



Perspectives on learning design
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Learning Design Conference
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Conceptualising
learning design as both
an analytical and
creative process

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Outline

Technology-based innovation should come from teachers

To innovate, teachers need tools for design and planning

→ Tools and representations for a learning design support environment



Teachers as researchers...

- We need to understand how to foster collaborative learning among teachers as *learners about e-learning*
- Teachers need to be more like researchers, researching on *the teaching of their subject* – discovering how best to do it
- But *teachers lack the means and tools* to build on others' work, re-design, experiment, share, reflect, and collaborate



A different model of teaching

- building on the work of others – reusing, adapting, customising
- with support staff, and tools, to design new pedagogies
- treating teaching as an opportunity to innovate and discover
- collaborating and sharing ideas to improve quality and scale



Tools and representations for a learning design support environment

A Learning Design Support Environment - cross-institutional, interdisciplinary research project

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Researchers: Patricia Charlton, Dr Brock Craft, Dr Dejan Ljubojevic



A Learning Design Support Environment - LDSE project aims

- Research the **optimal model** for an effective learning design support environment (LDSE)
- Achieve an **impact** of the LDSE on teachers' practice in designing technology enhanced learning (TEL)
- Identify the factors that are conducive to **collaboration** among teachers in designing TEL
- **Embed knowledge** of teaching and learning in the learning design software architecture
- **Improve representations** of the theory and practice of learning design with TEL.



User requirements elicited

- *Planning* –

- ensure all the components of learning design (aims, learners' needs, learning activities, intended outcomes, etc) are addressed and are compatible with each other, at different levels of course, module, session, learning activity
- of a decision for other parts of the process, enabling editing and customising, and representing the resulting design in a link each decision to relevant online advice on learning design, online learning object repositories (e.g. OCW, OpenLearn, MERLOT), case studies (e.g. JISC, ALTC), learning designs (ALTC, iCampus), distillations of educational research findings (e.g. JISC briefings, journal abstracts), local information about learner needs (e.g. feedback surveys, examiners' reports)
- build a community of practice, where lecturers can discuss and share learning designs, learn from each other, and build on each others' ideas
- for allocating lecturers' time, learners' time, estimating comparative costs, publishing schedules for modules or sessions, producing module-level planning for administrative purposes.

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Approaches to learning design

- Content-based

constrained by academic interests, discipline aims, qualification (knowledge and skills, duration), professional requirements - tool

- provides IAG on qualification requirements, QAA learning outcomes for the discipline. links to topic-related resources

constrained by resources (facilities, number of staff, income), number of students, entry requirements, student capabilities, contact requirements

- - tool provides information on resources available, requirements, staff costs, fee levels, other costs, students, course requirements

determined by institutional curriculum and other T&L-related policies, market demands, learner needs - tool provides links

