



## Finding a way in ...

... introducing students to the knowledge community and how to learn within it.



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‘Finding a way in’ – introducing students to the knowledge community and how to learn within it.

When students join our courses at the university, they don’t know what we know. That’s one reason why they come here. This sounds like a statement of the obvious, but it reminds us of the importance of helping students to ‘find a way in’ to our subject or academic discipline. Students are joining, and need to become active within, a knowledge community with its own specialist academic discourse.

If you recall learning in any subject or discipline at any stage of your life, but particularly within an educational institution, you will remember that you didn’t know everything at once. Some elements; a few key concepts; some key words might have been familiar to you, but the big picture will have been indistinct and potentially, alienating. You will also, no doubt, recall gradual realisation and piecing together of a more complete understanding. Teachers can help students to do this; we can help them find ‘ways in.’

In this introductory guide you will encounter these key ideas:

- Knowledge community
- Academic discourse
- Relevance
- Constructivism
- The Zone of Proximal Development (ZPD)
- Scaffolding
- Advance organisers
- Threshold Concepts

The expansion of higher education brings new students from ‘non-traditional backgrounds’ (i.e. those who have not been ‘prepared’ for university). Wingate (2007: 392) argues that,

“despite the changes in the student population, traditional expectations towards students have not changed: they are to manage their learning and acquire academic literacy independently.”

Rather than expecting students to acquire academic literacy and enter academic discourse independently, it may be more effective and efficient if lecturers provide learning environments and methods which help students to ‘find a way in.’

It has also been argued (Wingate, 2007:393) that secondary school students, under the pressure of league tables have increasingly been ‘taught to the test’ and, consequently, are less equipped with the ‘self-learning skills’ expected in university.

### **How can academics help students find their way in?**

Higher education needs to ‘move from a model of teaching knowledge to one of enabling learning’ (Goodman, 1994)

The first way in which academics can help students into learning is to challenge our own conceptions of teaching and learning in higher education. Kember (1997) suggests two basic, contrasting conceptions:

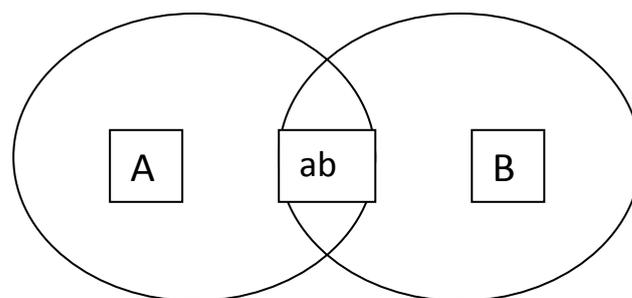
- Teacher-centred/ content oriented
- Student- centred/ learning oriented

The first sees university teaching as a process of transmitting knowledge and ideas (content) from the lecturer to the student. It is teacher-dominated, content-heavy and generally requires students to be passive. The second conception is of much more active students who are involved in creating meaning as much as receiving it; in short, it is about learning.

### **Becoming participants in the knowledge community**

To facilitate and encourage learning, academics must realise that they are participants in, and create, a **knowledge community** with its own **academic discourse**. This community and the associated discourse are new, and potentially scary, for students. We have to help students find their way from the periphery to the centre (Lave and Wenger, 1990). This idea not only recognises the needs of a diverse student population but also the linked idea of education for inclusion and widening participation.

A model from communication studies provides a useful device for investigating this issue. Schramm (1973) used two overlapping circles to represent the area of shared understanding between two parties. If A is the lecturer and B the student, the area *ab* represents their shared area.



The aim of learning should be to increase the area *ab* and to do this, lecturers need to recognise that, in the early encounters, students will be unfamiliar with the academic discourse. Depending on how these introductions are handled students will become more confident in exploring ideas, or they will feel distanced from them.

Northedge (2003a: 172) describes ‘a classic dilemma’ for students, resulting from their initial difficulties in engaging with academic discourse:

“[Students] find themselves ‘locked out’ – unable to make sense of utterances they encounter because they cannot place them within the implicit frames of reference, but equally unable to make progress with

internalising these frames of reference because they cannot engage with the utterances through which the frames of reference are made manifest.”

The simple overlapping circles model connects with Northedge’s ideas (2003a: 2003b) concerning the ‘role of the teacher in supporting participation in specialist discourse.’ Northedge talks of ‘frames of reference’ and ‘intersubjectivity’, that is the capacity to ‘frame and generate meaning together with others’, very much like our area *ab* in the model above. He outlines a series of steps by which sharing of meanings is achieved. The first two are relevant here:

1. Constructing the conditions of intersubjectivity
2. Leading excursions from familiar discourse into specialist discourse

For Northedge, the first step, at its simple level, means capturing students’ attention and establishing a common focus for understanding and meaning making. He illustrates this by an example from a social work training in which students are introduced to and discuss a case study of two homeless drug users. By this everyday, ‘common-sense’ discussion students can relate to a real-life scenario and start to tease out some of the key issues. The discussion would not necessarily include subject-specific language and concepts.

