Development & implementation of a Learning Technology specification: Learning Design

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About myself

- Until February 2006 I was working at the Educational Technology Expertise Centre of the Open University of the Netherlands
- Involved in Learning Technologies R&D <> Implementation
- Currently appointed as Instructional Technologist at the Staff Development Section at the UNHCR, Geneva

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Today.....

- Issues regarding developments Learning Technologies
- EML & Learning Design
- Explanation of Learning Design
- How in practise.. Tooling
- And without Technology?
- Questions & Discussion

Issues at stake

- Open Content – Open Source
- Interoperability; not to be bound to one particular VLE.
- Reusability of learning materials / objects,
- Write, use, change, borrow and rearrange educational contents and processes
- Include pedagogy = process..!
Issues at stake.. to be precise..

- Need a way of describing the whole teaching-learning process, not just the learning objects involved
- What do learners with these collections of Learning Objects?
- What about learning without Learning Objects?
- Learners will work together to solve problem solving tasks.
- Where are the teachers, tutors and coaches?

EML & Learning Design - history

- Educational Modelling Language (EML)
  - Developed at OUNL, started in 1997
  - Public draft available in December 2000
  - Moved to world of standardization (CEN ISSS) and specification.. a base for
- IMS Learning Design v1.0 Final Specification
  - Approved 10 February 2003
What is Learning Design NOT

- Not an instructional method… *can be used to describe many methods*
- Neither pedagogically neutral or ‘agnostic’ in the sense of not caring / knowing about pedagogy… *rather it requires the designer to be explicit about his/her pedagogical choices in the learning process*
- Not a guarantee of good education… *can use it to describe poor learning processes*
- Not a programming language… *although many characteristics are shared*

Main concepts of Learning Design

- Persons thrive to reach their own **objectives**.
- Everyone has its own **role**
- by performing **learning activities** or **support activities**
- in an **environment** that helps them doing so
- by giving access to **learning objects** and **learning services**
Reusable resources & scenario’s

- Learning object
  - Example: video fragment of a job interview

- Complete learning activity or collection of these
  - Example, assess a video of a job interview

- Whole unit of learning (content package)
  - Example: How to learn to assess a job interview

- Didactical scenario:
  Examples: Problem solving, role play, automated instruction

Modelling Units of Learning

- IMS Learning Design is used to model units of learning
  - A unit of learning (UoL) is any delimited piece of education or training, such as a course, a module, a lesson, etc.
  - more than just a collection of ordered resources to learn
  - activities, assessments, services and support facilities provided by teachers, trainers and other staff members.

- A model of the activities, content, tools and workflow for learners and staff to accomplish one or more learning objectives
  - Who does what, when, with whom and using which learning objects and services
Stage play metaphor

- People act in different roles
- working towards certain objectives
- by performing learning and/or support activities
- within an environment, consisting of learning objects and services used in the performance of the activities.

Method

play

Act 1 → Act 2 → Act 3 → Act 4 → Act 5

Role
Role-part 1
Role-part 2
Role-part 4
Role-part 5

Activity
Activity- Description

Environment
Learning objects
Learning services

Components
with thanks to Bill Olivier of CETIS
Exchangeable IMS LD manifest

How to .. in practise?

- A language to describe educational processes
- Software that can interpret this language, is able to support learners and staff during these educational processes
How to .. in practise?

Authoring

Learner & Staff Administration

Portal

Design time

Run tool

Learning services

Run time

Repository

Unit of Learning

Unit of Learning

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Learning Activities, structured into sequences and selections

The environment associated with the selected activity

An activity description for the selected activity
Why Learning Design?

1. Exchange of (multi-role, multi-person) learning processes:
   - My VLE
   - Your VLE
   - UoLs

2. Reuse of ‘learning flow’ and/of contents
3. Language to describe learning processes

Tooling 1/2

- No need to know the exact ins and outs of the specification for Software Developers. Use Coppercore engine: [www.coppercore.org](http://www.coppercore.org)
  - Developed as OS at OUNL to support other developers of editors and players

- RELOAD (CETIS, UK) Project has delivered both an editor and a player.
Tooling 2/2

- www.unfold-project.net for references to various software and exchange of actual LD’s.

- LAMS, user-friendly interface to build interactions www.lamsinternational.com

- Moodle www.moodle.org, LD awareness in progress

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Tooling.. future

- Learning Design is considered a complex but powerful concept
- Peer-review and reuse of pedagogical patterns (University of Waterloo)
- Few VLE’s give learning activities a central place

http://www.ifets.info/journals/9_1/2.pdf

A more general approach..

Learning Design as templates:
1. Narrative; free text describing activities
2. A lesson plan; with no LD specific aspects
3. A walk through; screen shots from UoL
4. An example UoL; to be used in VLE
5. A partly completed UoL to be filled
Questions & Discussion

Thank you for your attention.

More information

- Learning Networks www.learningnetworks.org
  moodle.learningnetworks.org
- UNFOLD share tools & LD templates www.unfold-project.net
- Telcert interoperability in technology enhanced learning www.opengroup.org/telcert/
- OUNL articles in D-space dspace.ou.nl

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