Tools for navigating the liminal tunnel

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Abstract

Within the domain of threshold concepts a considerable body of literature has built up in relation to what might constitute specific disciplinary thresholds. Central to the notion of the threshold concept is the issue of liminality, the space we inhabit prior to passing through the threshold and emerging transformed. The current paper explores the issue of liminality in relation to the affective dimension of learning. It utilises the metaphor of the liminal tunnel and draws on existing work on emotional capital and positive affect from within the field of threshold concepts and positive psychology. The willingness of learners to inhabit this liminal space, or tunnel, in search of new understandings is now occupying researchers who have become increasingly interested in how one comes to pass through the tunnel and emerge transformed. Research makes evident, that not all learners experience this transformation and questions are now being asked as to why this is. Several researchers have explored this issue from a pedagogical perspective considering the extent to which particular forms of pedagogy might facilitate movement through the tunnel and which might be restrictive. The current paper is similarly concerned with movement through the liminal tunnel but rather than taking a pedagogical focus it draws on notions of affect in relation to learning and explores the extent to which psychological characteristics might support movement through the liminal space. It explores the notion that the acquisition of threshold concepts involves both a cognitive, or conceptual shift, in understanding and an accompanying ontological shift that involves an emotional or affective transformation. Using psychological capital (PsyCap) as one measure of the affective dimension of learning, the paper explores firstly the potential relationship it has to academic performance before moving on to a consideration of any potential utility it might have as a means of explaining why some learners remain trapped in, or fail to enter, the liminal tunnel and others emerge from the tunnel to inhabit a new place of being. It argues that the malleable nature of some psychological characteristics render them meaningful in a learning and teaching context not only because of their explanatory function but as a potential source of intervention to support a positive learning experience.

Keywords: Threshold Concepts, Liminality, Affect, Psychological Capital

Introduction

Work in the area of threshold concepts (Meyer & Land, 2005) or learning thresholds, as Land (2014) suggests we might conceptualise them in his think piece, has identified that within an academic discipline learning thresholds can be identified. These represent potential sticking points for students as they enter the liminal space or tunnel (Land, Rattray & Vivian, 2014) and attempt to navigate their way through the conceptual and ontological shifts associated with the acquisition of the particular learning threshold. Research also tells us that whilst some students pass through the liminal tunnel and emerge transformed others get ‘stuck’ and fail to move through this space, never coming to occupy a place of new understanding. In short, they do not experience the conceptual or ontological change that will allow them to progress. The question as to why this might be is now occupying researchers interested in threshold concepts (Land, 2014; Land, Vivian & Rattray, in press). A potential explanation for such differentiation might be related to the level of psychological positivity a student exhibits. One might argue that in order to traverse the liminal space one needs initially to occupy it with some level of ‘comfort with, or tolerance of, the discomfort’. That is, the student needs to be able to cope with the uncertainty that comes with the letting go of currently held knowledge and pass through the liminal tunnel, emerging transformed by the newly acquired learning threshold. The learner needs to be prepared to persist with the new idea and to engage with its exploration so that they can truly come to a place of understanding and not just mimicry of the learning threshold (Cousin, 2006). As educators we might consider how we can support students to cope with liminality with some degree of confidence and to see it as a tunnel to be passed through as part of a learning transformation. We might think of this in two ways: firstly we can use pedagogical tools to help students gain purchase on the new idea or concept being introduced or secondly we can focus on the psychological factors such as resilience or optimism which enhance students’ positivity and which will sustain the student through the difficult and often uncomfortable liminal phase. It is this latter issue that the current paper explores.
Affect and the Liminal tunnel

Meyer and Land (2005) described liminality as a fluid or liquid state of understanding or being. They note that learners who occupy the liminal space can often move back and forward within this fluid state as they grapple with the threshold they are attempting to cross. Vivian (2012) applies a semiotic framework to liminality and likens it to a cognitive tunnel that one must enter and pass through in order to emerge transformed (see figure 1). The tunnel metaphor represents a useful way to think about liminality reflecting as it does the idea of entering a dark and foreboding place where the final outcome is as yet uncertain or initially out of sight (Land, Rattray & Vivian; 2014). The notion of the liminal tunnel has utility both in terms of the conceptual and ontological transformations that are brought about by the acquisition of a new threshold concept. Not only does it resonate with the idea of modular curricula that are based on a linear sequencing of disciplinary knowledge but, if we think of it as a cognitive and affective tunnel, it brings the affective dimension of the ontological shift into much sharper focus emphasising as it does the idea of a scary or unseen place that must be entered and passed through if transformation is to occur.

