Variety in Chemistry Education and Physics Higher Education Conference ViCEPHEC21 (16-20 August 2021)



Contribution ID: 16 Type: Talk

Contributed talk: Integration of the Chemistry³ textbook with the first year curriculum

Thursday 19 August 2021 11:00 (15 minutes)

Chemistry has a reputation of being one of the most difficult degree programmes on offer, resulting in comparatively high drop-out rates as students struggle to adapt to independent learning and expectations of being fully autonomous learners. I therefore focused my research on creating resources for first year chemists that would support them throughout the year, and that would encourage the development of positive study habits from the outset.

Chemistry³ is a textbook aimed toward first year chemists that incorporates organic, inorganic and physical chemistry content into one resource. My research focused specifically its integration with the first year curriculum at UEA, which was achieved via the distribution of weekly info- graphics titled 'getting the most out of your textbook/module'. Infographics were created each week for each core module, detailing both structured teaching events but also pages and practice questions for students relevant to that weeks learning.

The project was evaluated primarily through semi-structured interviews, with both students and academics, to explore the relationship between students and chemistry textbooks at university. While no definitive statistical result explicitly states the impact of increased textbook integration and the infographic intervention, data showed Chemistry³ to be the most used chemistry textbook at UEA. Qualitative data revealed students reasons for previously not engaging with textbooks, why they like Chemistry³, and how the infographics have helped navigate their independent study. This then gave insight into how textbooks are currently used by both students and academics, and therefore how usage could be optimised for all those involved. An indirect result of the study was the surveyance of the various pedagogical methods used on the first year chemistry curriculum at UEA and the effect these have on student learning, particularly as many lecturers have changed their methods to adapt to online learning due to the COVID-19 pandemic.

Region

UK/Ireland

Key words

Textbook, integration, first year, resources, studying

Author: EGGLETON, Amber (University of East Anglia)Presenter: EGGLETON, Amber (University of East Anglia)

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