

THRESHOLD CONCEPTS IN THEORY AND PRACTICE

This special issue on Threshold Concepts in Management Education invites readers to engage with a distinctive category of concepts that, when learned, result in students “seeing things in a new way” and thereby making transformative leaps in understanding (Meyer & Land, 2003:1). Threshold concepts have garnered much attention and enthusiasm in the broader education literature over the past decade (e.g.: Timmerman et al, 2013; Meyer & Land, 2005; Meyer, Land & Baillie, 2010; Wimshurst, 2011) but have been underdeveloped in the management education literature. Thus, our initial premise in proposing this special issue was that applying threshold concepts to the pedagogy and practice of management education was important and had the potential to open up valuable advances for students, educators and managers.

In their seminal development of threshold concepts, Meyer & Land (2003, 2005, 2006) identified five characteristics. First, threshold concepts mark the boundaries of particular disciplines (Meyer & Land, 2006). That is, they signify particular understandings that are distinctive to a particular disciplinary discourse. Second, threshold concepts involve forms of “troublesome knowledge” or notions that appear illogical, unfamiliar or alien (Perkins, 1999; Cousins, 2006; McCormick, 2008). For some threshold concepts, troublesomeness arises because of the way core concepts are bound together in “an underlying game” to create a “disciplinary way of knowing” which may be imperceptible to novice students (Perkins, 2006, p.42). Third, threshold concepts are integrative. Crossing the threshold brings new connections and patterns in the focal area of study into view through the new conceptual lens (this may also help to establish the conceptual boundaries of the area of study). Fourth, the change in

understanding associated with threshold concepts is usually not reversible. Once new connections and patterns have been discerned, a retreat into earlier patterns of understanding cannot easily be achieved, although the concept itself might be superseded by even more sophisticated, alternative conceptualizations (Trafford, 2008). Fifth, successful engagement with threshold concepts is transformational. The irreversible reconfiguration of patterns of understanding, which results from the engagement, has effects on the patterns of practical action that follow; if the “world” is seen anew, the way in which one should think and act must also change (Meyer, Land & Davies, 2008; Mezirow, 2000).

These five characteristics of threshold concepts provide the foundation for the contributions of the special issue, and the four articles that follow offer the kinds of advances we envisaged by taking threshold concepts in new pedagogic and disciplinary directions. We briefly introduce each article before considering their contributions in relation to the scholarly conversations they engage with and the target beneficiaries of their insights.

In This Issue

In their research article, Bolinger & Brown focus on the troublesomeness characteristic of threshold concepts. Their empirical study of ‘entrepreneurial failure’ as a threshold concept illuminates how threshold concepts can involve ‘troublesome knowledge’ when a concept elicits an (emotional) attachment to one of several relevant meanings. The study shows how experience of entrepreneurial activities enabled students to grasp the concept of entrepreneurial failure in richer, more complex and ultimately more useful ways. Bolinger & Brown offer important insights

on the role of experience in supporting student's interpretive engagement and how educators might leverage this experience.

In the next article, Burch, Burch, Bradley & Heller present a conceptual essay that builds on the integrative and transformative characteristics of threshold concepts. The authors argue that educators can identify stumbling blocks and transform students through a bottom-up micro-oriented approach to curriculum design and delivery. They articulate a model of a Conception-Focused Curriculum (CFC) that integrates concepts viewed through the lens of the discipline and illustrate the implementation of their model using the example of organizational behaviour courses.

In the third article, Vidal, Smith & Wellington further unpack the troublesome and integrative characteristics of threshold concepts by exploring how troublesomeness can arise from interconnections between concepts. The authors present an empirical study based on the redesign of an undergraduate course teaching sustainability, social responsibility and ethics. Their study demonstrates how multiple theoretical concepts that are (or can be) interconnected may function as threshold conceptions. The authors also provide methodological guidance for how educators can evaluate student progress in navigating the 'liminal space' of engagement with threshold concepts.

The special issue concludes with a resource review by Nichols & Wright¹, who build on the notion that the characteristics of threshold concepts create a liminal space which students must navigate for the 'new way of seeing' to come into view. The authors argue that simulations offer a valuable learning resource for helping students to navigate the liminal space. Extending Wright & Gilmore's (2012) finding that

¹ Because this Resource Review involved one of the special issue editors, it was overseen, reviewed and accepted separately under the auspices of the Resource Reviews Editor, Scott Allen and the Editors-in-Chief, Jeanie Forray and Kathy Lund Dean.

introductory management courses are underpinned by the threshold concept that ‘management is a practice informed by theory’, the authors illustrate how the Everest Team Simulation by Harvard Business Publishing can be used to help this threshold concept come into view for novice management students.

