

# 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

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## 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..!

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## 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?

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## 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

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## 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*

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## 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**

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## 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

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## Modelling Units of Learning

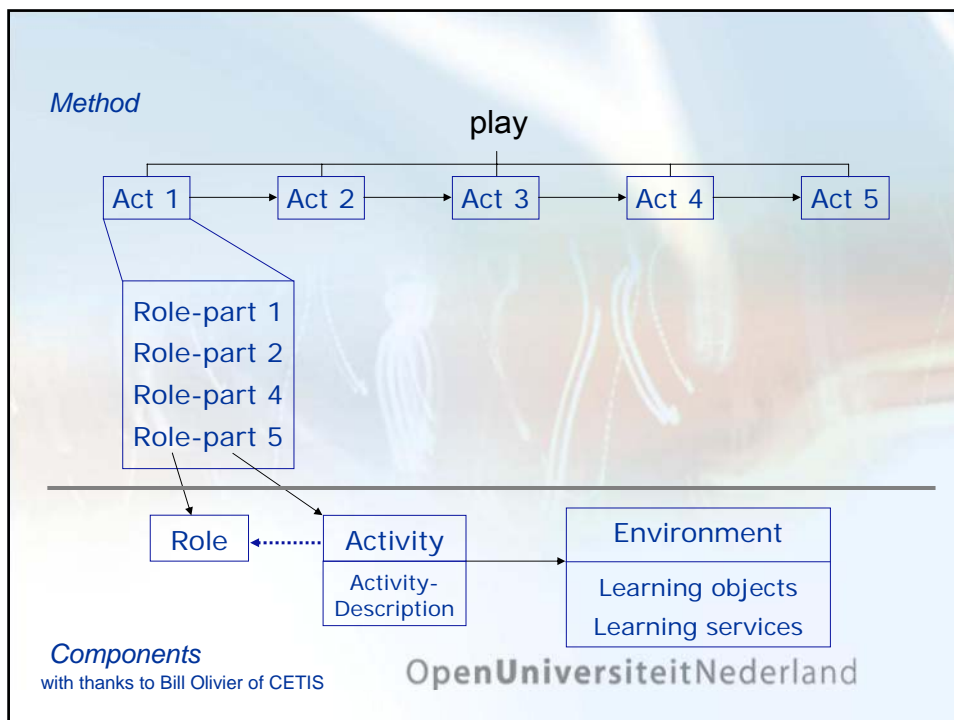
- IMS Learning Design is used to model units of learning
  - A unit of learning (**UoL**) is any delimited piece of education or training, such as a course, a module, a lesson, etc.
  - more than just a collection of ordered resources to learn
  - activities, assessments, services and support facilities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

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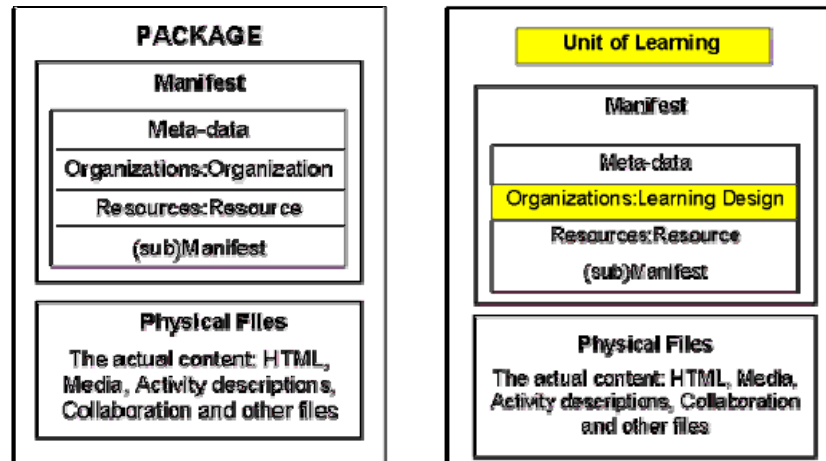
## Stage play metaphor

- 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.

