

## Short Course in Learning and Teaching in the Classroom

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### Session Two: Theories and models of learning and teaching

#### Theoretical context to facilitating learning

- Where does our knowledge about learning and teaching come from?
  - Psychological theories about learning
  - Learning styles
  - Specific models of teaching and learning
- How do we apply this to our teaching practice?

#### Psychological theories of learning

- **Behaviourist:** e.g. operant conditioning (positive and negative re-inforcement for learning)
- **Cognitive:** e.g. building cognitive maps/ templates to understand and learn
- **Attention and Memory**
- **Motivation:** e.g. Humanistic theories of Rogers and Maslow
- **Social Learning theory:** e.g. Bandura 'vicarious learning'

#### Some models of teaching and learning

- **Squires' 'Micro model' (1994)** – three dimensions: functions, methods, variables
- Deep and surface approaches to learning e.g. **Marton and Saljo (1976)**
- Learning Cycle's e.g. **Kolb (1984)**
- **Phil Race (2001)** – 'Ripples in a pond'

#### Squires' micro model

Three dimensions:

- **Functions** – what teachers actually do
  - E.g. inform, explain, explore, motivate, assess, reinforce
- **Variables**
  - all elements, circumstances that may impact (group, individual, setting)
- **Methods**
  - E.g. presentation, demonstration, discussion, Q and A, supervision, practical etc.

#### Deep and surface approaches to learning (Marton and Saljo)

- Students adopt different approaches when undertaking academic tasks:
  - focus on understanding
  - focus on reproducing
- A great deal of research in this area....
- ...concluding that students using deep approaches tend to have higher quality learning outcomes

### Main features of deep/ surface approaches

	Orientation	Characteristics
Deep approach	Knowledge transforming	<p>An intention to understand material for oneself/ Vigorous and critical interaction with knowledge content</p> <p>Relating ideas to one's previous knowledge and experience Discovering and using organizing principles to integrate ideas</p> <p>Relating evidence to conclusions Examining the logic of arguments</p>
Surface approach	Information reproducing	<p>An intention simply to reproduce parts of the content Ideas and information accepted passively</p> <p>Concentrating only on what is required for assessment Not reflecting on purpose or strategies</p> <p>Memorising facts and procedures routinely Failing to distinguish guiding principles or patterns</p>

### Exercise: deep v surface approaches

*What are the main determinants for whether a deep or surface approach is used?*

### Kolb's experiential learning cycle



### Kolb's experiential learning cycle

- **Concrete experience**
  - Learning starts with doing something – the key to learning is active involvement
- **Reflective observation**
  - Stepping back from the 'doing' and reviewing what has been done and experienced
- **Abstract conceptualisation**
  - Interpreting events and understanding the relationships between them
- **Active experimentation**
  - Considering /planning how to put learning into practice

### Race: Ripples on a pond....



### Race's 'Ripples on a pond' model

**Wanting:** eg motivation, interests, enthusiasm

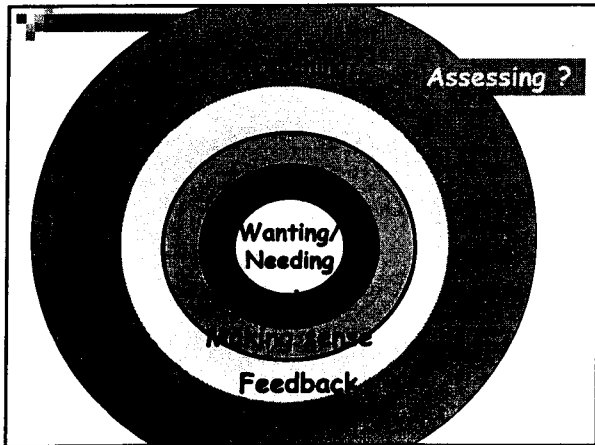
**Needing:** eg necessity, saving face

**Doing:** eg practice, trial and error

**Feedback:**

- intrinsic – seeing results
- extrinsic - other people's reactions

**Digesting/ making sense** of what has been learned, realising, gaining ownership



### Exercise: How do you learn well?

*Think of something that you're good at, something that you know you do well.*

*How did you become good at it?*

### Exercise: What can go wrong?

*Think of something that you're not good at – perhaps as a result of bad learning experience*

