Main Arguments
Learning objects (LOs) and learning design (LD)

- Useful for discovering, sharing and developing pedagogic strategies and designs.

- Introduction reveals existing pedagogic practice and values.

- Makes staff development almost inevitable
The Learning to Learn (L2L) project is part of the JISC Exchange for Learning Programme (X4L) and is developing reusable learning objects to support learning/study skills.

**PEDAGOGIC FRAMEWORK:**

Uses a pedagogic framework based on the work of Tom Shuell and ideas presented in the JISC funded report *Effective Networked Learning in Higher Education* (2000).
Capturing Pedagogy

- Use a common vocabulary to describe pedagogic strategies by an existing community of practice - study skill tutors

- Good target group - dedicated and educationally savvy
It’s teaching Jim - but not as we know it…

Who’s we?

Where teachers are in reality

Using our Pedagogic Framework - 2 problems
  - Discussion not common
  - Terminology is rebarbative
### Shuell’s Pedagogic Framework: Learning Functions

<table>
<thead>
<tr>
<th>Define Learning Expectations</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior knowledge activation</td>
<td>Evaluation</td>
</tr>
<tr>
<td>Motivation</td>
<td>Monitoring</td>
</tr>
<tr>
<td>Combination, Integration,</td>
<td>Can be activated by:</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Learner</td>
</tr>
<tr>
<td>Attention</td>
<td>Teacher</td>
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<tr>
<td>Encoding</td>
<td>Resource</td>
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<tr>
<td>Comparison</td>
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<tr>
<td>Repetition</td>
<td></td>
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<tr>
<td>Hypothesis Generation</td>
<td></td>
</tr>
</tbody>
</table>
Our Experience

- Better to work outwards from teachers' existing conceptions and terminologies

- Back to:
  - Prepare
  - Teach
  - Review
Knowledge Construction Activities

1. Preparing To Learn
   - Define Learning Expectations
   - Motivation
   - Prior knowledge activation

2. Learning Episode
   - Comparison
   - Hypothesis Generation
   - Encoding
   - Reiteration
   - Attention

3. Reviewing Learning
   - Feedback
   - Monitoring
   - Evaluation

Learner Management Activities

L  Learner
R  Resource
T  Teacher
Building on Shuell

- A Bridge between Cog. Psy. and ID - important for the UK

- Lessons for uptake of Learning Design....

- Too abstract

- Strongly implicit organisational model in LD & Los

- Industrial approach
  - Division of Labour
  - Design Intensive
  - Design once run many
  - Change of roles
The Learning Design Continuum

LD Levels
A - Basics and Sequence
B - Properties and Conditions
C - Notifications
What a Teacher Sees

Many Continuums
Implications for the Future

• LD and LOs as Boundary Objects (Wenger) for CoPs.

• They Need to Carry some Context and offer possible Generalisations (Toshiba)

• Lessons from AI Knowledge Elicitation for LD?
Where Teachers Are: Operating at Levels 1, 2 & 3 of Ramsden’s Model of HE teaching

‘Craft’ Style Communication with Artefacts and Primitives
Conclusions

“That we develop only intra-disciplinary libraries of learning objects is not a bad thing. It is simply so much less than what could be. If we do develop these boundary spanning resources and strategies, there is a genuine opportunity for a critical revolution in knowledge production. ”

Anderson 2003

End