Short Course in Learning and Teaching in the Classroom
Janet Holmshaw and Jeff Sapiro
Middlesex University, London

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

- 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 (Martin 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

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Deep approach</td>
<td>Knowledge transforming: An intention to understand material for oneself, vigorous and critical interaction with knowledge content, relating ideas to one's previous knowledge and experience, discovering and using organizing principles to integrate ideas, relating evidence to conclusions.</td>
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<tr>
<td>Surface approach</td>
<td>Information reproducing: An intention simply to reproduce parts of the content, these is information accepted passively, concentrating only on what is required for assessment, not reflecting on purpose or strategies, learning facts and procedures routinely.</td>
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Exercise: deep v surface approaches

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

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...

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)
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=QfSPDVcaaUFUC&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=2aBEBOow8wlC&dq=Reflective+Teaching+in+Further+and+Adult+Education&printsec=frontcover&source=web&ots=JXh6NVWU_F&sig=iwVjiWfiW_kOMH1Fx5xBlc-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

Support4learning - lots of downloads re learning styles:
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
Information about different theories of learning
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