

For stimulating multidisciplinary first year students to learn Anatomy for life via innovative, pro-active approaches to improve engagement and learning outcomes

1. OVERVIEW OF PARTICULAR CONTRIBUTION AND CONTEXT

The Discipline of Anatomy & Pathology at James Cook University (JCU) teaches Anatomy to health science students in their first year, with teaching consisting of lectures plus practical classes in the anatomy laboratory. As a traditionally trained human Anatomist, I have great passion for teaching Anatomy. I strive to provide a nurturing and stimulating environment for students that will make learning both enjoyable and meaningful.

In keeping with my reconstructed approach to teaching Anatomy, the laboratory becomes the key focus for action, where team activities encourage 'hands-on', multi-sensory learning by all students. However, the availability of prosections was very low when I arrived at JCU in 2008 (5 cadavers between 2003-7). Therefore, to support the learning of Anatomy and influence, motivate and inspire students to learn, I led a major overhaul of the Body Donor Program, that has resulted in 62 cadavers by April, 2010, translating to an extra 600 prosections for students. To ensure consistency and a team approach, I have also built up a team of well-trained tutors who have a significant impact in fostering small group teamwork in the laboratory environment, further encouraging students to develop self-directed learning skills. Tutors are trained to encourage maximum student engagement using the prosections and my innovative teaching approaches. Tutor numbers have grown from 2 (2007) to over 60 (2011), with higher retention rates as tutors appear to be engaged themselves, happier and motivated to improve their own Anatomy learning. Human cadaveric tissues and a team of

Students' perspective:

Of central importance is student learning of Anatomy. Analyses of student grades over the past six years (2005-2010) indicate that we are achieving a >80% increase in the pass rate since 2005, and that the fail rate has dropped by over 30% (Figure 1). I believe that this improvement is mainly due to my new teaching approaches that enable students to not only engage fully, but also to achieve better results due to undertaking meaningful and worthwhile tasks. This belief is strongly supported by a student survey in 2010 comparing the responses of 176 of my first year health sciences students to 155 first year medicine students (who do a separate, more didactic Anatomy course to mine), with regards to their perceptions of the course. This study found that my health sciences students were significantly more likely, than the medical students, to enjoy the subject, have higher quality learning experiences, have a higher level of interest in the course, believe the teachings to be more relevant to their later years and professional career, and have a higher level of interaction with both their peers and their teachers (Table 1). Backing this, my SFS data shows I have consistently received scores of 4.1-4.6 on the 5-point scale in questions regarding student interest, motivation and learning experience.

Table 1: Comparison of self-reported engagement scores between students enrolled in the Health Science Anatomy subject and students enrolled in the Medicine Anatomy subject (scored on 1- 10 scale)

Engagement variable	Health Science Anatomy subject n = 176 (mean± SD)	Medicine Anatomy subject n=155 (mean± SD)	p-value
Your overall enjoyment of the Anatomy subject	7.9 ±1.4	7.0 ±1.4	<0.001
The overall quality of learning experiences from the activities in the Anatomy subject	8.0 ±1.3	7.1 ±1.4	<0.001
Your general level of interest in Anatomy teaching activities	7.8 ±1.4	7.3 ±1.5	0.002

