MODELLING COMPETENCIES UPON DOTLRN

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• The competency concept
• The element of the competency
• Approaches to model competencies
• Modelling Competencies upon dotLRN
Competency Concept

Appropriate performances that should be demonstrated by a person on a specific context.

This performance should be adjusted to quality parameters, previously defined by a particular productive sector.
Competency Elements

- A proper definition of competency should take into account at least four elements:
  - a description,
  - associated performance criteria,
  - ranges of application and
  - the necessary definition of evidences to evaluate the competency.
Two approaches to model Competencies

- IMS Reusable Definition of Competency or Educational Objectives (IMS-RDCEO), created by the IMS Global Learning Consortium.

- Ontology – Based Competency Management development at Alcalá University.
IMS Reusable Definition of Competency or Educational Objectives (IMS-RDCEO)

COMPETENCY

General Data:
- Identifier
- Title
- Description

Definition:
- Competency Elements
  (i.e. Perform Criteria, Applications Ranges, Evidences)

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Este documento explica especificaciones IMS. Se entiende que el candidato debe saber las especificaciones IMS y debe desarrollar ejemplos XML. También debe ser cómodo con los documentos digitales.
## Advantages and Limitations

### Advantages
- It provides a flexible and adaptable schema for describing competencies.
- It can be related to another knowledge specifications about the user.

### Limitations
- It is a oversimplification of the concept of competency.
- IMS does not offer an adequate semantic level to support intelligent decisions because it does not consider, explicitly, important elements such as: some characteristics of users (knowledge, skills), desirable performances, different measure scales and does not propose a common language of competency.

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Ontology-based Competency Management approach

- Provides a rich set of modeling elements capable of expressing subtle details in competency schemas.
- Increases the possibility of establishing different kinds of relations among competencies.
- Offers different measure scales to evaluate diverse users characteristics.
- Takes into account the desire performances of a person.
Ontology-based Competency Management approach
Objective: dotLRN Competency Package

Develop a dotLRN XML–based package to specify the data structure to model the competencies associated to a course.
The dotLRN Competency Package

Using:

- a) the registered student interactions through their experience on the course, specially on the GRAIL (IMS-LD), LORS (SCORM) y Assessment (IMS-QTI) packages,

- b) the student interactions on the collaborative services such as discussion forums and storage area,

- c) the results of the aDeNu Group in EU4ALL Project regarding the characterization of the student using IMS-AccLIP specification.
The dotLRN Competency Package

- These specifications will be used with the purpose of generating a dynamic user model and the appropriate adaptation variables to adjust learning paths in order to satisfy students learning needs.
The dotLRN Competency Package

- Those paths are to be generated through indicators about the achievement level of the competencies on the learning environment.

- To arrange, schedule, carry out, and evaluate the learning activities and relate them to the definition of competencies make possible the generation of necessary indicators to support adaptations decisions.
The dotLRN Competency Package

- Competencies definition
- QTI LD SCORM

ACHIVEMENT INDICATORS ABOUT THE LEVEL OF COMPETENCIES

PATH

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# Activities and Dates

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Thanks for your attention