. Based upon student progress, it then adjusts the learning content based on their knowledge strengths and weaknesses, as well as their confidence level around that knowledge.

“Each module also includes an assessment section where students can find homework, quizzes, practice quizzes with deadlines etc., again all integrated into Blackboard.”

“By integrating e-resources into my course it was easy to transform teaching and learning. The e-book can be customised, students can work in their own way on LearnSmart, and I can set homework using Connect. We have organised the content into modules to eliminate any confusion for students. Each module, linked to Blackboard, includes the relevant chapter from the e-book and a range of e-content including lecture notes or a lecture recording, reading materials, summaries and worksheets.”



The Results

“Key among the advantages for Higher Education Institutions is that you can increase student success – I have evidence of much more positive experiences. It can definitely increase the rigour in the classroom. It better addresses students’ needs; it can be a tool for scheduling classes, especially useful for high-demand and large classes. Administrative functions, such as grading and class rosters, are all automated.

“The main advantage of Connect and LearnSmart for students is that it is available 24/7. You are providing access to content any place, any time on multiple devices.”

“Students know their deadlines, and can easily check them, allowing them to work when they want to. It is a fail-safe technology that really engages students.”

Outcomes: Student Performance