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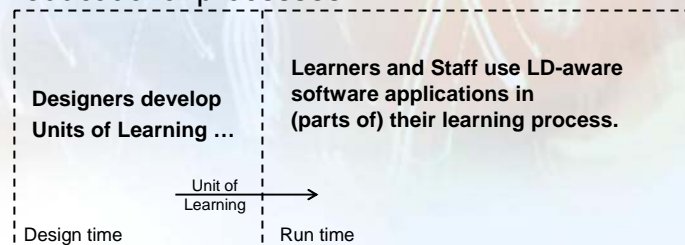
## Exchangeable IMS LD manifest



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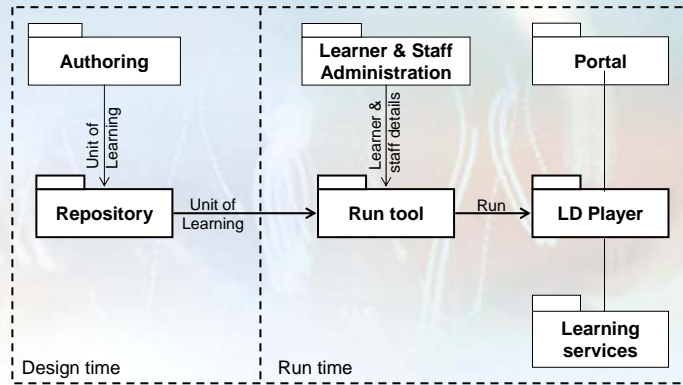
## How to .. in practise?

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



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# How to .. in practise?



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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**

see Dizzy Gillespie sample of Bebop  
Listen to the next music clip  
music\_clip

## Why Learning Design?

1. Exchange of (multi-role, multi-person) learning processes:



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

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## 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)

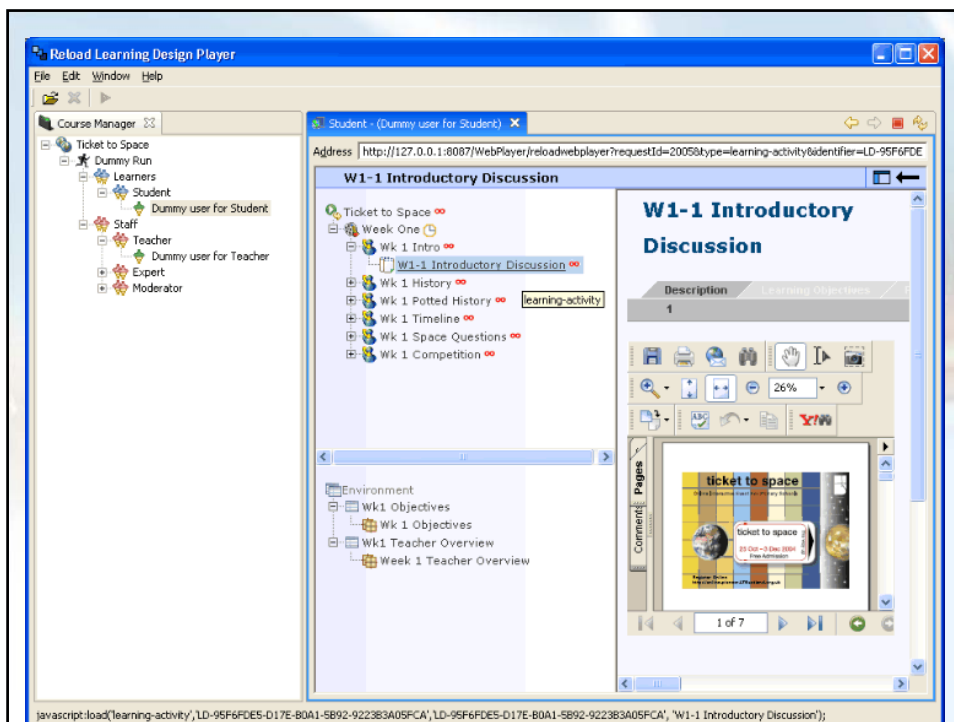
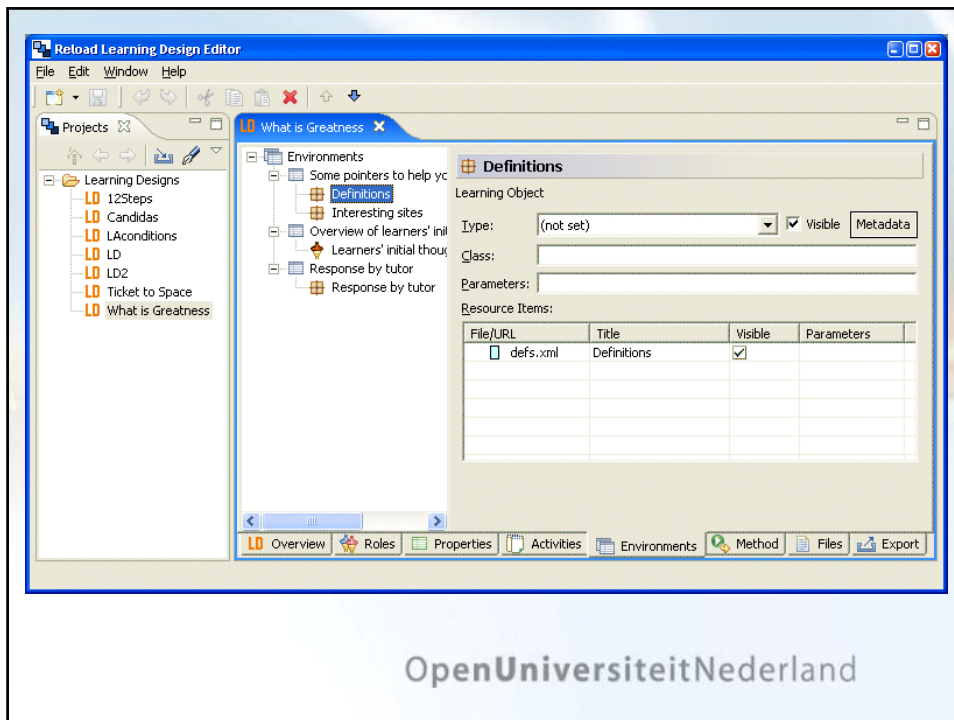
**CopperCore**