The second step leads from familiar to specialist discourse by discussion and questioning and the introduction of specialist concepts. A further advantage of this process, implicit in Northedge’s work, is that students can develop their critical thinking skills as they move from ‘common-sense’ understandings and opinions to more rigorous and objective, academic understandings.

Northedge’s ideas seem to challenge conventional wisdom that students need to acquire theory/ content before they can apply it to problems. Sometimes introducing problems first can be a stimulating introduction and increase motivation to develop understanding of theory.

Haggis (2006: 529) suggests that the language of academic discourse is a problem for students but that academics may be concerned that the use of simpler language may be perceived as ‘dumbing down’ and that ‘the idea of using less complicated language where possible, or of the need to translate specialist terms’ is likely to be associated with the lowering of standards.

### **Relevance**

Northedge’s work hints at the notion of relevance. This is amplified by Kember, Ho and Hong (2008) in their discussion of the importance of relevance in motivating student learning. It is fundamental to several theories of learning that new knowledge and concepts should be connected to students’ existing learning; this both motivates and helps them to structure their learning. Kember, et al, suggest

that abstract theory alone is demotivating in that it seems to students to be isolated and decontextualised.

“It was not just that the abstract theory aroused little interest, it was also hard to understand in many cases. Without seeing an application which put the theory in context it became hard to grasp the meaning. It was also difficult to frame suitable questions to advance understanding.” (Kember, Ho and Hong, 2008:254)

Paradoxically, much of the content of the first year of degree courses is delivered in this way and students are expected to apply it in subsequent years. They argue that supplying reasons and contexts for learning from the outset will increase motivation. Relevance can be established by, for example:

- using real-life examples
- drawing cases from current issues
- giving local examples
- relating theory to practice.

### **Using advance organisers**

Students, particularly in their early studies, can feel overwhelmed by the sheer size of the subject discipline and their inability to ‘map the territory’; they feel unable to grasp ‘the big picture’. This applies at various levels – course; stage; module; lecture. One way to give students the big picture is by using advance organisers. These are written and/ or graphical overviews of a topic or subject. Concept maps (Novak, 1998) are a good example. In much the same way the picture on the box is the key to completing the jigsaw, an advance organiser is a way of helping students to locate detail in a larger frame Advance organisers were developed by the educational psychologist, David Ausubel.

In addition to concept maps, advance organisers could be:

- A written statement or overview
- (Flow) chart
- Spider diagram
- Picture
- Timeline
- Visual representation
- Tree diagram
- Series of steps (diagram)

As Gibbs and Habeshaw (1998) point out:

“What makes it possible for students to understand and remember is the way they link ideas to form meaningful wholes...the big ideas that structure

your courses probably can't be found in any one part of one lecture or seminar...

### **Constructivism**

Gibbs and Habeshaw's reference to linking 'ideas to form meaningful wholes' represents a key idea in constructivism. This will be discussed more fully in a later article but, in essence, it is a theory of learning which stresses the role of the individual learner in creating their own understanding. It emphasises that learning is most effective, and most lasting, when it is integrated into and extends existing learning. Constructivism emphasises,

"... that the learners construct knowledge with their own activities, building on what they already know. Teaching is not a matter of transmitting but of engaging students in active learning, building their knowledge in terms of what they already understand." (Biggs and Tang, 2007)

This does not mean, however, that the creation of meaning is the responsibility of learners alone. As Scales (2008; 61) states, "Constructivism suggests that we must provide, and help learners to create, frameworks for learning." This implies the development of a range of teaching and learning methods which encourage students to create; question; analyse; criticise; synthesise and evaluate.

Constructivism also implies that we don't store huge amounts of content, so much as create personal mental maps. As Costa (2001: xvi) points out, "It is not the content stored but the activity of constructing it that gets stored. Humans don't *get* ideas; they *make* ideas."

### **Threshold concepts**

A recent development in learning theory is the notion of 'threshold concepts'. These are particularly associated with the work of Meyer and Land (2003) (see also Land, Meyer and Smith: 2008) who suggest that 'threshold concepts may be a way of overcoming the 'stuffed curriculum'. They refer to "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." Focusing on 'threshold concepts' can help to teachers to identify what is fundamental to students' grasp of the subject. (See linked article, Cousin 2006)

Three of the key features of threshold concepts are that they are:

- transformative – in that they involve 'an ontological as well as a conceptual shift.' They make a difference to who we are and how we perceive the world.
- irreversible – once understood they are unlikely to be forgotten. Teachers can find it difficult to recall a time before they didn't understand these concepts and, therefore, find it difficult to empathise with students who are struggling with them.

