Open Education as a threshold concept in Teacher Education: a theoretical framework for further research

Conference or Workshop Item

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Open Education as a Threshold Concept in Teacher Education: a theoretical framework for further research

#oer18thresholds
This session grew from an original session proposal by:

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Following an open call for participation the group expanded to:

Leo Havemann, Birkbeck, University of London/The Open University
Jeffrey Keefer, New York University
J. Dawn Marsh, University of Waikato
Fabio Nascimbeni, Universidad Internacional de La Rioja
Helen Crump, The Open University
Nick Baker, University of Windsor
Mari Cruz García Vallejo, Independent
#oer18thresholds

Part 1

A Video Introduction

(Gemma and Victoria)

https://drive.google.com/open?id=1jwYwQ9GnYQ0QEjU927fyTAViCWXk_IRt
Part 2:
Open as Troublesome and Discussion

(Slides by Dawn and Leo, Presented by Leo and Helen)
The original criteria

**transformative**: occasioning a significant shift in the perception of a subject, the construction of subjectivity and personal identity

**irreversible**: unlikely to be forgotten, or only able to be unlearned with difficulty

**integrative**: making connections between ideas within a subject and resulting in an understanding of the relationships between ideas and practices in a field

**bounded**: constituting a demarcation between disciplinary areas, which serves to delineate members of one academic community from another

**troublesome**: appearing counter-intuitive, intellectually absurd or ‘alien’ when first encountered

(Meyer & Land, 2006b; Perkins, 1999, 2006)
Subsequent criteria

**reconstitutive:** involving a shift in learner subjectivity and a transfiguration of self;

**discursive:** incorporating an extended use of natural, symbolic and artificial language characteristic of particular disciplinary discourses and thinking processes; and

**liminal:** likening the internalisation of a threshold concept to a journey or rite of passage (Baillie et al., 2013; Barradell, 2013; Meyer, 2012; Quinlan et al., 2013).
Rites de Passage
The genesis of threshold concept theory is in van Gennep (1960) and Turner’s (1969, 1970) anthropological research on initiation rites and life transitions.

- Adolescent >>> Adult
- Student >>> Professional
- PhD candidate >>> Academic researcher
- Traditional educator >>> Open educator

How does the initiation from thinking like an open educator, to thinking as an open educator take place?
<table>
<thead>
<tr>
<th>Subject</th>
<th>Threshold Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>cash, depreciation, profit, reconciliation</td>
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<td>Art therapy</td>
<td>professional identity, reflexivity, taboo</td>
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<tr>
<td>Biology</td>
<td>complexity, conceptual change, dynamics, energy, equilibrium, evolution, homeostasis, hypothesis creation, osmosis, process and abstraction, probability, proportional reasoning, randomness and scales, variation</td>
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<tr>
<td>Business and commerce</td>
<td>politics as power</td>
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<td>Climate change</td>
<td>uncertainty</td>
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<tr>
<td>Computing</td>
<td>code reuse, complexity, data abstraction, design patterns memory/pointers, modularity, object-oriented programming, state, recursion</td>
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<tr>
<td>Economics</td>
<td>discretionary fiscal policy, economic modelling, efficiency, elasticity, equilibrium, incentives, interaction between markets, margin, opportunity cost, welfare</td>
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<tr>
<td>Electrical engineering</td>
<td>dynamic resistance, feedback, holistic current flow, Thévenin’s theorem</td>
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<td>Engineering</td>
<td>Bode plots, logical thinking, map sense, professionalism, response, social justice, transient critical flow, transmission lines</td>
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<tr>
<td>Geography and geoscience</td>
<td>data modelling, geologic/deep time, interoperability, map scale</td>
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<tr>
<td>Humanities</td>
<td>subjective interpretation</td>
</tr>
<tr>
<td>Information literacy</td>
<td>authority, commodification of information, disciplinarily, format as process, metadata</td>
</tr>
<tr>
<td>Leadership</td>
<td>moral courage, risk, service, shared leadership, structural leadership, ‘creating leaders’</td>
</tr>
<tr>
<td>Linguistics</td>
<td>rank scale</td>
</tr>
</tbody>
</table>
Troublesome knowledge

The notion of troublesome knowledge is informed by Perkins’ (1999, 2006) pragmatic constructivism.

- **Inert**: seldom applied, e.g. passive vocabulary
- **Ritual**: routinely (but often uncritically) executed to achieve a result
- **Conceptually difficult**: conflicting with intuitive understandings
- **Foreign**: challenging existing beliefs and worldviews.
- **Tacit**: reflecting unconscious beliefs or peripheral awareness
Discussion!

Threshold concepts are said to be ‘troublesome knowledge’ - in what sense might teachers experience open education as troublesome?

Any other thoughts arising from the idea of open education as a threshold concept?

Please discuss and tweet your responses with the hashtag!
#oer18thresholds

## References


Available from: https://www.researchgate.net/publication/311577867_Open_Educational_Resources


