Identifying threshold concepts and supporting their development [Abstract]

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Identifying threshold concepts and supporting their development

A threshold concept can be described as a core concept within a subject, which once understood changes the way the learner thinks about the subject or even the world. It allows them to see connections which were previously inconceivable, in relation to both the threshold concept itself and between different concepts. As they often challenge the learner’s view of the world, they can seem counter-intuitive, conceptually difficult and unfamiliar. Throughout education, and especially in Higher Education, students are exposed to a vast amount of information, which can be difficult to process given the short timescales provided. As a result, students can get stuck in a liminal state of understanding, whereby they adopt a surface approach and a ‘learning how to pass’ frame of mind. It is important that students transition from this surface approach to a deep approach if they are to apply their learning beyond their time in higher education.

Threshold concepts are crucial for the transition from surface to deep learning and involve the transformation from a liminal learning space to genuine understanding. This heightened level of understanding makes learners more adaptable and helps them to see interconnections between topics they have learnt, and topics which are completely new to them. This adaptability would be very advantageous within industry. It is therefore important to know what these threshold concepts are. If they are then taught poorly, they will have little significance in improving students understanding. To take advantage of the potential of threshold concepts to improve teaching, learning and professional competence, it is crucial that the teaching method is effective.

This paper will suggest a method for identifying threshold concepts, initially developed as part of a Masters level project. The method is designed for implementation within Higher Education, from which lessons plans can be constructed and informed decisions made regarding the relevant content. The method went through a first stage of testing for Systems Engineering. It goes on to consider the implications of threshold concepts on memory and learning and teaching styles, and outlines targeted support for both staff and students.