VIDEO BLOGS TO ENHANCE STUDENT EXPLANATIONS OF STRUCTURE/PROPERTY RELATIONSHIPS IN CHEMISTRY

Gwen Lawrie[a], Emma Bartle[b]

Presenting author: Gwen Lawrie (g.lawrie@uq.edu.au)
[a]School of Chemistry and Molecular Biosciences, University of Queensland, St Lucia QLD 4072, Australia
[b]School of Medicine, University of Queensland, Brisbane QLD 4006, Australia

KEYWORDS: Student-generated explanations, video assessment, chemical literacy, conceptions

ABSTRACT

Student generated explanations provide insight into their mental models and their understanding of chemical concepts. Novice chemistry learners often develop poorly structured mental models because they have little time to construct their understanding either within class or in a self-regulated way. In 2011, a new assessment task was introduced into a one semester introductory chemistry course with the aim of both enhancing engagement through a personal connection to chemistry and to strengthen their understanding of chemical structures and representations. In 2012, over 350 enrolled students created a 2-3 minute video where they explained the structure and properties of a molecule/substance that was personally relevant to them. Students were required to create a visual aid of a structural model to support their explanation and also appear in the video at least once to establish their personal connection. The videos were uploaded to Youtube or Vimeo and the link shared with the instructor for assessment.

Evaluation of the student videos revealed significant insight into the role of the visual aid in supporting their explanations[1]. The range of chemical vocabulary was related to students' conceptions. Students had an opportunity to be creative with some outstanding visual presentations – reflecting the diversity of the students enrolled in the course.

REFERENCES

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