Title: **Exploring transformative dimensions of threshold concepts**

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Abstract:

Session Learning Outcomes

By the end of this session, delegates will be able to:

*   enhance the support given to students to enable them to pass through threshold concepts.

Session Outline

This paper presents our model of the characteristics of learners before, during and after the crossing of a threshold concept. Our model is based on our findings from our national online survey of UK PhD students, which was an integral part of the project 'Doctoral Learning Journeys' (HEA, 2009), run by the University of Brighton and Anglia Ruskin University.

While the study of threshold concepts is established in a range of disciplines at undergraduate level, this research is part of a small number of recent projects investigating threshold concepts at doctoral level (c.f. Kandiko, Kinchin, and Hay, 2008; Kärner, 2009; Kiley, 2009). The Doctoral Learning Journeys project sought to identify and explain the strategies students use to understand and cross conceptual thresholds (c.f. Trafford, 2008; Trafford and Leshem, 2009; Kiley and Wisker, 2009; Wisker and Robinson, 2009).

Respondents were invited to reflect on breakthroughs they had experienced, how they recognised them, and how they felt afterwards. The responses were analysed using N*Vivo to generate themes which were subsequently mapped against the five key characteristics of threshold concepts (e.g. transformative, irreversible, integrative, bounded, and 'troublesome knowledge') (Meyer and Land, 2003).

Our analysis identified the seeds of a model not of a conceptual threshold of doctorateness, but of a description of the characteristics and state of an individual who is a) ready and prepared to cross a threshold; b) in the liminal state when in the midst of the crossing and c) once safely through. These states include cognitive, attitudinal and emotional characteristics, plus an overarching characteristic of those likely to be able to cross a conceptual threshold: 'intellectual bravery'.

By definition, doctoral students are successful learners who have crossed through many threshold concepts on their way to doctorateness. Their descriptions of how they think, approach problems, experience learning, and manage their emotions gives us an insight into

how other learners may experience threshold concepts, and helps us identify the support they need to develop the ability to pass through.

We are developing a 'toolkit' to enable supervisors to identify students' location on their learning journeys.

The Pre-threshold Novice needs to develop their meta-cognitive ability and our research strongly suggests that this is best achieved through discussion particularly with supervisors, peers. In addition, students at this stage often require support for emotional issues, particularly in relation to confidence. Involvement in a cohort (or study group or other form of peer support) provides both a safe environment for discussion, plus opportunities to build confidence in the company of others with common experiences.

Supervisors need to prepare Liminal students to let go of any entrenched opinions. Students who set out to 'prove what they know to be true' are unprepared for troublesome knowledge and will be unable to cross a conceptual threshold.

Post-threshold students are recognisable as they display the effects of a transformative experience. They have developed their integrative skills and are confident and excited about their work. These students are ready to complete.

Discussion will focus on our model as will be used to validate our model against audience experience. We will use audience experience to develop our advice to supervisors.

Session Activities and Approximate Timings

- Introductions – 5 minutes
- Presentation of Paper – 15 minutes
- Discussion – 20 minutes
- Concluding comments and future research – 5 minutes

References

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