

Threshold Concepts and Transformational Learning

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In higher education/medical education:

“What is of importance is neither that which is transmitted per se nor that which is received but the transformative space which the processes of transmission and reception enable”.

(Davey 2006)

Educational Goals/Learning Objectives

By the end of the workshop participants will be able to:

- describe in general the characteristics of threshold concepts,
- describe in particular how a threshold concept has transformed their own lives
- articulate how threshold concepts can apply to their own discipline
- discuss the importance of threshold concepts for curriculum design and the design of learning activities

Why is this important?

The core activity of teachers is not to deliver the curriculum to a passive group of students but to engage students actively with ideas and then uncover and guide their thinking about those ideas and how those ideas are used. In this workshop we focus on the ideas we want the students to engage with and how students can change through this process.

Threshold Concepts

“A threshold concept represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress.” (Land et al)

Threshold Concepts

“In certain disciplines there are ‘conceptual gateways’ or ‘portals’ that lead to a previously inaccessible, and initially perhaps troublesome’ way of thinking about something.” (Meyer and Land 2005).

Threshold Concepts Examples

Irony – Literature studies

Depreciation – Accountancy

Deep time – Geology/Astronomy

Inertia/momentum – Physics

Contestability - History

Pain - Medicine

Threshold Concepts Characteristics

Transformational

We are what we know. There is an **ontological** shift as much as an **epistemological** one. New understandings become a part of who we are and how we see the world.

Threshold Concepts Characteristics

Irreversible

Once mastered it is difficult to forget.

But it is easy to forget how *we* mastered it.

Teachers can forget their own struggles with learning threshold concepts.

Threshold Concepts Characteristics

Integrative

‘ ... exposes the hidden interrelatedness of a phenomenon. Mastery of a threshold concept often allows the learner to make connections that were hitherto hidden from view’ (Cousin 2006).

Threshold Concepts Characteristics

Bounded

‘any conceptual space will have terminal frontiers, bordering with thresholds into new conceptual areas’ (Meyer and Land, 2006).

In other words, threshold concepts should be open to challenge. The boundaries are questionable and only have a provisional explanatory capacity.

Threshold Concepts Characteristics

Troublesome

Threshold concepts can involve difficult or counter-intuitive ideas that can seem alien or incoherent. They may go against common sense understandings.

Threshold Concepts Characteristics

Liminality (from the Latin word *līmen*, meaning "a threshold") in anthropology is the quality of ambiguity or disorientation that occurs in the middle stage of rituals when participants no longer hold their pre-ritual status but have not yet begun the transition to the status they will hold when the ritual is complete.

Threshold Concepts Characteristics

Liminality

Students may need time to grapple with a threshold concept. They may need to try out different understandings and make emotional adjustments. Many students need to enter a liminal state before mastering a threshold concept. There may be 'oscillation'. Some students substitute mimicry for mastery.

Threshold Concepts

Think/Pair/Share

Identify a threshold concept you have mastered in your own life but NOT from your discipline or profession (e.g. hobbies, pastimes, sports, languages, etc.)

In what ways is this concept: transformational, irreversible, integrative, bounded and troublesome?

Threshold Concepts

Think/Pair/Share

Identify a potential threshold concept from your discipline or profession.

In what ways is this concept: transformational, irreversible, integrative, bounded and troublesome?

Implications for Curriculum Design

“Jewels in the Curriculum” (Land et al 2006)

“A tendency among academic teachers is to stuff their curriculum with content, burdening themselves with the task of transmitting vast amounts of knowledge bulk and their students of absorbing and reproducing this bulk. In contrast, *a focus on threshold concepts enables teachers to make refined decisions about what is fundamental to a grasp of the subject they are teaching.* It is a ‘less is more’ approach to curriculum design.” (Cousins, 2006)

Jewels in the Curriculum

A focus on these **transformational** points:

“allows for richer and more complex insights into aspects of the subjects students are studying; it plays a diagnostic role in alerting tutors to areas of the curriculum where students are likely to encounter troublesome knowledge and experience conceptual difficulty”.

