

Evidencing the efficacy of curricula and pedagogical innovation in the affective domain: a case study

Daniel C Southam

Curtin University, Perth, Australia
d.southam@curtin.edu.au

Yujuan Liu

University of South Florida, Tampa, USA
liuy@mail.usf.edu

Jennifer E Lewis

University of South Florida, Tampa, USA
jennifer@usf.edu

In our desire to improve engagement with students in rich shared face-to-face experiences we have implemented an active learning pedagogy in place of traditional didactic instruction in our first year chemistry programme. This pedagogy, Process Oriented Guided Inquiry Learning (POGIL), is designed around a learning cycle and includes teamwork and metacognitive processes in its classroom implementation. We have redesigned the entire curriculum around POGIL to have smaller workshops in place of the majority of lectures. This move to a student-centred curriculum and pedagogy raises a number of questions about its efficacy that include issues beyond the more familiar conceptual domain. Social constructivism suggests that affective constructs of attitude and motivation are important dimensions in this type of setting. In this case study student attitude toward our discipline relating to affective and cognitive components is used as an indicator of successful outcomes. Likewise, basic needs of social interaction, autonomy, and competence are key influences on motivation and will be explored through self-determination theory. Here we will present preliminary findings from data collection in POGIL classes to explain how tools designed to measure these constructs may be utilised to gauge the affective impact of innovative curriculum and pedagogy.