- to institutional information

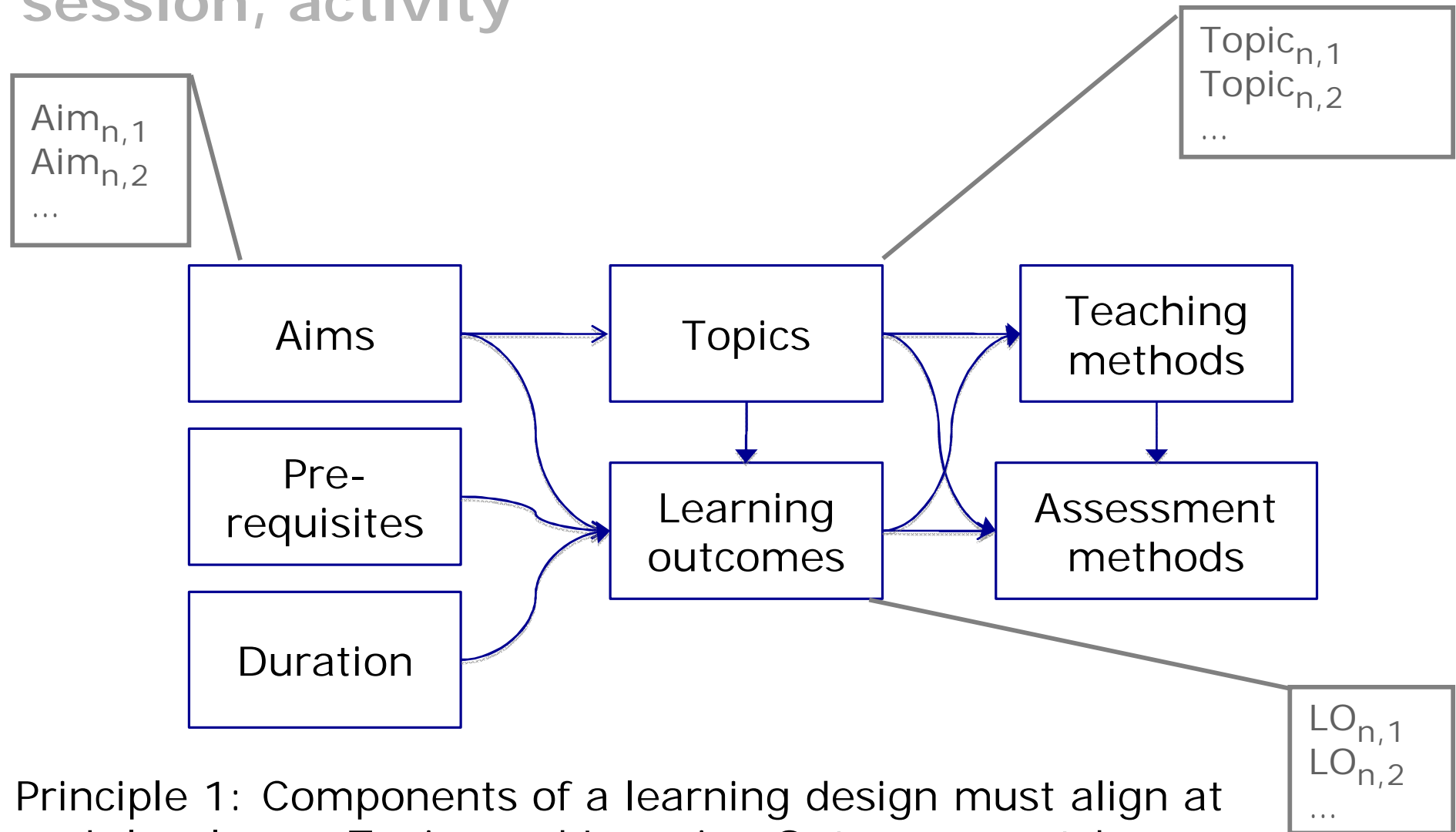
driven by an account of how a student will be enabled to learn and achieve the learning outcome - tool provides advice and guidance on what it takes to learn

- different types of outcome, links to exemplars of learning activities related to each, student evaluations, information on typical forms of misconception related to topic

constrained by learning theories (ID, Soc-constr, Constructionism, Ed tech, etc.)

governing teaching strategies - tool provides information, advice and guidance, on teaching strategies, and learning activities, as well as exemplars

Modelling the planning: course, module, session, activity



Principle 1: Components of a learning design must align at each level: e.g. Topics and Learning Outcomes match Aims



