

# WHEN WRITING THE ASSESSMENT BECOMES THE ASSESSMENT

Shannan J. Maisey<sup>a</sup>, Laura K. McKemmish<sup>a</sup>, Siobhán S. Wills<sup>a</sup>

Presenting Author: Siobhán S. Wills (siobhan.wills@unsw.edu.au)

<sup>a</sup>School of Chemistry, The University of New South Wales, Sydney, NSW 2052, Australia

**KEYWORDS:** Authentic assessment, Metacognition, Peer learning,

Some of the most sophisticated demonstrations of deep student understanding are the creation and evaluation of information, tasks that require developed cognitive and metacognitive skills (Herscovitz, Kaberman, Saar & Dori, 2012; Kay, Hardy & Galloway, 2020).

In an approach to construct a deeper, more authentic assessment and challenge students to consider the wider context of theory, we designed an iterative assessment process in a first-year undergraduate chemistry course. Students authored practice questions and marking guides and provided and used peer feedback to improve these questions. An online, collaborative question-writing application, StudentQuiz, was used to facilitate the implementation of these activities in a HyFlex course.

Working within a constructivist framework, students' draft and final questions, as well as guided reflections on the assessment process, were collected and thematically analysed using grounded theory to investigate:

- 1) The level of sophistication to which students were able to formulate and critique chemical questions.
- 2) How students think about their learning during the question-writing process.
- 3) How students format feedback on other students' questions and how this impacts their reflections on their own attempts.

Emerging themes from this analysis will be presented with a focus on significant features of the artefacts produced and students' metacognitive experience of formulating questions.

## REFERENCES

- Herscovitz, O., Kaberman, Z., Saar, L. & Dori, Y. J. (2012). The relationship between metacognition and the ability to pose questions in chemical education. In Zohar, A. & Dori, Y. J. (Eds.), *Metacognition in Science Education: Trends in Current Research* (pp. 165-195). Dordrecht: Springer Netherlands.
- Kay, A. E., Hardy, J., & Galloway, R. K. (2020). Student use of PeerWise: A multi-institutional, multidisciplinary evaluation. *British Journal of Educational Technology*, 51(1), 23-35.

Proceedings of the Australian Conference on Science and Mathematics Education, 29 September - 1 October 2021, page 38, ISSN 2653-0481