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Elearning and the future of distance education

elearning Workshop March 20 - March 22 2017 Peja



Oficina de Gestión de Proyectos
de la Universidad de Alicante.

Distance Learning Delivery Methods

Self directed courses

-Self-Directed courses have monthly starts (with a few exceptions) and must be completed within the specified time period. Time frames vary from one month to nine months . However, students can and do complete a course sooner.

Term courses

- Many courses are available on a TERM basis and must be completed by the specified date.
- TERM courses are either online or involve teleconferencing and telephone tutoring.
- TERM courses have a given start and end date. Some term courses are offered on a cyclical basis such as once

Distance education, distance learning, dlearning, or D-Learning

- is a **mode of delivering** education and instruction,
- often on **an individual basis**, to students who are not physically present in a traditional setting such as a classroom

Distance learning provides "**access to learning when the source of information and the learners are separated by time and distance, or both**". (Honeyman, 1993)

Textbooks and Course Readers

Most Distance learning course packages include the required textbook and/or Course Readers

- Course Readers (reading material) are collections of journal articles, book excerpts, case studies and other writings selected by instructors. They are specific to a course offering (both course and semester).

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Distance education link in Albanian

<https://www.youtube.com/watch?v=Wr7gcHKL02U>



LEARN (LN)

LEARN is a web-based learning management system (LMS) for the delivery of online teaching and learning.

Students will use the tools within LEARN to access the course content, link to resources, communicate with the instructor and other students and to submit assignments.

Some courses have chat rooms, some have class mail lists and some have a discussion board.

SharePoint(SP)

This is an easy to use web-based collaboration tool for peer-to-peer work, small group work and instructor-to-student communication.

Documents such as modules or compacs and course outlines are available on the SharePoint site.

Students need to login, using the academic domain (e.g. academic\username) and password



Teleconference Courses

Classes are conducted over the telephone using a teleconference bridge that enables the instructor and students to speak to and hear each other.

To access the bridge, you dial a toll-free number and enter a pass code.

Each course includes a series of one-hour, one-and-one-half-hour, or two-hour teleconference classes.

For teleconference courses, students receive printed materials and, in most cases, a textbook. Some include videotapes.

Virtual classroom

A virtual classroom is an online learning environment. The environment can be web-based and accessed through a portal or software-based and require a downloadable executable file.

Students in a virtual classroom participate in synchronous instruction, which means that the teacher and students are logged into the virtual learning environment at the same time.

Many schools and businesses have rolled out virtual classrooms to provide synchronous distance education.

Virtual classroom software applications often employ multiple synchronous technologies, such as web conferencing, video conferencing, live-streaming, and web-based VoIP to provide remote students with the ability to collaborate in real time. To enhance the educational process, applications may also provide students with asynchronous communication tools, such as message boards and chat capabilities

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Virtual classroom using Adobe connect

<https://www.youtube.com/watch?v=6M9IsLSwks>



Video Streaming

Courses delivered on web via synchronous video streaming, supplemented by additional web activities, projects or exams. This category assumes that students are required to attend the synchronous video streaming sessions, wherever they are scheduled.

The required video streaming can be a part of an Internet, blended, or web-enhanced course

Computer Based Training

Instruction that is delivered via a computer program in place of a live instructor.

May be delivered via online, CD, LAN or Internet.

The required completion of computer-based training can be a part of an Internet, blended, or web-enhanced course.

Educational Content

Educational material developed to be consumed in
computer based learning using on-line web environments

Educational material has embedded pedagogical &
instructional information

Complex specifications and a variety of description
standards

Complex authoring process and difficult to maintain (Miguel
Artacho, UNED, 2004)

Desired properties

- **Interoperability** → Combine different specification in different contexts
- **Maintainability** → Contents must be maintainable and upgradeable
- **Reusability** → Allow 'Cut & Paste' for building new content
- **Durability** → Independent from the delivery technology

Problems

- **Interoperability** → It is not possible to re-assemble content
- **Maintainability** → Difficulty to update content, difficult for authors to maintain independence
- **Reusability** → Content embedded in VLE and nor searchable or retrievable
- **Durability** → Do not recover from a big change in the delivery format or content format

Lack of an abstraction level

Abstraction Level:

Technical issues

HTML tree, *.asp, form, GET/POST, ...



