

ACCREDITING OUTCOMES: EVIDENCING THE SKILLS NECESSARY FOR EMPLOYABILITY

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KEYWORDS: Accreditation, Outcomes, Employability, Assessment

Background

The Royal Australian Chemical Institute (RACI) is the qualifying body in Australia for professional chemical scientists, and a learned society promoting the science and practice of chemistry. The RACI accredits Bachelor's level chemistry courses in Australia, which is designed to ensure that graduates of accredited courses have the skills and knowledge necessary to be a practicing chemist and member of the Institute. However, until very recently, the criteria for accreditation were input-driven and placed significant resource demands on curriculum. With the advent of the new *Higher Education Standards Framework*, and its outcomes and assessment focus,¹ the RACI embarked on realigning its accreditation process to this framework.

Outcomes

The skills and knowledge of a graduate of a bachelor degree majoring in chemistry are articulated in the *Chemistry Academic Standards Statement*,² which is a derivative of the statement for science.³ This statement represents the current consensus view of the Australian chemical sciences community and defines the minimum Threshold Learning Outcomes (TLOs) of a pass bachelor's degree in chemistry.

Approach

To evidence the attainment of the Chemistry TLOs the notion of curriculum described by Rosier and Keeves⁴ and extended by Treagust⁵ was adapted. The accreditation process has four stages of curriculum review: *Intended*: the Chemistry TLOs are the intended curriculum; *Implemented*: each institution interprets each of the TLOs, and reports their self-assessment of student attainment in a curriculum map; *Perceived*: an accreditation panel validates the alignment between the intended and implemented curriculum before recommending the award of accredited status for a given programme or programmes, and; *Achieved*: this accreditation panel summarises the student achievement through the lens of the Chemistry TLOs.

Questions

Some questions have emerged during the implementation of the new RACI accreditation regime, which is of interest to anyone teaching undergraduate science and will be addressed through this presentation:

- How do we assess for and assure outcomes at the program level?
- What is the evidence to support students' achievement of outcomes?
- Are graduates achieving the outcomes needed for employment?
- What is the current state of play of chemistry courses around Australia?

References

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- (5) Treagust, D. F. Exemplary Practice in High School Biology Classes. NARST Annual Meeting, San Francisco, 1986.

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Queensland, Sept 28th to 30th, 2016, page 5, ISBN Number 978-0-9871834-5-3.