Programme

Course

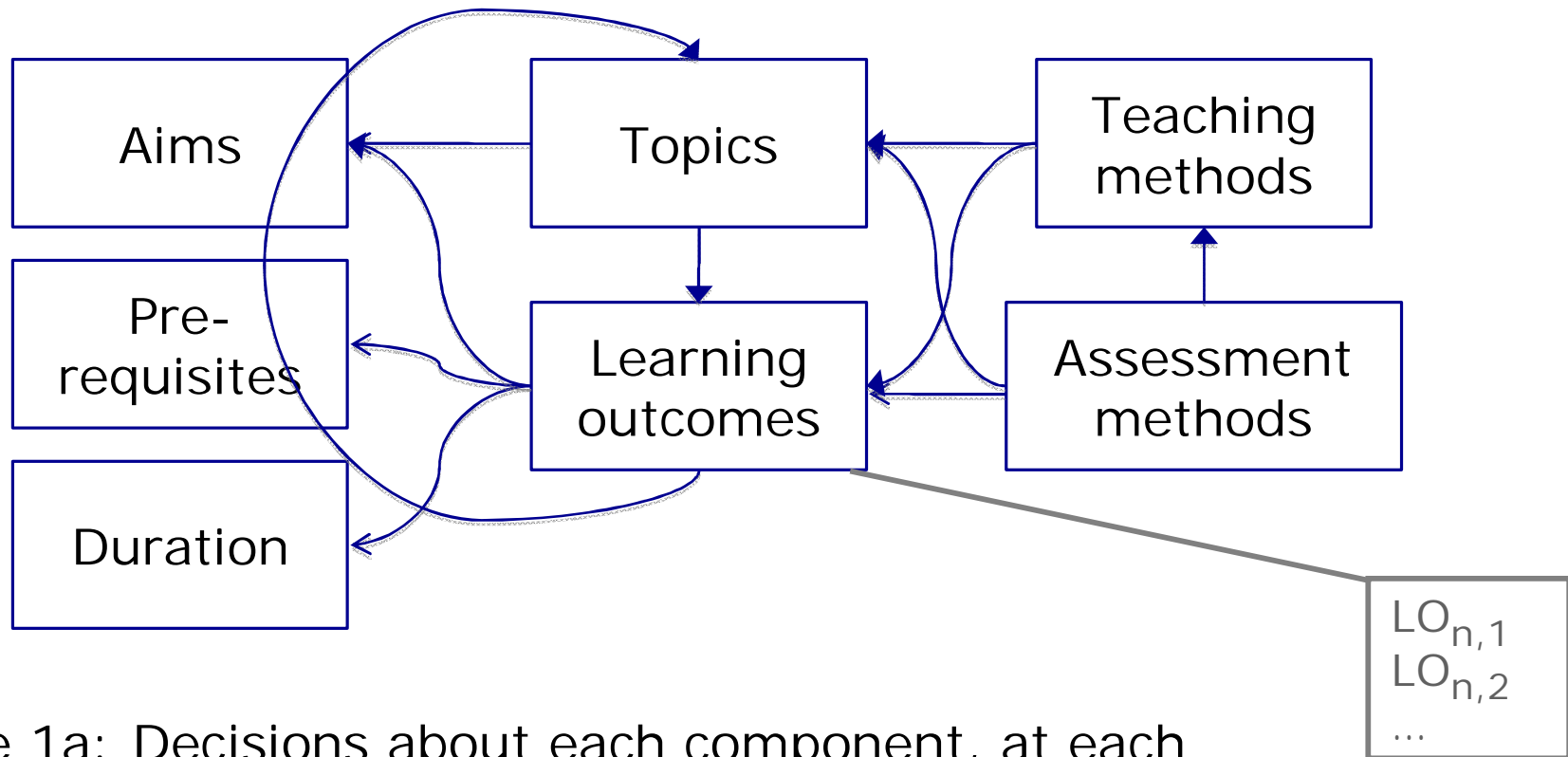
Module

Session

Activity

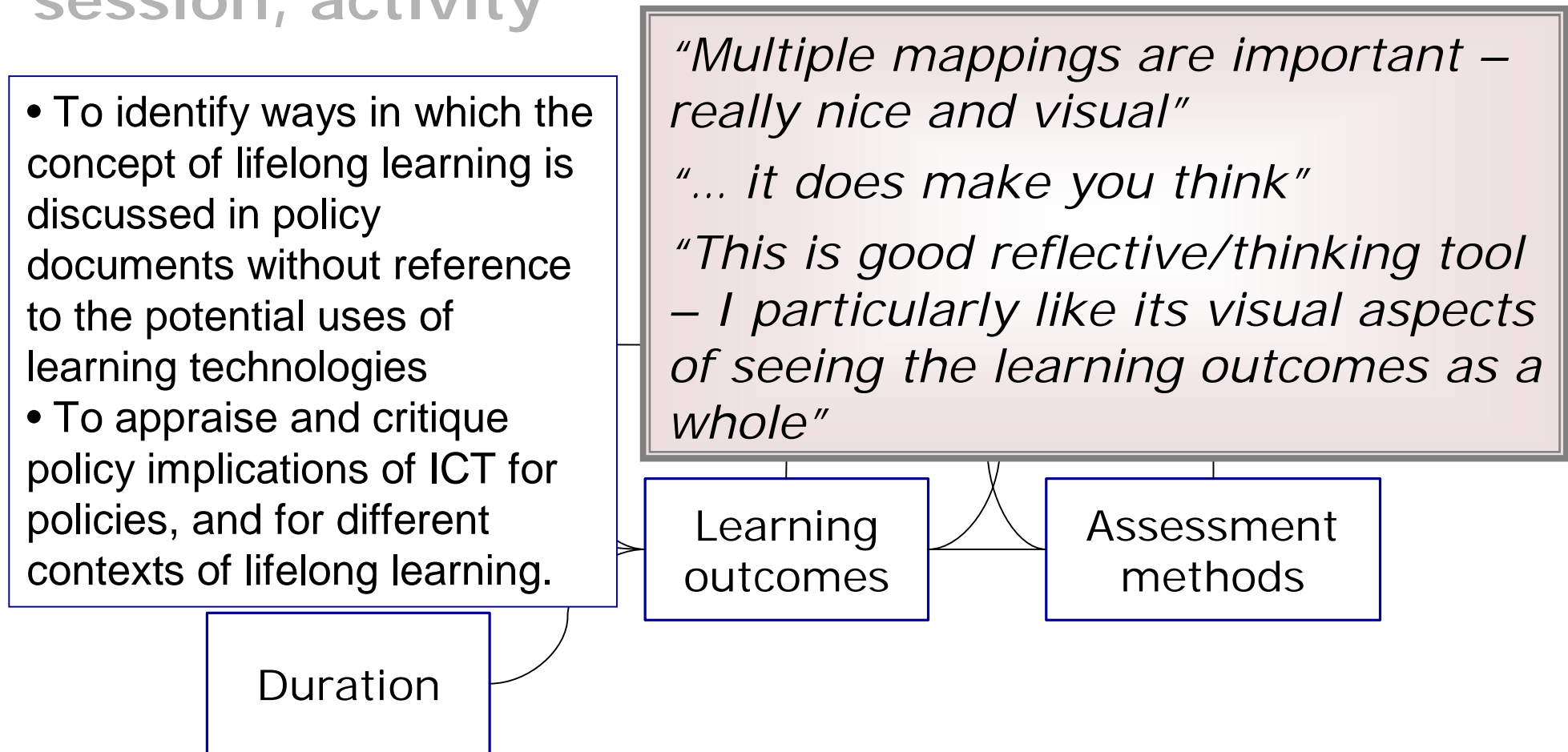
‘Layers’ for learning design

Modelling the planning: course, module, session, activity



Principle 1a: Decisions about each component, at each level, should propagate through the network

Modelling the planning: course, module, session, activity



Principle 11: Users should be able to govern the level of complexity of representation they deal with

Modelling pedagogy against use of time

Editable web address

Select different

select which teaching methods to use

☒ Lectures

☒ Tutorials

☒ Set Readings

☒ Tutor-marked assignment

☒ Online Asynchronous Conferencing

☐ Study Guides

☐ Workshop

☐ ICMA

☐ Digital tool

☐ Interactive learning object

☐ Audio-graphic

☐ Seminar

☐ Independent inquiry

ing methods.

TIME

Group

30

80

80

50

90

300

Total:

Target:

all things in
moderation
moderation

Profile Services Research Contact Sitemap

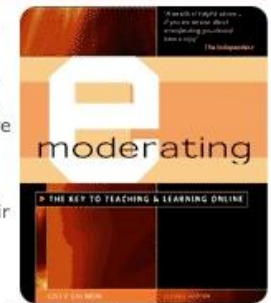
All Things In Moderation | E-moderating | Introduction

About "E-mod 2"!

The first edition of E-moderating was published in May 2000. The 2nd edition of E-moderating, published in January 2004, offers something of a renewed and refreshed, rather than changed vision, of the role and training of the online teacher or trainer, the person I call the e-moderator. There is a little more about his or her role in synchronous technologies. There is a new chapter about the future for e-moderating, which I hope will help you better prepare for what's around the corner. I've updated the stories, views, experiences and online reflections of developing e-moderators and I hope their voices continue to shine through.

Three key themes have emerged since I wrote for the 1st edition of 'E-mod' around the turn of the Millennium. First there's less reason to convince the world that we need support for online teachers, trainers and facilitators, (i.e. from a happy and successful band of e-moderators) to make e-learning work well. Thinking has moved on a little from believing technology may do away with teachers and towards how they can be trained and supported to work online. Second, researchers have stopped counting online messages, making spurious comparisons between online and face to face and started instead to explore when and what we need to make online really worthwhile. I have included some of their published literature for this edition. Third, and as yet largely unresolved, are ways of scaling up the e-moderating task force beyond the early adopters, without consuming huge amounts of diminishing resources. I hope you will find this edition helpful for these new directions. Good luck and report back please! The challenge will last a while. I hope E-mod 2, will help make the online world a more social, supportive and dynamic place.

