

their study of this subject, and also find other aspects of anatomical study (embryology, gross anatomy and pathology) challenging later in the program.

Learning analytics data has indeed demonstrated that success in the initial cell biology module (exam score >74%/D) is linked to success in the gross anatomy module that follows ( $P < 0.05$ ), irrespective of previous study. This strongly suggests that improved engagement and success within year 1 cell biology could lead to improved learning outcomes for students in other aspects of anatomical science, too.

Increased cohort size in the medicine program in the last 5 years has led to decreased study time in laboratory classes for students, and in 2016 the cell biology teaching team developed a series of instructional cell biology videos to supplement students' private study. Preliminary data collected on the use of these resources have demonstrated a positive student response. Students reported that they found the ability to review materials outside of class highly beneficial and the end of semester exam results average was improved for this module (compared with 2014 results).

A project that aims to embed course-wide technology-enhanced learning approaches into the medicine program will begin in 2017 with the aim of improving student engagement and student performance. Based on our findings so far, an E-book for delivery of the cell biology module has been developed to allow students to progress their knowledge at their own pace, review materials, extend and better apply their knowledge.

Ethical approval was granted from James Cook University to study and present this data.

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### **A3 Blended learning approaches for improving cell biology and embryology in year 1 medicine**

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Year 1, semester 1 of our MBBS program begins with a formal introduction in cell biology before this subject is expanded to look at the development and structure of the human body through systems. However, many students (an average 39% of students in 2013/2014) enter the program without having previously studied biological sciences in years 11 and 12. As such, students have reported that they struggle to keep pace in