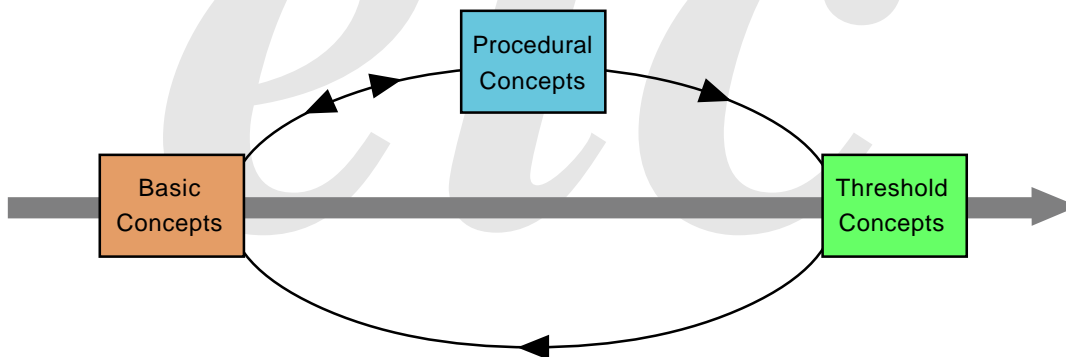


## Threshold Concepts: pedagogical principles and learning activities

In our second newsletter we described the integrative nature of threshold concepts and introduced the distinction between discipline concepts (such as marginality and opportunity cost) and modelling concepts (such as comparative static analysis) that form the ways of thinking and practising in the discipline. As well as these threshold concepts our students also have to acquire a large range of newly met basic concepts (such as economies of scale, the natural rate of unemployment), some of which transform understanding of everyday experience through integration of personal experience with ideas from discipline (such as the distinctions between price/cost and money/income). These basic concepts often have to be introduced before we can proceed to threshold concepts, but usually cannot be fully understood in isolation. Our diagram gives a simple illustration of the relationship in learning of these different types of concepts and the feedback that may be necessary for learning to be deep and transformative.



We have taken account of these interrelationships in proposing pedagogical principles for the development of our teaching and learning activities:

- Highlight variation to ensure there is a sufficient foundation of basic concepts to make it possible to work towards acquisition of the threshold concepts
- Expose the way in which scholars in the discipline use modelling thresholds by highlighting variation in the use of key procedures
- Help students to integrate their understanding through using key procedures in re-working their understanding of previously acquired concepts in the light of threshold concepts
- Help students to regard their understanding as provisional and to tolerate uncertainty.

How these principles are embedded in our teaching and learning activities is explored in our conference paper that is available on our website.

*The project is led by Staffordshire University and our partners are Coventry University, Durham University and the University of the West of England. The project aims to improve students' understanding in economics by developing first year undergraduates' acquisition of threshold concepts.*

*The funding is by the Higher Education Funding Council for England (HEFCE) and the Department for Employment and Learning (DEL) under the Fund for the Development of Teaching and Learning.*

You are welcome to download the current versions of the activities from our website and to make use of these in your teaching. We would welcome any information you could give us on their impact, any problems you find with them and what, if any, adaptations for use you made given your teaching and learning environment.



# Website News

*This section highlights the main recent additions to the website*

The website now contains three conference papers developed from the work on the project:

\* *Recognising Threshold Concepts: an exploration of different approaches* explores the distinction between basic, discipline and modelling concepts and highlights the importance of the web of concepts

\* *Embedding Threshold Concepts: from theory to pedagogical principles to learning activities* develops pedagogical principles from the distinction between the three types of concepts considered in the above paper. It describes the types of learning activity devised by the project and explains how they aim to address these pedagogical principles

\* *Trajectories of students' learning: threshold concepts and subject learning careers* uses threshold concepts to characterise the trajectories of students' experience of learning and presents the stories of a few students selected to illustrate some themes that were apparent across our interviews

## Current Developments

### Conference Papers and Articles

We presented a paper on aspects of embedding threshold concepts at the Allied Social Sciences Associations (AEA) conference in Chicago early in January. We have had an article 'Threshold Concepts and the integration of understanding in economics' accepted for publication by *Studies in Higher Education* and will be developing our other conference papers for publication over the coming months.

### Teaching and Learning Activities

We are continuing our trialling of the activities at the partner and cascade institutions and will review them at the end of the current academic year. Our data collection this year includes lecturer's diaries and the recording of student groups while participating in our activities.

### Transferability Funding

The project has been awarded transferability funding for the year from October 2007 by the HEA. This will involve investigating the embedding of threshold concepts in modules for business undergraduate and MBA students.

### Contacting us.....

Contact Jean, the project manager, by email at

[j.t.mangan@staffs.ac.uk](mailto:j.t.mangan@staffs.ac.uk)

or telephone on 01782 294096.

If you would like to participate in our work and join us as a cascade partner please get in touch.

**Bookmark our website**

<http://www.staffs.ac.uk/thresholdconcepts>