![Figure 1: The Liminal Tunnel](Reproduced from Vivian (2012))

Cousin (2006) has already argued that, what she terms emotional capital, might provide some explanatory frameworks for categorising students into different affective typologies in relation to students understanding of ‘others’ which she argues is a threshold concept. Emotional capital is, according to Cousin (2006, an accumulation of affective assets which are the result of varied life experiences. Emotional capital is the affective relation of social capital (Bourdieu & Passeron, 1997), and it represents one way of thinking about the affective dimension of learning. Whilst cousin applies the idea to one very specific threshold, her acknowledgement that traversing the liminal tunnel includes an affective component reflects an increasing shift towards a consideration of this aspect of learning and learner behaviour (Weatheral, 2012). More recent work has explored the specific role of hope as it relates to student learning and performance (Davidson, et al., 2012). These researchers reported that students who had participated in a workshop designed to enhance their hope, academic self efficacy and sense of coherence showed improvements in their grades in the semester following the workshop. Controlling for intelligence, prior academic performance and personality characteristics (Day, Hanson, Maltby, Proctor & Wood, 2010) found that hope was a reliable predictor of academic success. Emerging work on attachment-based teaching capitalises on these ideas and proposes an approach to teaching which is much more attuned to the affective dimension of learning and how it could support teaching practices.

The current paper aims to add to this body of work by considering how detailed research focusing on students’ psychological characteristics could add to our understandings of liminality. It considers the extent to which students’ capacity to cope with liminality and navigate the tunnel might be mediated by psychological characteristics that might initiate and maintain learner motivation. Hoyle (2010) argues that psychological capital (PsyCap) may be one such mediating factor. Psychological capital (e.g. Luthans & Youssef, 2004: Luthans, Youssef & Avolio, 2007) has its roots in the area of positive psychology (Lopez & Snyder, 2003; Seligman, 2006) and refers to “an individual’s positive psychological state of development” (Luthans, et al., 2007 p3). It is represented as a higher-order factor that encompasses four affective (emotional) components...
associated with an individual’s emotional positivity: self-efficacy, optimism, hope and resilience, all of which have been found to influence learners and learning behaviour individually. In combination, it is argued, these four constructs have a greater influence on human behaviour than they do individually – the whole is greater than the sum of its parts (Luthans, Youssef & Avolio, 2007; Searle, 2010).

The four factors constituting PsyCap might explain why some learners are able to pass through the liminal tunnel and acquire a new conceptual framework and others, despite having the intellectual capacity, are unable to make the same transformation. A learner who believes they are capable of understanding new ideas (self-efficacy), who makes positive attributions in relation to their potential for success (optimism), who can monitor and re-align goals and the pathways to attaining these goals (hope) and who does not give up in spite of the difficulties they encounter with the new knowledge (resilience) may be able to cope with liminality more effectively than those who lack these affective assets. Cousin (2006) argued that students with less emotional capital might experience greater levels of discomfort with troublesome knowledge and this might result in them being unwilling to enter the liminal tunnel at all and leave them permanently in the pre-liminal space (Meyer & Land, 2005; Cousin, 2006) argues that just as social capital is acquired in a cumulative way emotional capital can be developed through one’s life experiences making it a useful idea in education as rather than reflecting a fixed set of learner attributes or pathologies it represents something more changeable. In a similar way PsyCap is considered to be a malleable state rather than a fixed trait (Luthans et al, 2007) and this gives it potential utility in a learning context. Educators who want to facilitate learners motivation to embark on the navigation of the liminal tunnel and engage in the process of ontological shift might consider embedding the principles of positive psychology in their pedagogy and curricula as a means of enhancing students PsyCap and facilitating the engagement they seek.

Much of the work on PsyCap to date comes from the field of management and organisational psychology and studies considering its direct application in educational contexts are scarce (Searle, 2010). One study which has crossed the boundaries of organisational and educational contexts reported that an intervention designed to enhance the psychological capital of a group of management students showed that improved PsyCap was associated with higher academic performance (Luthans, Avolio, Avey, & Norman, 2007). Given that few studies have applied PsyCap to educational contexts, before we can determine whether PsyCap might support movement through the liminal tunnel it is first important to determine its general relationship to academic performance and other cognitive and affective characteristics associated with learning. The data presented in this paper are drawn from a cohort of undergraduate education students who were asked to complete a modified PsyCap inventory (Luthans et al, 2007) prior to the submission of a written assignment that explored their understandings of the relationship between theories of how people learn and their application within an educational context. Students’ PsyCap scores are then correlated with the overall grade on their written assignments to determine what, if any, relationship exists between PsyCap and academic performance. The results of this analysis will then be discussed in relation to interventions designed to enhance the PsyCap of students and potential future research studies which might explore in more specific detail the relationship between liminality and a student’s psychological capital.

