A MODEL FOR EXPRESSION, DEVELOPMENT AND REFINEMENT OF CRITICAL THINKING SKILLS IN THE BIOMEDICAL SCIENCES

Mark O'Brien

Presenting Author: Mark O'Brien (m.obrien@qut.edu.au)
School of Biomedical Science, Queensland University of Technology, Brisbane QLD 4000, Australia

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ABSTRACT

Through my teaching, I aim to transform my students' classroom experiences so they are motivated and inspired in ways that support deeper learning, while demonstrating mastery of the subject content. Moreover, I have not succeeded unless my students show they are able to think flexibly (i.e. analytically, critically, deductively, scientifically and professionally). Critical thinking in particular is considered by most educators to be an important graduate attribute and is currently highly valued in the workplace. Yet, there are tertiary educators who view critical thinking as a skill which can only be addressed and assessed at an advanced level of a student's learning. Moreover, didactic delivery of content leaves little time for classroom expression, development and refinement of critical thinking skills. A model has been developed that addresses these issues. In this model, critical thinking is focussed on early in the learning pathway and subsequently developed and refined as the student progresses through to capstone units (subjects) in their biomedical degree. Opportunities for critical thinking are provided in lecture, tutorial and wet laboratory settings through the use of interactive classroom discussions that employ Q&A forums as well as Case Scenarios and/or Role Plays. In the wet laboratory, students apply their knowledge and understanding of theoretical concepts through the use of critical thinking-complex reasoning case scenarios and problem-solving activities which both support and assess (formatively and summatively) individual and group-based critical thinking skills. Hardcopy quantitative student evaluations, feedback and improved assessment performance indicate that the model is achieving the desired learning outcomes and assists student learning.

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