IMS Learning Design
State-of-the-Art

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30 September 2009
Nice
Questions:
Getting to know each others background

- Who of you has ever developed an online course using an LMS like Blackboard, Moodle, etc.?  
- Who of you is a teacher that uses online tools for teaching as part of your daily profession?  
- Who of you is a researcher in Technology Enhanced Learning, incl. instructional design?  
- Who of you has ever developed a course using IMS Learning Design?  
- Who of you has ever developed applications for IMS LD?
Fields of Expertise that IMS LD addresses

• Theories of Learning, Instruction and Design
• Knowledge of the IMS LD and related specs
• Knowledge of IMS LD Tools for
  – pre-authoring
  – authoring
  – storage/repository
  – LD Interpretator
  – Players (Web and others)
• Knowledge of the TEL area and developments in the educational arena (policies, organisational issues, etc.)
Question

• What are the **Major Objectives** of IMS LD?

   “*Why is it developed*”
IMS Learning Design Objectives

• Create a standardised description of an adaptive learning and teaching process that take place in a computer-managed course

• Provides support for all types of learning designs based on various pedagogical approaches

• The Learning & Support activities at the centre, not the content

• Representation is as medium and device neutral as possible

• Provide an Integrative framework for a large number of open standards & technologies, IMS CP, LOM, SCORM, LIP, QTI, Services (Chat, Forum, etc.) …
Standardised description of an adaptive learning and teaching process that take place in a computer-managed course

- These courses are 'developed' before they are used
- These courses can be used by different groups/classes of learners at different times (course runs). Principle: “develop ones, run many times”
- Courses are managed by the computer (LD), not by the teacher
- Courses are designed to attain some learning objectives for a given target group (prerequisites) as effective and efficient as possible for the individual users
Not within scope!

- Courses that have no online components or automation
- Courses that are designed and taught by the same person all the time (classroom-teaching model)
- Simple, non-adaptive courses
- Courses in which technology is used as a source of information or a tool for social interactions, but with no orchestration or automation in the management of it
- Learning events that are hardly planned in advance: unique performances, no repetition
Question

What is meant with 'description' of the teaching learning process?
What did you see?

• Large variety of *learning activities*

• Large variety of *learning environments* (generic, task specific)

• Sometimes *individual*, sometimes *group* interactions

• In most situations some kind of *support* (teachers, tools)

• Sometimes *self-directed*, sometimes *teacher directed*

• When appropriate using *computers* and other new *technologies and devices* (not 'virtual only'!)
Supports all types of learning designs based on various pedagogical approaches

*Question:* 

Can you mention some examples of a) more straightforward and b) more advanced learning designs?
Examples

Exploratory learning
Problem-based Learning
Experiential Learning (Kolb)
Active and Collaborative learning
Adaptive learning and personalisation
Automation of workflow in the teaching-learning process
Dynamic task selection (e.g. based on the 4C/ID model)
Conditional text and runtime tracking of user performance
ePortfolio's and new forms of assessment
Multi-role activities (e.g. role-playing serious games)
Modelling of pedagogical patterns
...

CELTEC
celstec.org
How?

By means of a pedagogical 'meta model':

The Learning Design Model
Role: Teacher

Activities:
- Tell about X
- Write on blackboard
- Ask questions
- Manage group

Environment:
Classroom

Tools:
Controls

Tools:
Tables, Pen, Paper

Role: Student

Activities:
- Listen to Information
- Take Notes
- Answer questions

Communication Services:
- face-to-face comm.
- blackboard
Basic Learning Design Model

Role performs Activities within an Environment

Environment

Tools:
- Pencil
- Table
- Prototype

Comm. Services:
- Mobile Phone

Role: architect

Activities:
- make design
- create prototype
It is not static, it is a process.
Compare

- Music Notation
- Film Recording (and editing)
Learning & Support activities at the centre, not the content

Question:

This is a big difference with SCORM, do you know why?

How does SCORM relate to LD according to the spec?
Representation is as medium and device neutral as possible

Question:

What does this mean?
Integrative framework for a large number of open standards & technologies

Question:

Do you know which standards are absolutely necessary to use with IMS LD?

IMS CP, LOM, SCORM, LIP, QTI, Widgets, ...
State-of-the-art
Issues

• Is it still up-to-date when looking at current developments in the theories/applications of learning & instruction?
  Answer:...

• Is it still up-to-date when looking at technological developments?
  Most of the technological issues will be discussed in the talk of Bill Olivier, So I only will go into one aspect of the discussion: web 2.0
Issues

• In debates about web 2.0 versus online courses, people tend to forget to make a difference between:
  – Formal Education & Training
  – Informal/Non-formal Learning, including Continuous Professional Development

QUESTION:
Core characteristics of both, main differences?
Discussions ignore differences between the types of teaching and learning

- Formal Education & Training
- Informal/Non-formal Learning, including Continuous Professional Development

Learning Design, Courses, Curricula

Web 2.0
Collaborative Tools
Learning Networks
Relationship?

Incompatible?
Some demo's of very recent LD Tools

(when time left)
Thank You!