(Land et al)

Importance of Engagement

Students must engage with and manipulate a threshold concept. They must explain it, use it, represent it in new ways and even apply it to their own lives.

For example, in what ways can a threshold concept help students know *what* doctors think, know *how* doctors think and then go beyond this to *think like* a doctor?

Tolerating Uncertainty

Students (and teachers) need to accept that learning threshold concepts takes time and the liminal state means living in, and with, uncertainty.

An important means of coping with uncertainty is metacognition, being sensitive to, and aware of, how we think and how we learn.

Pre-Liminal Variation

What different preconceptions and assumptions do students bring to the learning experience? If we can find these out then we can modify our teaching to deal with these.

Listening for Understanding

We need to pay attention to common misunderstandings. What are these?

We need to develop a:

“third ear that listens not for what a student knows ... but for the terms that shape a student’s knowledge” (Land et al.)

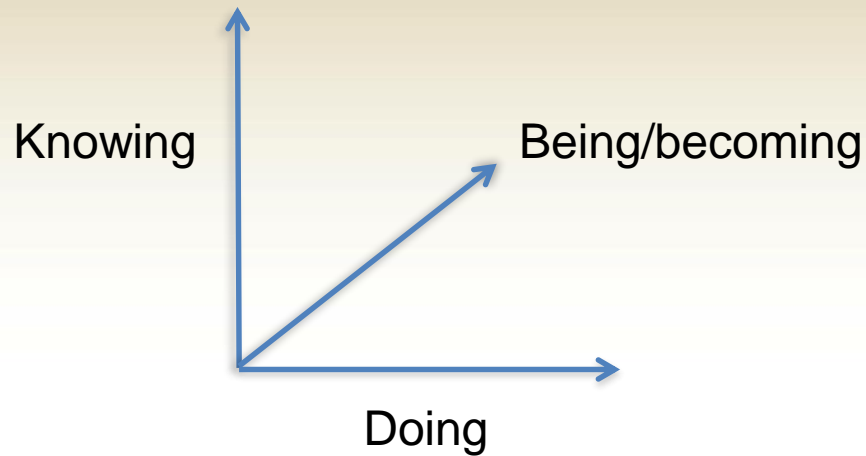
Holding Environments

Provide a “Holding Environment”. A ‘place’ or set of experiences that allows students to engage with the concept and work through the difficulties and misunderstandings. Let them see that others have difficulties too so that they can work through them together. Without this there is the danger of mimicry.

Transformation of Self

“as students acquire threshold concepts, and extend their use of language in relation to these concepts, there occurs also a shift in the learner’s subjectivity, a repositioning of the self ... Threshold concepts lead not only to transformed thought but to a transfiguration of identity and adoption of an extended discourse” (Meyer and Land 2005).

Three Axes of Curriculum



(Barnett & Coate, 2005)

Professional & Practice-Based Education

Neo-Aristotelianism:

Episteme: propositional (textbook) knowledge

Techné: technical skills

Phronesis: the *disposition* to act wisely (gained from practice experience)

“What makes a practice a practice rather than a method is precisely the fact that it is based upon acquired and accumulated experience. The acquisition of discernment, judgment, and insight is based not so much upon what comes to us in a given experience but upon what comes to us by involvement and participation in a whole number of experiences. ... Experience of this order affords a wisdom. (Davey, 2006, p. 245)

Implications for Curriculum and Research

- What are the threshold concepts in your subject?
- What do students find difficult about these?
- What learning activities/experiences can support students?
- How can we assess if students have really learned threshold concepts?

Threshold Concepts and Transformative Learning

“What is of importance is neither that which is transmitted per se nor that which is received but the transformative space which the processes of transmission and reception enable”.

[Because curriculum needs to be seen ...]

“not as a body of set received works but as a cluster of issues, questions, and practices that over time have come to define a certain cultural practice” (Davey 2006)

Issues/Questions?

- What most struck me about the discussion today is ...
- The question that I'd most like to ask the originators of these ideas is ...
- The idea I most take issue with is ...
- The most crucial point is ...
- The part that I felt made the most sense to me was ...
- The part that I felt was the most confusing was ...
- Other comments/questions?

References

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