

# Threshold Concepts

Information on this document has been adapted from:  
Cousin, G. (2006). *An introduction to threshold concepts*, Planet (17), 4-5.



## What is a threshold concept?

A 'threshold concept' is a concept that, once understood, changes the way that a person thinks about a topic. Jan Meyer and Ray Land explain:

*'A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress.'* (2003, p1).

A threshold concept is essential for mastering the subject and for adopting the worldview of their graduate profession.

## Recognising Threshold Concepts

Meyer and Land outline five key characteristics that distinguish threshold concepts from other core concepts in the curriculum:

- **Threshold concepts are transformative**, in that grasping a threshold concept involves a conceptual shift (changing what you know) as well as an ontological shift (changing your sense of being). We are what we know. New understandings are assimilated into our biography, becoming part of who we are, how we see and how we feel.
- **Threshold concepts are irreversible**, in that once a concept threshold is understood the learner is unlikely to forget it (this does not exclude subsequent modification or rejection of the concept for a more refined or rival understanding). For example, it is difficult for many teachers to retrace the journey back to their own days of 'innocence', when understandings of threshold concepts escaped them in the early stages of their own learning.
- **Threshold concepts are integrative**, in that mastery of a threshold concept often allows the learner to make connections that were previously hidden from view. As such, a threshold concept exposes the hidden interrelatedness of the phenomenon.
- **Threshold concepts are conceptually bound**, in that 'any conceptual space will have terminal frontiers, bordering with thresholds into new conceptual areas' (Meyer and Land, 2006, p. 6).
- **Threshold concepts can involve 'troublesome knowledge'**. Troublesome knowledge is 'that which appears counter-intuitive, alien (emanating from another culture or discourse), or seemingly incoherent' (Meyer and Land, 2003, p.7). From this view, the prevalence of a 'common-sense' or intuitive understanding can inhibit mastery of a threshold concept. Getting students to reverse their intuitive understandings is also troublesome because the reversal can involve an uncomfortable, emotional repositioning.

## Threshold Concepts

### Examples of threshold concepts<sup>2</sup>

#### Mathematics:

**COMPLEX NUMBER** – a number that is formally defined as consisting of a ‘real’ and an ‘imaginary’ component:  $x + iy\dots$

#### Physics:

**INERTIA** – objects in motion (eg. rolling ball) will continue in motion unless an external force of some kind (eg. gravity or friction) affects the motion of the object.

#### Cultural Studies:

**DECONSTRUCTION** – the analysis of discourse and text with the purpose to identify and critique the implicit message, positioning or structuring of the argument by the author (as opposed to the message itself).

#### REFERENCES

- 1 Meyer, J., & Land, R. (2003). *Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines* (pp. 412-424). Edinburgh: University of Edinburgh.
- 2 These examples are adapted from Sharpe, L. (2008). *Defining the term ‘threshold concepts’*. [www.flinders.edu.au/Teaching\\_and\\_Learning\\_Files/.../threshold.doc](http://www.flinders.edu.au/Teaching_and_Learning_Files/.../threshold.doc)