Pedagogical/Instructional

Module, Task, Sequence, Prerequisite, Assignment,
Exercise, Simulation, ...

Learning content specification

Lack of an appropriate abstraction level



Provide specifications with associated operational semantic. Not related with delivery formats

Provide pedagogical design elements

Authoring tools should be a standalone application

Make LOs interoperable and reusable

Learning objects

A digital self-contained and reusable entity, with a clear educational purpose, with at least three internal and editable components: content, learning activities and elements of context. The learning objects must have an external structure of information to facilitate their identification, storage and retrieval: the metadata. (Chiappe, Segovia & Rincon 2007)

Interoperable educative content
components

Labelled with Metadata

Context independent →
reusable

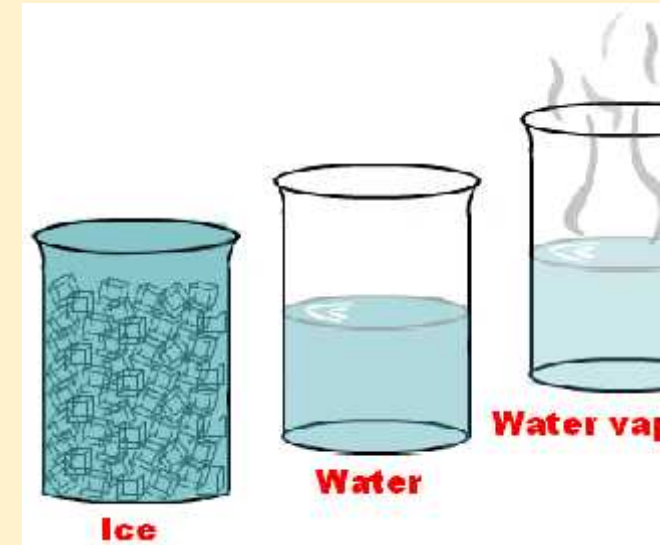
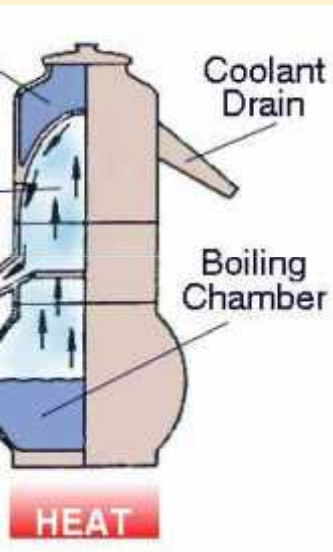
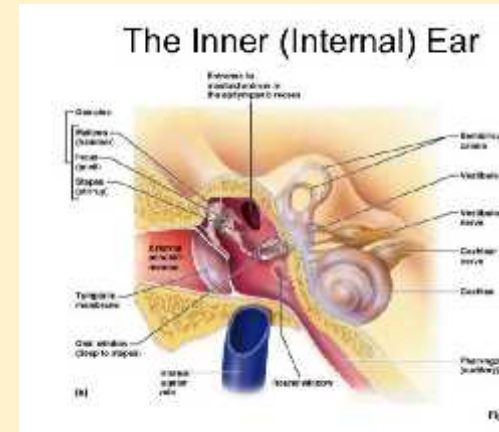
Organized in repositories
(distributed) or in conceptual
maps (ontology)

Examples of LOs

Components of inner ear

Process of distillation

Change of State – Water



Use of Learning objects

Metadata allow search and retrieval
Aggregation of LO's according to its
aggregation level

Repositories of LO's

ARIADNE (1997) → Development
of LOM

Other projects: OASIS, CELEBRATE
(IST E.U.)