Themes and Insights

The four articles in the special issue contribute to the literature on threshold concepts in management education by advancing scholarly conversations about threshold concepts as pedagogic practice, pedagogic theory, and disciplinary theory, and by offering insights targeted at educators, students and managers. Figure 1 shows how we, as the special issue editors, were able to map the authors’ contributions to the conversational landscape on threshold concepts along two dimensions: the nature of the scholarly conversation they engaged with and the target of the insights from their inquiry. As we would expect of *Journal of Management Education* scholarship, all of the contributors develop important insights for pedagogic practice. Across the collection, there are also useful developments for pedagogic theories regarding threshold concepts and some insights for disciplinary theory in relation to entrepreneurship. These insights have utility for communities of educators and students and also, to a lesser degree, for the managers that our students are in the process of becoming, as we shall now discuss.

Targets of inquiry insights

	Educators	Students	Managers / Organizations
Scholarly conversation			
Pedagogic practice	Burch et al Bolinger & Brown Vidal et al Nichols & Wright	Burch et al Vidal et al Nichols & Wright	
Pedagogic theory	Vidal et al Nichols & Wright	Burch et al Bolinger & Brown	
Disciplinary Theory		Bolinger & Brown	Bolinger & Brown

Figure 1: Conversations and inquiry insights

Insights for educators – in theory and practice

Our contributors have a lot to say about our practice as management educators, and how we use pedagogic theory to inform that practice. Burch et al show how educators can orient course design around threshold concepts, offering a suite of examples of how Organizational Behaviour courses might be designed from the ‘bottom up’ rather than through top-down design principles. They lead us on the first steps of this path and advocate for transformation across the whole curriculum: “...the ultimate goal of a conception focused curriculum would be to identify all of the concepts, across all business disciplines. [...] Educators could then provide students with a roadmap of how concepts are used [and] allow students to integrate learning across topics.” (p. 494). Vidal et al highlight a similar need for integration of concepts into threshold conceptions in the teaching of ethics, social responsibility and sustainability. They demonstrate how “students have a better grasp of the interconnections and interdependencies between the social, environmental, and economic responsibilities of business when these separate concepts are presented as a web of threshold concepts

that transform the understanding of one another” (p. 498). Burch et al and Vidal et al thus draw attention to the need for educators to think about how they use integrative conceptions in their courses and reinforce the emphasis on threshold conceptions rather than threshold concepts in recent research in this area (c.f. Wright & Gilmore, 2012).

However, as other research has identified, there continue to be areas of management education where a focus on *particular* concepts is an appropriate approach. Yip & Raelin (2012), for example, have previously established the existence of particular threshold concepts in leadership education. Bolinger & Brown adopt this approach in their contribution to the special issue, offering a powerful illustration of the concept of entrepreneurial failure as a particular threshold concept in entrepreneurship education.

Taking the insights from our contributors together, a clear question for further research is suggested: how might we *theoretically* distinguish when there is a need to approach a body of knowledge through integrated threshold conception(s) or particular threshold concept(s) - or perhaps even a combination of both - across the breadth of a curriculum? Bolinger & Brown and Vidal et al present methods for engaging with this conundrum empirically, notably multi-stage concept mapping and survey research before and after course redesign, while Burch et al engage with it speculatively in their model of course and curriculum development. How might we go further and develop a deeper theoretical approach for predicting threshold learning challenges?

An additional insight for educators concerns the role of student experience in the creation of threshold concepts. The simulation described by Nichols & Wright is

targeted at educators involved in undergraduate introductory courses, where students' lack of experience creates a threshold conception regarding the connection between management theory and practice. The authors advance pedagogic theory for educators by encouraging them to think about how resources can be used to simulate experience, rendering the threshold conception less troublesome. Bolinger & Brown further unpack the role of experience in learning from (or through) threshold concepts. Their broad cohort of undergraduate students included some with substantial work and entrepreneurial experience. Their findings reveal how the life and career-stage of students may impact on their desire and ability to engage with (some) troublesome threshold concepts. They argue that: "Whereas previous research has suggested that threshold concepts are where individuals are likely to find the greatest difficulty in learning from experience [we] suggest that experiences themselves may provide the motivation for individuals to learn threshold concepts such as entrepreneurial failure" (p. 470). This insight supports Hibbert & Cunliffe's (2013) recent finding that experience contributes to a *reflexive* engagement with threshold concepts. Thus, we think that Bolinger & Brown's findings encourage management educators to consider how broader formational experiences in students' lives and careers impact on their (potential for) engagement with threshold concepts and conceptions.