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.

**RELOAD**  
Reusable eLearning Object  
Authoring & Delivery

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# Tooling

2/2

- [www.unfold-project.net](http://www.unfold-project.net) for references to various software and exchange of actual LD's.



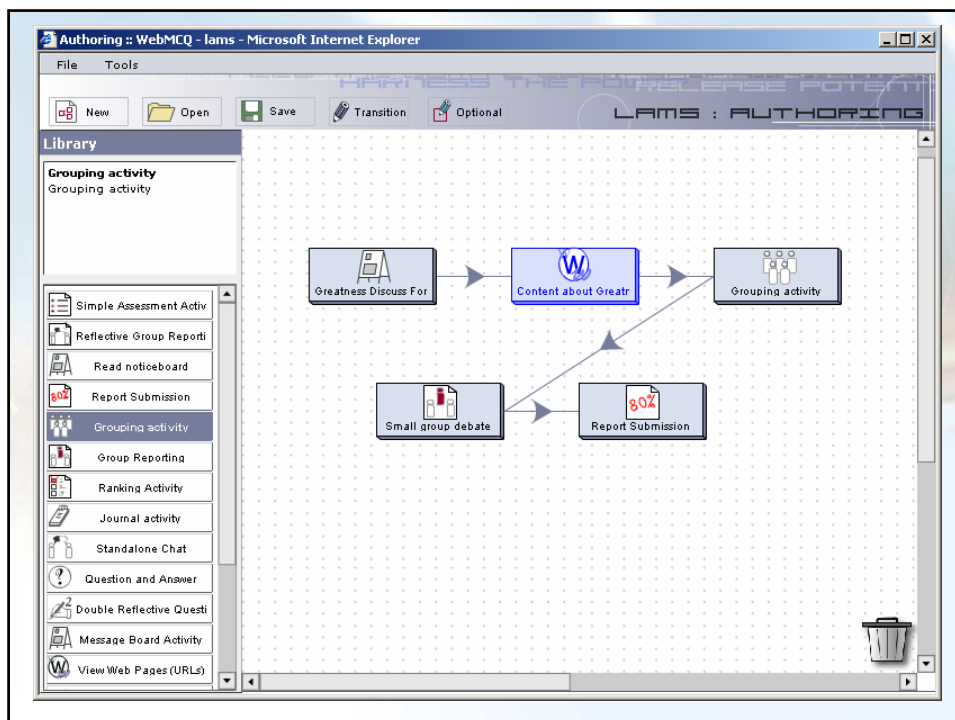
- LAMS, user-friendly interface to build interactions  
[www.lamsinternational.com](http://www.lamsinternational.com)



- Moodle [www.moodle.org](http://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

De Vries, F., Tattersall, C. & Koper, R. (2005). Future developments of IMS Learning Design tooling. *Educational Technology & Society*, 9 (1), 9-12.

[http://www.ifets.info/journals/9\\_1/2.pdf](http://www.ifets.info/journals/9_1/2.pdf)

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## 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

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## Questions & Discussion

Thank you for your attention.

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## More information

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

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