Authoring process based on selection
and aggregation

Limitations of learning objects

De-contextualized learning

Reusability vs. Aggregation level

Context vs. Interchangeability

Lack of personalization

Not able to adapt for students

Complex business model

Copyright restrictions

Distribution problems

Instructional design and LOs

Research explores definition of activities as part of LO's

David Merrill (Utah Univ) proposes 4 types of LO's

- Entities (objects)

- Properties (attributes of entities)

- Activities (Actions on objects)

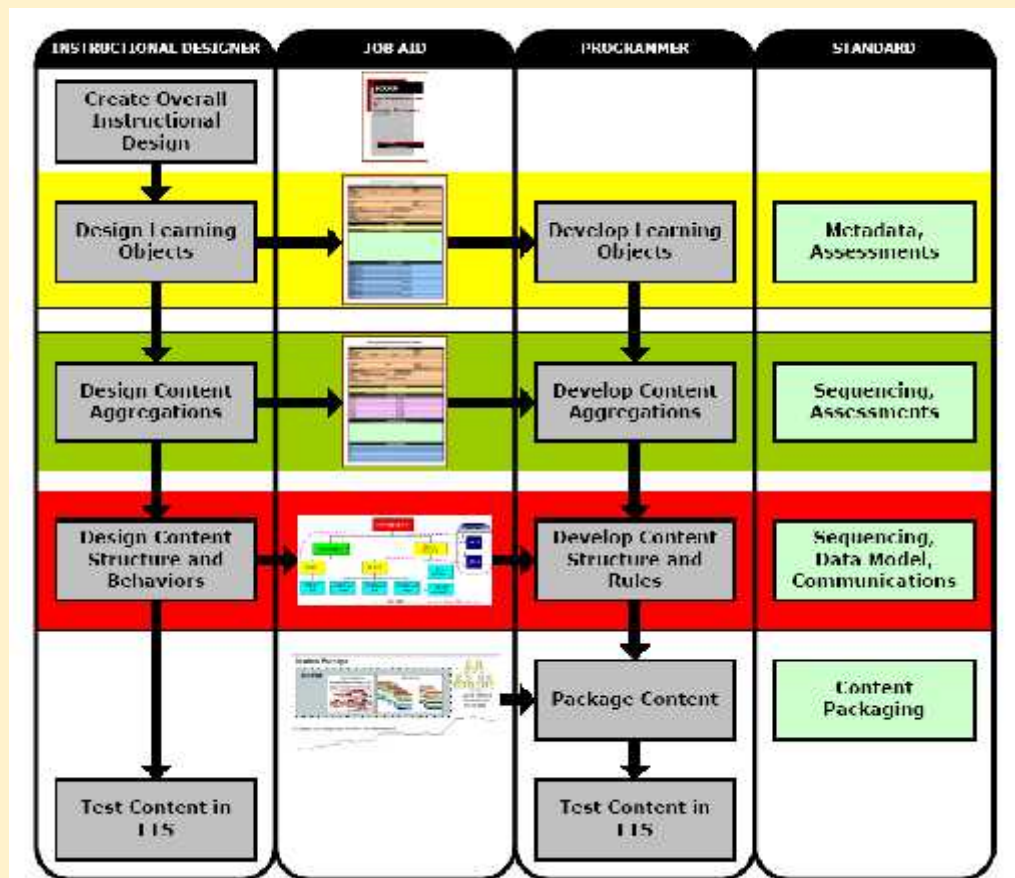
- Processes (Change attributes triggered by activities)

→ Need to incorporate **learning processes**

Educational content

Management	Inter-operability parameters
Pedagogical/Instructional	Pedagogical Information
Activity/Task	Educative processes y activities. Collaborative tasks and activities
Sequencing	Sequencing, entry requirements, deadlines, dependencies
Structure	Navigational model
Content	Small LO's, assets and formatted content

Current author models using LOs



Overview of the design and development process and products for specification-based instructional materials.

Educational modelling language

1997 -research into pedagogies in use
no description per pedagogy, but
one meta-language to describe them
all: Educational Modelling Language
(EML), published in December 2000

Educational modelling language formally describes educational materials and/or pedagogical scenario.

It is a kind of educational design language that may or may not be executable

EML – simple but powerful

People engage in Activities, for which they use
Resources

People: one or many, learner or staff roles

Activities: description, structured

Resources: learning objects & services (chat,
etc.)

