

Team Based Learning to undergraduates at Deakin University

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HSE303 Exercise Metabolism is a 3rd year undergraduate unit grounded in physiological principles in the Bachelor of Exercise and Sports Science degree at Deakin University. The teaching team were of the view that the traditional lecture format delivery of the unit produced learning outcomes consistent with the lower levels of Bloom's taxonomy (Anderson & Krathwohl, 2001), in addition to low levels of student engagement. Team Based Learning (TBL) is an educational strategy involving individual and team learning with instant feedback, with students being motivated by this process to hold each other accountable for preparation and contribution (Sweet, 2012). Therefore, to improve critical thinking skills and student engagement, the unit team implemented TBL to the unit HSE303 in trimester 1 of 2012.

Students completed a questionnaire at the end of the unit, with a 98% response rate (N=112). 89% of students preferred the TBL format to the traditional lecture format, with the most common reasons being that it was "an engaging/interactive way to learn" that "motivates/forces you to learn the content and keep up to date". 90% of students thought they learnt the content to a greater extent than the traditional lecture format.

Student engagement was also tracked throughout the unit using the reporting facilities available on "Deakin Studies Online". The total number of hours students spent viewing learning materials was approximately twice that of comparable 3rd year units. Furthermore, the amount of time per week students spent viewing unit learning materials in HSE303 was relatively stable across the 12 week unit, which is in contrast to comparable 3rd year units, whereby the amount of viewing time per week declines approximately 50% over 12 weeks.

Although improvements in critical thinking skills were not quantitatively evaluated, the teaching team observed a larger number of students being able to apply and interpret their knowledge in laboratory assignments and the exam. There was also a noticeable improvement in how teams worked together in their laboratory tasks/assignments compared to previous years. Research is now required to quantify the level of improvement in critical thinking skills.

In summary, students overwhelmingly preferred the TBL method of learning for this unit compared to the traditional lecture format, with student engagement also being maintained across the trimester and anecdotal support for improved critical thinking skills.

Anderson LW, Krathwohl DR. (eds) (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* New York: Longman.

Sweet M. (2012) In *Team-Based Learning in the Social Sciences and Humanities: Group Work that Works to Generate Critical Thinking and Engagement*, Sweet M and Michaelsen LK, (eds), pp 18-32. Sterling, Virginia: Stylus Publishing.