*What went wrong?*

### Exercise: application of theories to own experiences

- *Do any of the theories and models covered in this session offer insights into your own experiences of:*
  - How you have learned well?*
  - What has gone wrong for learning about something?*
- *Which theory/ model best explains your own experiences?*

### Theoretical context to facilitating learning

- *Where does our knowledge about learning and teaching come from?*
  - Psychological theories about learning
  - Learning styles
  - Specific models of teaching and learning
- *How do we apply this to our teaching practice?*
  - Planning and delivery of teaching sessions
  - Assessment and feedback

### Teaching ...

- Other people's knowledge is just information.
- Teaching is helping people to turn information into knowledge...
- ...by getting them to do things with the information...
- ...and giving them feedback about their attempts.

Phil Race (2001)

MIDDLESEX UNIVERSITY, Department of Mental Health and Social Work:  
A Centre for Excellence in Teaching and Learning:

## **Learning and Teaching in the Classroom: A short course**

### **Learning resources: useful websites and links**

Phil Race's website – full of useful downloads, including some whole books!  
<http://phil-race.co.uk/>

Geoff Petty's book 'Teaching Today' is available online:  
<http://books.google.co.uk/books?id=QfSPDVcauFUC&printsec=frontcover#PPP1,M1>

Yvonne Hillier's 'Reflective Teaching in Further and Adult Education' is also available online:  
[http://books.google.co.uk/books?hl=en&id=2aBEOow8wIC&dq=Reflective+Teaching+in+Further+and+Adult+Education&printsec=frontcover&source=web&ots=JXh6NWWU F&sig=jwVjijWfiW kOM H1FxdxBIc-DKM&sa=X&oi=book\\_result&resnum=3&ct=result#PPA32,M1](http://books.google.co.uk/books?hl=en&id=2aBEOow8wIC&dq=Reflective+Teaching+in+Further+and+Adult+Education&printsec=frontcover&source=web&ots=JXh6NWWU F&sig=jwVjijWfiW kOM H1FxdxBIc-DKM&sa=X&oi=book_result&resnum=3&ct=result#PPA32,M1)

The Higher Education Academy website - link to resources:  
<http://www.health.heacademy.ac.uk/resources>

For example:  
[http://www.heacademy.ac.uk/resources/detail/id472\\_managing\\_classroom\\_difficulties](http://www.heacademy.ac.uk/resources/detail/id472_managing_classroom_difficulties)

Support4learning - lots of downloads re learning styles:  
[www.support4learning.org.uk/education/learning\\_styles.cfm](http://www.support4learning.org.uk/education/learning_styles.cfm)

<http://www.learning.ox.ac.uk> The Oxford Learning Institute – good information, links and downloads. For example:

<http://www.learning.ox.ac.uk/oli.php?page=175>  
links to '*Learning and Teaching Papers*' from their *Teaching development support via Resources for teaching development* web pages.

<http://www.learning.ox.ac.uk/oli.php?page=63>  
The Oxford Learning Institute links to '*Web resources for teachers*' from their *Teaching development support via Resources for teaching development* web pages.

<http://www.journeytoexcellence.org/practice/instruction/theories/>  
Downloads - practical examples and resources for teaching

[http://www.funderstanding.com/about\\_learning.cfm](http://www.funderstanding.com/about_learning.cfm)  
Information about different theories of learning

<http://www.educationatlas.com/education-methods-and-theories.html>  
Teaching and learning methods and theories

### **Others that might be useful:**

<http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/teachtip.htm#learn>

<http://www.ukcle.ac.uk/resources/temp/assessment.html>