Many roles, activities and resources need co-
ordination in a workflow: learning flow

An instructional design/pedagogy/learning design
essentially is a learning flow.

Creating a course with EML

1. **Roles:** Definition of roles (ex. Student, staff member) and definition of the workspaces of each one of the roles, and also types of outcome
2. **Activities:** Definition of content by mean of one or more activities
3. **Methods:** Definition of sequences of activities defining
 - **Activity structure**
 - **Play per role**
 - **Conditions**

Components: tools

Online education: future trends

People expect to be able to work, learn, and study whenever and wherever they want to.

The technologies we use are increasingly cloud-based and expectations of IT decentralized support.

The world of work is increasingly collaborative, driving changes in the structure of student projects . (P. Hawranik, 01/2013)

Abundance of resources and relationships are easily accessible via the Internet.

Education paradigms are shifting to include online learning, hybrid learning, and collaborative models.

There is a new emphasis in the classroom on more challenge-based and active learning.

Challenges for new technology

1. Economic pressures and new models of education are bringing unprecedented competition to the traditional models of higher education.
2. Evaluations have not kept up with the new scholarly forms of authoring, publishing, and researching.
3. Digital media literacy continues is becoming more and more important.

Institutional barriers present major challenges to moving forward with emerging technologies.

5. Increasing challenges for libraries.
6. Current business models of universities and libraries are being challenged.

New and emerging technologies

Mobile apps

Tablet computing

Game- based learning

Learning Analytics

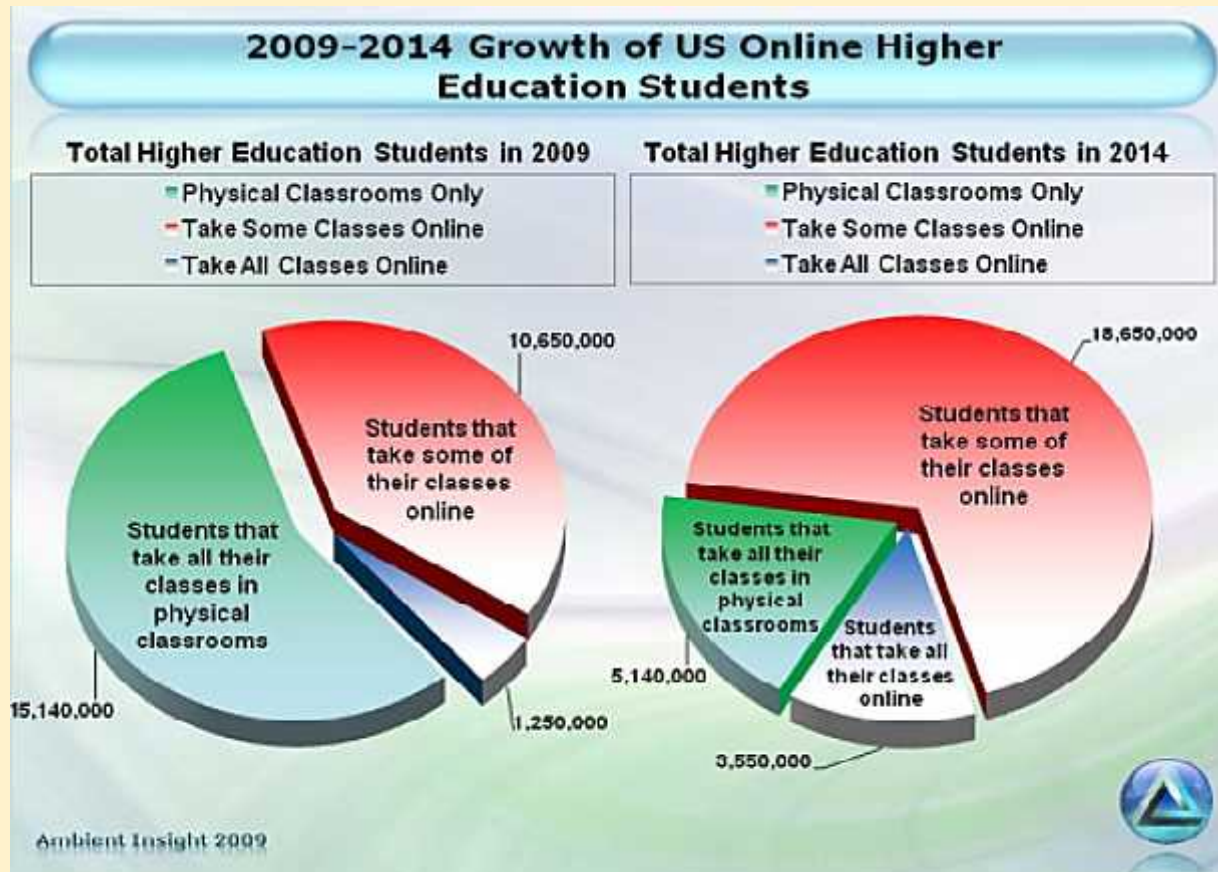
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Gesture-based computing