Gilly Salmon
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activities defined
for a method?

Modelling pedagogy against use of time

The London Pedagogy Planner

File Edit View Help

Properties Teaching Methods Link Allocate

Use this panel to distribute the total credit hours among your selected teaching and learning methods.

The default values under cognitive activities give a sense of the likely learning experience generated by each method.

If you prefer to insert your own expectations of the learning experience generated by each method, you can edit these values so that they sum to the same number of hours.

double-click 'Teaching Methods' to select teaching methods.

Teaching method	TIME	Attention	Inquiry	Discussion	Practice	Production
Lectures	60	30	??	30		100
Tutorials	30	3	3	24		5
Set readings	80	80				
T-M Assignments	80		24			
Online tutorials	50	15		35		
		128	27	89	36	20
		173	33	24	45	25

Change distribution of learners' time across methods?

Change proportion of cognitive activities defined for a method?

Teacher can model different selections of teaching methods and check effect on learning experience and staff time

Support for modelling learning experiences

- The teacher can model the effect on the learning experience of different selections of teaching methods
- Can explore other conventional and digital methods

"It encourages thinking outside current teaching box and therefore use of other methods"

"This is more useful than I expected it to be"

"...very good for integrating learning technologies and the learning design process"

"...as a newcomer to writing modules I welcome the help and appreciate definitions/suggestions"

Principle 12: Users should be able to model the **pedagogic benefits** and workload costs of different combinations of teaching methods

Tool for modelling teacher workload

Comparative models for teacher training										
DEFINE Number of students	50									
<i>Black numbers can be edited; red numbers are derived.</i>										
Shift more lecture time to web more tutorial to online project group to online marking to computer to halve the teaching time	Hours	100	5	0	1	0	20	0	0	
	Allocate learner time	200	100	100	200					600
	Teacher time	400	1000	10	1000					2410
Model 2: Blended learning										
ALLOCATE Learner time	100	50	50	100	100	50	50	100		600
Teacher time	200	500	5	500	10	15	2.5	10		1243
Model 3: Distance learning										
ALLOCATE Learner time	10	10	50	100	150	100	80	100		600
Teacher time	20	100	5	500	15	30	4	10		684
Assumptions										
Teacher preparation time / student hour	1.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1		
Teacher presence needed / student hour	1.0	1.0	n/a	0.1	n/a	0.1	n/a	n/a		

Principle 12: Users should be able to model the pedagogic benefits and workload costs of different combinations of teaching methods

Creative tools for 'progressive innovation'

Given your anticipated learning outcomes

Likely learner characteristics

- ☐ Understanding
- ☐ Understanding
- ☐ Understanding
- ☐ Motivation to
- ☐ Justification
- ☐ Seeing the
- ☐ Understanding

About Learning Activities and Sequences

Phoebe tool

Definition

A learning activity has been defined as:

"an interaction between a learner or learners and an environment (optionally including content resources, tools and instruments, computer systems and services, 'real world' events and objects) that is carried out in response to a task with an intended learning outcome." (Beetham, 2004)

There may be only one activity in a particular learning session, or there may be a **sequence** of activities. The exact number depends on a number of inter-related factors, including:

- The length allowed for the session in the course timetable
- The nature of the content, concepts and/or skills to be learned
- The different techniques that may be appropriate to the content, concepts and/or skills
- The amount of time you expect each activity to take.

Activity types

We have suggested a number of different activities that you might need to design for a particular learning session:

- [Preparation](#) activities to be done before the session
- [The "main" activity sequence](#): the principal activity or activities that make up the learning session itself
- [Assessment](#) activities to ensure that students have achieved the intended learning outcomes
- [Follow-up](#) activities: non-assessed activities that you might want the students to do afterwards
- [Additional](#) activities, such as extension activities for more able students and reinforcement activities for students who may have difficulty with particular aspects of the material
- [Alternative](#) activities that might be needed in case of unforeseen circumstances

Principle 13: Users should be able to link to supporting ideas to match the learning outcomes they want to achieve for learners



Can teaching ‘build on the work of others’? - Learning outcomes across disciplines (Entwistle, 2005)

Biology: “achieve interconnective and synoptic understanding”

Economics: “bring appropriate concepts and research findings to bear in developing solutions “

History: “understand how evidence is used in argument”

43 similar statements from these + Music, Media studies and Engineering

12 academics from maths, philosophy, cognitive science, computer science, and sociology, classed 19/43 as ‘relevant’ for their subject.