Method

The participants for this study were 42 students enrolled on a first year undergraduate Education module. The sample comprised 39 female students and 3 males with an overall mean age of 18.7 years (range = 18-43 years). The participants included 14 students who were first generation University students and 28 who had a family history of university study.

All students were asked to complete the 24 item modified PsyCap inventory (modified to make it relevant to the student rather than the business community). The inventory includes six items that measure each of the 4 factors of which PsyCap is comprised. Students also completed both the learning self-regulation questionnaire (SRQI) and the academic self-efficacy scale. In addition assessment data from an essay which focused on the links between theory and practice were recorded and correlated with student’s scores on the inventories. In addition students scores on each of the individual inventories was also correlated.

Results

Figure 2 shows the distribution of scores on the three psychological measures for the total sample. What is evident from this graph is that students who showed higher levels of psychological capital also showed higher scores in relation to both academic self-efficacy and self-regulated learning. Further analysis indicates that these measures all showed a moderate correlation of 0.63 with the students subsequent assessment scores...
Discussion

The data presented in this paper indicate that a moderate relationship does exist between student performance and the specific psychological characteristics measured. The relationships presented are, admittedly, not as strong as we might have predicted but they do support the existence of a relationship that might be worthy of further exploration. The data was derived from a relatively small sample of first-year undergraduate students at the start of their academic journey for whom the stakes are arguably not high. Such students may experience less negative affect in relation to their academic performance at this stage of the journey as not only are they given the message that ‘year one doesn’t count’ but, having gain entrance to a prestigious university may be used to experiencing academic success. If we were to measure their PsyCap as they progress through their degree we may see a more pronounced relationship develop as some students will inevitably experience increasing amounts of anxiety (negative effect) and decreasing amounts of success in the form of declining grades. Others will of course continue to experience positive affect as they maintain high levels of academic success in the form of first-class grades. Future longitudinal research, needs to explore this issue by looking at the ongoing relationship between students’ PsyCap and academic grades as they progress through their degree programme. Research of this nature will provide us with a clearer picture of this relationship and how it might develop across time as the ‘stakes’ get higher.

As well as establishing the full nature of the relationship between PsyCap and student performance we need to explore more specifically any potential link to liminality. Undergraduate students have a minimum of three years to acquire the disciplinary thresholds associated with their degree subject as they move through the modularised curriculum at a gradual pace with time for reflection and regular feedback opportunities which potentially provide them with information about their position in the liminal tunnel. We need to determine whether students who successfully pass through the liminal tunnels as they acquire the thresholds associated with their discipline, exhibit higher levels of psychological capital from the outset enabling them to cope with troublesome knowledge (Perkins, 1999) or whether as they experience transformative ontological shifts and a new way of being they build emotional Capital (Cousin, 2006) and enhanced psychological capital. The outcomes of this research have potentially significant implications for academic practice. As the liminal space is so far under explored, this paper shows that PsyCap tools are useful to help us understand the journey through the tunnel. It is clear from the results and discussion here that whilst the initial study presented shows a medium effect, there is clearly an effect worth exploring further in relation to affect and educational achievement. What this analysis reveals runs contrary to much published literature insofar as the outlier in terms of PsyCap came from a mature first generation student with an assessment score of 69%. This student represents the ‘kind’ of learner we are cautioned to be concerned about. The limited stakes of first year whilst clearly of profound importance to individual students can only become of increasing importance as the stakes get higher as students progress through the academic hierarchy.
It is suggested therefore that that PsyCap tools and their appropriate interpretation can be a sound basis for further deployment longitudinally to explore learning trajectories and may also be a useful tool to those researchers interested in looking at the processes involved in traversing the liminal tunnel. If we are able to establish a predictive relationship between PsyCap and movement through the liminal tunnel there is potential, given the malleable nature of PsyCap, to support students acquisition of threshold concepts by putting in place interventions designed to enhance PsyCap. The evidence from the hope studies of Davidson et al, (2012) and Day et al, (2010) would support such a claim and suggest that work that builds on aspects of positive psychology might have considerable utility both as an explanatory framework in relation to liminality and, in addition, as an approach to pedagogies and curricula. The latter might embed within them an affective dimension designed to support the students tolerance of troublesome knowledge and establish a safe environment in which entering the liminal tunnel is an accepted, if uncomfortable, part of learning.

References