The Internet of Things



to what extent has
technology influenced
higher education?



Or do these technologies support and reinforce existing practices?



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What do you see as the future for elearning at your institution?

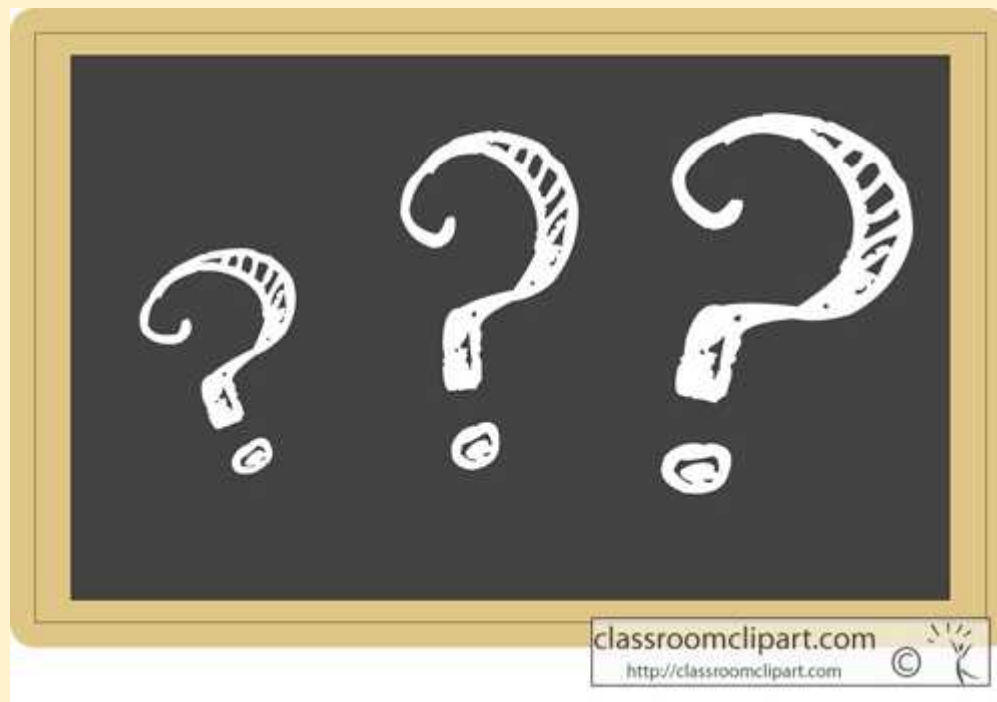


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What needs to be put into place for your institution to be serious about implementing elearning?



Barriers or Factors affecting Effective Adoption of Technology

- the prevailing methods of instruction impede the most effective application of technology
- have we learned how to make new technologies that transform teaching
- instructional workload
- often too much emphasis on the technology itself and lack of support for faculty
- clear direction, sustained commitment, and financial incentives needed
merely providing tools is unlikely to provide a significant increase in effective use of technology in instruction

Support

- instructional development
- faculty consultation and professional development
- learning space/environment design and support
- knowledge management/learning objects support
- research and development
- multimedia development and production
- distance learning support and consulting services



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