

Examining orientation to society in chemistry and chemical engineering

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Abstract

This paper emerges from the society theme of the Understanding Knowledge and Student Agency. Here we take a close-up view of particular students who have caught our attention as we have gone about investigating the society theme. The UKSA project is a large multisite longitudinal project. We tracked students through four years of study in chemistry and chemical/process engineering. The study covered six institutions evenly distributed between South Africa, England and the United States.

We began with a simple conception of a nested model of orientation to society – self/limited other/general other. The ‘other’ here is conceived in two ways. The ‘limited other’ are those with whom the student has a direct link. The ‘general other’ can be understood more generally as ‘society’. The nested model is derived from the Frankfurt School of Critical Theory. In particular the notion that one’s capacity to fully actualise individual wellbeing is only possible in and through engagement with society. Hence, our interest in determining the extent to which an orientation to the other was visible in the student narrative. There have been four particular areas of interest that we have explored – assessment, diversity, reason for attending university, and finances. In all cases, we have included both chemistry and chemical engineering students.

In the process of these analyses we have identified some key narratives which exemplified the possible trajectories. For example, Scarlet, a chemistry student from Soudan University, who began her studies with great ideas of she could make a difference in South Africa. After three years of study she was simply focused on getting a job, any job. Scarlet’s move was in the reverse direction to the one we had been hoping to observe. She began a clear orientation to the general other which seemed to erode to a focus on self. We decided it would be useful to focus on students who showed a distinct shift in orientation to society over the course of their degrees.

It is important that the close-up read is done against the backdrop of the broader analysis that has already been carried out. In examining in detail the responses of these students, we will develop questions which can then be taken back to the broader data set. This therefore affords a fractal analysis of the society theme where patterns visible in the small subset may be repeated on the larger data set.

Keywords

Critical theory; narrative; society; self and other.