Borderless e-Contents

Prof Alain Senteni, WITFOR Education Commission, Delhi, 17th April 2012
Borderless e-Contents

- eContent history at a glance
- One size *DOES NOT* fit all
- Learning Objects
- Evaluation criteria
- Repositories
- HBMeU case study
large scale e-contents history, at a glance

1st generation [technology driven]

2nd generation [content driven, knowledge as a readymade product]

3rd generation [process driven, learning as knowledge creation]

India PanAfrican Network (2005)

MIT OCW (2001)

AFRICAN VIRTUAL UNIVERSITY UNIVERSITE VIRTUELLE AFRICAINE (ACEP - 2nd phase)

TTISSA

increased sustainability
3rd generation [process driven] Knowledge as a dynamic process - Learning as knowledge creation

2nd generation [content driven] Knowledge as a product

e-Contents development, from a content-driven approach to a process driven one?
NOT WANTED

contents

pedagogy  technology
traditional curriculum

top-down transmission

passive recipients of the teacher’s knowledge

user-generated content

bottom-up participation

proactive knowledge builders

WIKIs

Web 2.0

NOT WANTED
We want e-contents that will contribute to turn passive learners into proactive knowledge builders.

passive recipients of the teacher’s knowledge / proactive knowledge builders

NOT WANTED
HIGH QUALITY

- traditional curriculum

POOR QUALITY

- user-generated content

NOT WANTED
We want QA and accreditation frameworks that allow to validate user-generated e-contents and integrate them into academic programs.
We want a mix of high quality e-contents 
AND user-generated dynamic contents 
AND reliable e-learning materials 
AND engaging activities.
We want e-contents that can be recycled, so that we do not need to re-invent the wheel all the time.
We want blended e-contents, combining traditional perspectives with socio-constructivist ones.

(Schneider, 2003)
traditional school

to bridge the gap
learning object?

http://www.uwlax.edu/faculty/kosiak/projects/index.html
yes, learning object

6.5 kg  4.1 kg  2 kg
from e-contents to learning objects, or how to ...

categorize
classify
...e-contents
STORE
retrieve
reuse
The term Learning Object [LO] was first popularized by Wayne Hodgins in 1994 when he named the CedMA working group "Learning Architectures, APIs and Learning Objects".

An LO is “a discrete reusable collection of content used to present and support a single learning objective.”

“Reusable Learning Objects- What does the future hold?”

Peter Jacobsen (2002)

LOs have become the Holy Grail of content creation and aggregation in the field of computer-mediated learning.
Learning objects (LOs) facilitate the (re)-use of educational content online. Internationally accepted specifications and standards make them interoperable and reusable by different applications and in diverse learning environments. Metadata (tags, index) describe them, facilitate search and make them accessible.
Evaluation Criteria

Pedagogical Quality
Content clarity and conciseness, instructional strategies aligned to the learning objectives, appropriate media according to target audience, etc…

Ergonomics
User-friendliness, motivating, visually attractive, built-in accessibility features, etc..

Interoperability, reusability
Technical independence and robustness, metadata schema and tagging procedures, conformance to standards
<table>
<thead>
<tr>
<th>drill &amp; practice</th>
<th>microworlds</th>
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<tbody>
<tr>
<td>behaviorist</td>
<td>socio-constructivist</td>
</tr>
<tr>
<td>fully automated</td>
<td>affordances</td>
</tr>
<tr>
<td>individual only</td>
<td>individual / collaborative</td>
</tr>
<tr>
<td>no human interaction needed</td>
<td>facilitates human interaction</td>
</tr>
<tr>
<td>closed set of predefined answers</td>
<td>open-ended answers</td>
</tr>
</tbody>
</table>
context free?

“we haven’t resolved the tension between including context for effective instruction and excluding it to ensure maximum reuse of the object.”

From “Reusable Learning Objects- What does the future hold?”
By Peter Jacobsen, e-learning Magazine, November 1, 2002
http://www.elearningmag.com/elearning/article/articleDetail.jsp?id=5043
LIFE-CYCLE?

- **Expensive**
  - Long life-cycle
    - e.g. in line with course or program review cycle

- **Medium**
  - Medium life-cycle
    - e.g. semester

- **Short**
  - Short life-cycle
    - e.g. class

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Fig. 2. Extended LO creation schema - LO’s content is related with a domain ontology (DO)
Types of Repositories for Learning Resource

**Private repositories**
- author bibliography and productions
- students personal portfolio
- course student production showcase

**Community repository**
- a university department,
- a community of practice
- a research repository

**Public repository**
- totally open (e.g. Creative commons)
- limited access or repository

A few metadata, quality is in the usefulness of the repository to the participants

Larger effort/investment, higher degree of quality insurance, needs a domain ontology (specific classification and relation between resources)

Protect the consumer
Protect the IP through CC or a digital rights management (DRM) system.
Learning Objects

Hamdan Bin Mohammed e-University Case Study
"Learning objects are THE MAIN course material, not simply additional support for self-study."

http://repository.hbmeu.ac.ae/lor/access/searching.do
LOs' role similar to digital text-books

Reference documents semester-wise [syllabus, timetable, outcome-assessment maps, etc]

[Selected LOs + User Generated Contents]

Context will be embedded THERE

long in line with course/program review cycle

LIFE-CYCLE

short semester
interactivity

low level
close set of questions, fully automated

high level
open-ended questions human interaction

tools

Equella search engines

discussion forums, wikis, blogs, etc
LO1 - table of contents

**RELATED COURSE LEARNING OUTCOMES**

CO1. Demonstrate an effective understanding of the design and evaluation of multimedia technologies.
CO3. Evaluate a variety of multimedia technologies and tools.

1. **Basic Principles of Visual Communication Design** (lecture)
   Prof. Senten (voice over PPT, 19 mn)

2. **Quick analysis of a poster** (activity)
   with regard to Calvino’s dimensions (VMELOQ), and learning dimensions (IMPC),
   using the provided visual analysis worksheet (dmm_lo1_worksheet)

3. **Poster analysis** (additional PPT on Slide Share)
   [http://www.slideshare.net/Jade_16/poster-analysis-2154048](http://www.slideshare.net/Jade_16/poster-analysis-2154048)

4. **Laurillard’s Multimedia Narrative**
   Summarize and comment the article (Laurillard_Narrative)
Open Educational Resources (OER) are defined as “technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes.”
the medium is the message
thank you for your attention