So we can expect lecturers to be grappling with similar kinds of learning outcomes

– so could they share learning designs across disciplines?

Creative tools for 'progressive innovation'

Given your analysis of learner needs, please select the learning outcome that is most relevant:

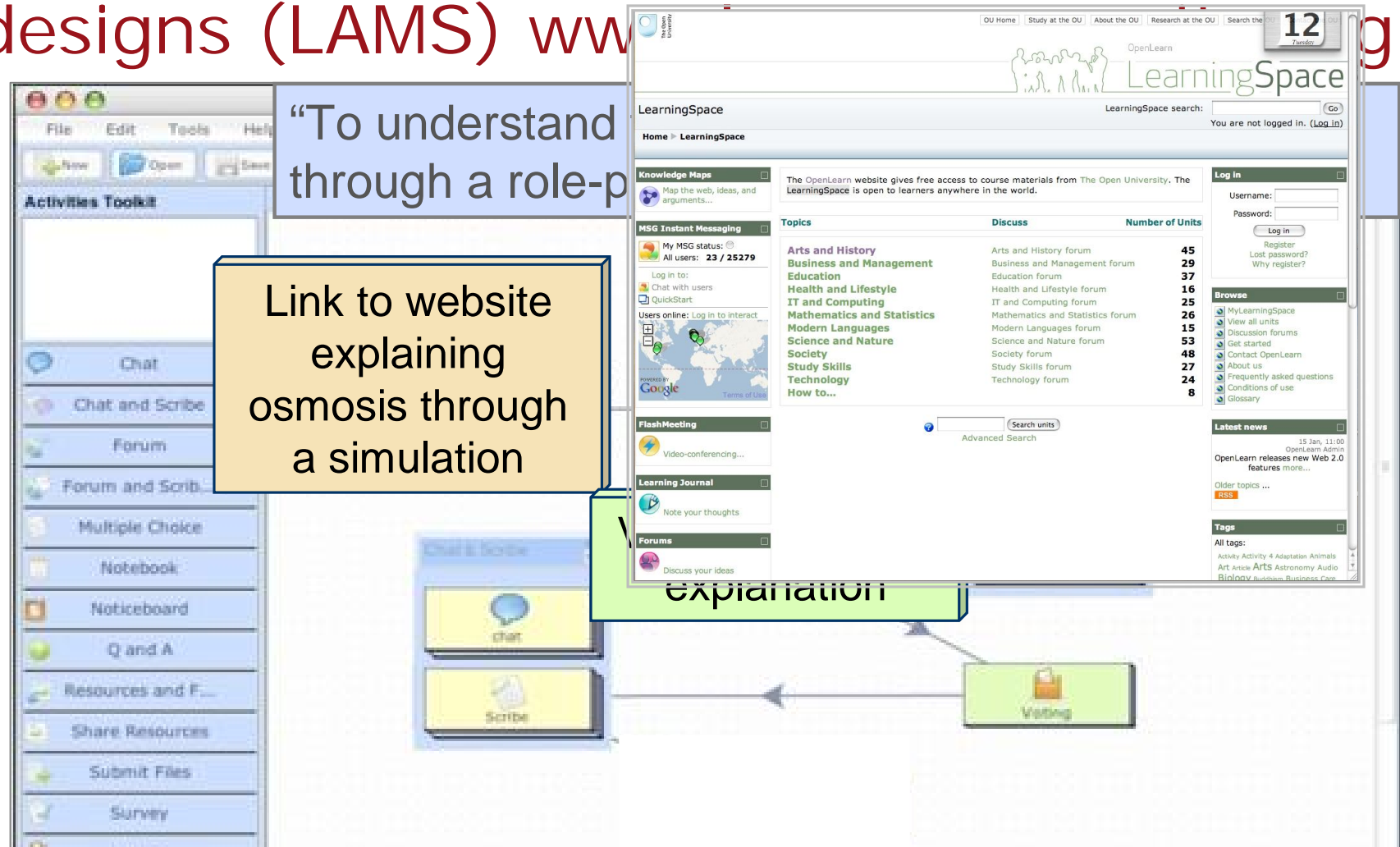
Likely learner needs

- ☐ Understanding meaning
- ☒ Understanding the process
- ☐ Understanding and applying
- ☐ Motivation to do thorough
- ☐ Justifications for key
- ☐ Seeing the familiar as
- ☐ Understanding the value

