TRANSFORMING ASSESSMENT PRACTICE: EVIDENCING AND BENCHMARKING STUDENT LEARNING OUTCOMES IN CHEMISTRY

Siegbert Schmid^a, Simon Bedford^b, Adam Bridgeman^a, Glennys O'Brien^b, Ian M. Jamie^c, Gwen Lawrie^d, Kieran F. Lim (林百君)^e, Samuel Priest^f, Simon Pyke^f, Madeleine Schultz^g, Daniel Southam^h

Presenting Author: Siegbert Schmid (siegbert.schmid@sydney.edu.au)

KEYWORDS: Chemistry threshold learning outcomes, assessment, accreditation, assessment practice, benchmarking

ABSTRACT

Higher Education in Australia is in a phase of rapid change due to a number of regulatory changes. Over the past five years the Australian Chemistry community has agreed on a list of Chemistry Threshold Learning Outcomes (CTLOs) that every student graduating from an Australian University will have attained. In addition, the Royal Australian Chemical Institute (RACI) has changed its accreditation process for Chemistry degrees and now uses these CTLOs as the basis for accreditation.

Therefore, it is now paramount to ensure that our assessment items allow students to demonstrate attainment of the CTLOs during a degree [1]. The "Assessing the Assessments" project, funded by the Australian Government's Office for Learning and Teaching (OLT ID14-3562) is developing a framework designed to help academics at tertiary institutions to determine the alignment of their assessment items with the CTLOs. The project is also collating a database of standards-based assessment items.

The project team has developed an online pro-forma, allowing self-assessment and submission of assessment items. Through workshops, colleagues are guided through the evaluation of assessment items to determine how they meet or fall short of attainment of specific CTLOs. These workshops are designed to support evaluation of assessment items to ensure that they are CTLO compliant. We will reflect on the first year of this large project and seek suggestions and feedback from the audience.

REFERENCES

Elmgren, M., Ho, F., Åkesson, E., Schmid, S., & Towns, M. (2015). Comparison and evaluation of learning outcomes from an international perspective: Development of a best-practice process, *Journal of Chemical Education*, 92:427-432.

Proceedings of the Australian Conference on Science and Mathematics Education, Curtin University, Sept 30th to Oct 1st, 2015, page 65, ISBN Number 978-0-9871834-4-6.

^aSchool of Chemistry, The University of Sydney, Sydney NSW 2006, Australia

^bSchool of Chemistry, University of Wollongong, Wollongong NSW 2500, Australia

Department of Chemistry and Biomolecular Sciences, Macquarie University, Sydney NSW 2109, Australia

^dSchool of Chemistry and Molecular Biosciences, The University of Queensland, St Lucia Qld 4072, Australia

eSchool of Life and Environmental Sciences, Deakin University, Burwood Vic 3125, Australia

Department of Chemistry, School of Physical Sciences, University of Adelaide, Adelaide SA 5005, Australia

⁹School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology, Gardens Point Qld 4001, Australia

^hDepartment of Chemistry, Faculty of Science and Engineering, Curtin University, Bentley WA 6102, Australia