Student participation – in theory and practice

The contributions from Burch et al, Vidal et al, and Nichols & Wright have clear practical implications for how we work with students and the expectations that we have of them in terms of participation in our courses, assessment and learning resources. In addition, Burch et al take us into territory of pedagogical theory by incorporating Bloom's taxonomy into their theorising of threshold concepts.

Characterising Bloom’s notion of “understanding” as a threshold conception, the authors explain how this new characterisation illuminates students’ (lack of) progression through the stages of Bloom’s taxonomy. Bolinger & Brown also offer an interesting theoretical contribution to our understanding of threshold concepts by opening up the potential dynamic role of experience and student learning trajectories, which connects with the burgeoning interest in interpretation and learning per se (c.f. Hibbert, Siedlok & Beech, 2014; Quinn Trank, 2014). There is clearly more room to explore how (theories) of students’ interpretive ‘work’ might illuminate their processes of engagement with threshold concepts.

Bringing theory and practice to managers and organizations

The focus of the contributions in this special issue has largely been on what happens within our college teaching and learning contexts and processes. Obviously, our common hope and expectation is that this has an impact on the abilities and actions of our students in their future (and sometimes concurrent) working lives as managers. Although the domain of management practice has not been the main thrust of the contributions offered here, Bolinger & Brown do add to our understanding of managers in the area of entrepreneurs and entrepreneurship. We believe there is potential for their insights about learning from failure to add to conversations on the determinants of entrepreneurial intentions and abilities, motivation to try again after experiencing failure, and particularly to debates on entrepreneurial resilience (Jenkins 2012; Jenkins, Wiklund & Brundin., 2014). More generally, as we have alluded to earlier, their work is invitation to consider how the interpretation of experience informs or enables engagement with learning challenges, which may apply to manager’s encounters with threshold concepts of the kind described by Hibbert & Cunliffe (2013).

Conclusion: a first step across the threshold, and a conversation to be continued

Overall, our contributors offer rich additions to the conversation on threshold concepts, providing useful practical insights and developments that extend into other theoretical domains and debates. We have been privileged to work with these authorial teams, the supportive editors-in-chief, Jeanie Forray and Kathy Lund Dean and the resource reviews editor, Scott Allen. This special issue has been a collective and a collegial endeavour.

While valuable inroads have been made by the contributors, we believe the special issue has just scratched the surface of threshold concepts in management education. Further research is needed to ‘fill in’ some of the ‘gaps’ in our conceptual research map presented in Figure 1. Specifically, there are three potential areas for further research that we suggest might be beneficial.

First, there is a need for research on how managers deal with threshold concepts when they address them as independent learners – that is, after they have completed their formal education. Contextual turbulence and the dynamics of change will continue to expose managers to new and unexpected challenges that we suggest might fit the troublesome and transformative characteristics of threshold concepts. No formal learning program can cover every emergent possibility that students might face in the future. Nevertheless, by investigating how managers inside organizations approach challenges as threshold concepts, we as educators might better understand how to embed opportunities for our students to develop skills to detect, interpret and negotiate troublesome threshold concepts for themselves.

Second, we suggest there is scope for future research to deepen understanding of the ‘causes’ of the ‘troublesomeness’ characteristic of threshold concepts, rather than its

‘symptoms’. The latter are well described in the literature, but the former are not so well understood. The contributions in this special issue open up some potential new lines of inquiry into the causes of troublesomeness. Emotional attachment to narrowly simplistic interpretations of concepts, alluded to by Bolinger & Brown, might contribute to troublesomeness when underlying concepts are in fact complex and polysemic, as Vidal et al found with the concepts in their study. These insights are starting points only and the root causes of ‘troublesomeness’ require much more extensive investigation.

Finally, scope exists for future research that focuses on the dynamics of experience and interpretation in relation to the recognition of, and engagement with, threshold concepts. Such research may also better illuminate the role of experience and interpretation in learning challenges more generally, building on recent research in this area (Hibbert et al, 2014; Quinn Trank, 2014).

We hope that our suggestions for further research, and the contributions made by the authors of the papers in this special issue, are just the beginning of new conversations and debates about the theory and practice of threshold concepts in management education. We are pleased to have been able to stimulate and facilitate discussion that advances our understanding of threshold concepts and conceptions, as well as offering practical applications for our fellow educators invested in improving student learning in their courses. Nevertheless we would like to end by emphasising that our conclusions remain provisional and we (always) eagerly await further dialogue and insights:

“...one rarely places a QED beside one’s judgements, or not without succumbing to the worst of intellectual vices. It belongs to the

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structure of conversation, as of wonder, to begin and end on a note of uncertainty and openness to further inquiry” (Fairfield, 2011:83).

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