Select a learning design – from CETIS? ALTC? LAMS? MERLOT? OpenSpace? SAKAI?

- ☐ Provide an animated representation of the system working, which learners can step through, and then report their understanding
- ☐ Provide a simulated model of the system and ask learners to manipulate it to achieve a particular outcome, and then explain how it works
- ☒ Use a role-play activity to get learners to take turns in teaching and questioning about elements of the system, and collaborate on producing the best explanation
- ☐ Develop a set of inappropriate explanations, taken from other learners' assignments and exams, ask learners to 'mark' them alongside expert explanations, and discuss results.

A creative tool for representing learning designs (LAMS) www



The sequence of learning activities embodies a pedagogic idea - captured to enable the teacher to re-use, review, and improve.



Requirements for 'progressive innovation'

We need to be able to

- link from the specific context to the relevant generic form
- enable generation of a new specific activity from the generic form
- pedagogical patterns for each level of description

This requires

- categorisation of learning outcomes – as in QAA, Tuning exercises
- categorisation of design patterns and activity sequences in terms of learning outcomes they are designed to achieve
- common standards of metadata to enable resource discovery of this kind



A tool for *migrating* learning designs (LAMS)

www.lamscommunity.org

The image is a composite of several elements illustrating a LAMS (Learning Activity Management System) design. On the left, a screenshot of the LAMS interface shows a sidebar with various activities: Chat, Chat and Scribe, Forum, Forum and Scribe, Multiple Choice, Notebook, Noticeboard, Q and A, Resources and F..., Share Resources, Submit Files, and Survey. In the center, a blue box contains the text: "To understand the process of the college system through a simulation". Below this, a yellow box says: "Link to website explaining the system through a simulation". To the right of the yellow box, a blue box says: "Role group". Below the blue box, a green box says: "Vote on explanation". On the far right, a screenshot of a website titled "How the Electoral College Works" by Kevin Bonsor is shown. The website has a navigation bar with "People", "Government", and "Elections". It includes a list of "Inside This Article" links, a "Related Categories" section, and a "RELATED AD CATEGORIES" section. A large image of a man in a suit is also visible on the website.

“To understand the process of the college system through a simulation”

Link to website explaining the system through a simulation

Role group

Vote on explanation

How the Electoral College Works
by Kevin Bonsor

Inside This Article

1. Introduction to How the Electoral College Works
2. History of the Electoral College
3. Selecting Electors
4. Electoral College Voting
5. Distribution of 2008 Electoral Votes
6. Electoral College Results
7. The Electoral College Debate
8. Lots More Information
9. See all Elections articles

Related Categories:

- > Agencies
- > Citizenship
- > Copyright & Intellectual...
- > Emergency Services
- > Political Issues
- > Privacy

RELATED AD CATEGORIES

- Electoral College
- Howstuffworks
- Auto Howstuffworks.com
- Government Auctions
- Vote Their

Every four years, on the Tuesday following the first Monday of November, millions of U.S. citizens go to local voting booths to elect, among other officials, the next president and vice president of their country. Their votes will be recorded and counted, and winners will be declared. But the results of the popular vote are not guaranteed to stand because the Electoral College has not cast its vote.

For some of you, this might be a bit shocking. You could be thinking, "Whoa, seriously?" But for many of you, you're probably immediately thinking of the 2000 U.S. presidential election -- Gore won the popular vote (more Americans voted for him), but Bush actually won the presidency, because he was awarded the majority of the votes in the Electoral College.

Are politicians vying for your vote or the votes of electors?

The sequence of learning activities embodies a pedagogic idea - captured for others to adopt, adapt, re-use, review, improve, and share.





Conceptual representation of pedagogic theory at different levels of description ➞