- integrative – they help students to make connections. As Cousin (2006:4) points out, “mastery of a threshold concept often allows a learner to make connections that were hitherto hidden from view.”

‘Socialisation’ is an example of a threshold concept from sociology. Initially difficult for students to grasp, once mastered it provides a basis for understanding much of sociology. It is transformative, irreversible and integrative.

Stokes, King and Libarkin (2007: 436) provide examples of threshold concepts in other disciplines:

Economics	- opportunity cost; elasticity
Pure Mathematics	- complex numbers; limits
Electrical Engineering	- frequency response
Statistics	- sampling distribution
Computer Science	- object oriented programming
Law	- precedence

Another feature of threshold concepts, as defined by Meyer and Land (2003) is that they involve ‘troublesome knowledge’. Knowledge is ‘troublesome’ in the sense that whilst individuals are coming to grips with this new knowledge it may seem alienating, counter-intuitive, or just plain scary. Once the learner has passed through this ‘liminal’ state of partial understanding, they may feel transformed; if they get stuck they may only partially understand the concept and, consequently, encounter barriers to further understanding.

There is a link here to Haggis’s (2006) discussion of language and academic discourse insofar as language may result in ‘troublesomeness’. As Meyer and Land (2003: 9) state:

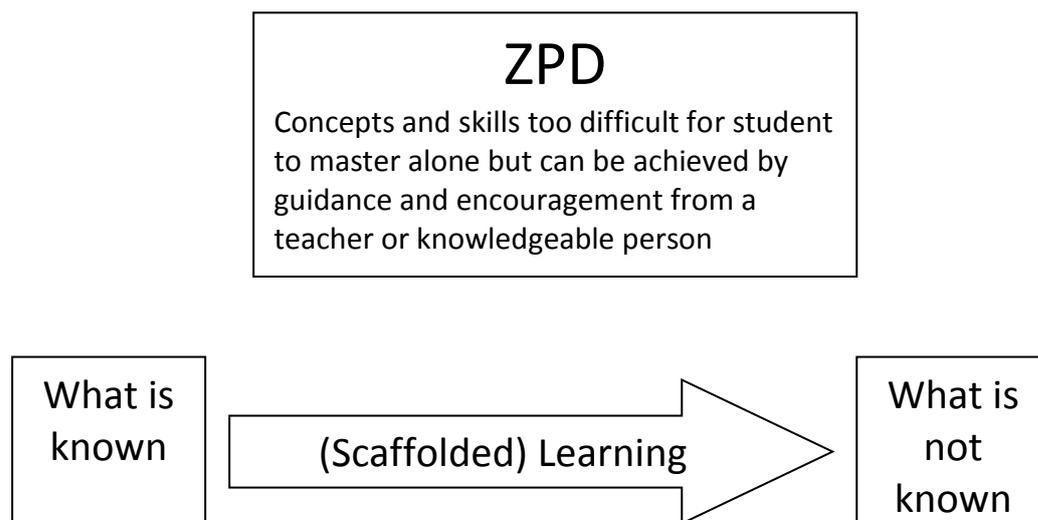
“Language itself, as used within any academic discipline, can be another source of conceptual troublesomeness. Specific discourses have developed within disciplines to represent (and simultaneously privilege) particular understandings and ways of seeing and thinking. Such discourses distinguish individual communities of practice and are necessarily less familiar to new entrants to such discursive communities or those peripheral to them... The discursive practices of a given community may render previously ‘familiar’ concepts strange and subsequently conceptually difficult. The use of the term ‘culture’ within first year Social Anthropology, for example, has been reported to us as problematic in this way.”

Similarly, in Communication Studies, the term ‘redundancy’ which in other contexts has negative connotations is used positively to indicate ease of communication and understanding.

## ZPD and Scaffolding

These two connected ideas come from Vygotsky (1978) and Bruner (1960). They are usually applied to learning in schools but are equally applicable to HE.

The Zone of Proximal Development (ZPD) refers to a theoretical space of understanding which is just beyond the students' current level of understanding; it is the area into which they will move next." Lecturers can support students across this space by the use of 'scaffolding', provided by supportive guidance, prompting, questioning and guided discovery. Once the higher levels have been reached the scaffolding can be removed and the students can happily inhabit that space.



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