Community, Content & Collaboration Management Systems in education,

A new chance for socio-constructivist scenarios?

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Code: rhodes-2002
The goal of our research

Pedagogical & technical support for socio-constructivist pedagogies on the Internet

Menu of this talk

The problem ...
Socio-constructivist pedagogical scenarios
Internet spirit 2002: C3MS Portals
The TECFA "SEED catalog" & scenario scripting
Design decisions and implementation strategies
State of our research & outlook
1. The problem ...

content transmission:
web pages / videos

listen
look at multi-media
surf on the Web

do

do

discuss
build

instructional pedagogies:
"Learning Management Systems"

socio-constructivist pedagogies:
????
Socio-constructivists were first - what went wrong?

1993

Teaching & learning with the Web
(thesis = learning by projects)

web pages & forums

Moos
Wiki

...many good little things

2002

Open-ended scaffolded collaborative learning

???

Web-based training

WBT Systems

(anti-thesis = "instructional design")

"E-learning"

Learning management Systems

synthesis?
4 hypothesis on the future of socio-constructivist tools:

1. It won’t happen, because *you can do good things without* much technology

2. It won’t happen because "*micro-worlds* constructivists" do more "*sexy stuff*" (e.g. our own SEED partners)

3. It won’t happen because systems that emphasize the teacher’s role as manager *won’t attract money* and research systems are too specialized, too fragile, too whatever ....

4. It will happen, because countries with strong socio-constructivist elements in their curricula *perform well* (e.g. Finland in the PISA/OECD test)

My hypothesis:

- It won’t fully happen in the next future,
  ... but *we can improve* on the situation. People actually like tools for doing, thinking, collaborating on which we will build.
2. Socio-constructivist pedagogical scenarios

Open ended & "rich" socio-constructivist designs are more effective if individuals and groups have to evolve within *somewhat* specified scenarios.

Note: In this talk we are not going to justify the need for socio-constructivist designs nor point out areas of effectiveness...
- Scenarios are **sequences of activity phases** within which group members **do tasks** and **play specific roles**
- This orchestration implies organizing **workflow loops**

... this is just the (abstract) "ur-loop" ... hold on!
3. Internet spirit 2002: C3MS Portals

- ... it’s a MEGA trend!
- Content, Collaboration & Community Management (C3MS)
- Examples: PostNuke, PhpWebSite, Drupal, Jetspeed, ...
Base features of the C3MS portal

- **Integration** of most applications (authentication, interfaces, ...)
- User system (administrator, members, invited, ..)
- **Plug-in architecture**! (YOU can write modules)

**Story engine** ("stories, logs") 
+ annotations

Indexation + search

- calendar
- forums
- Web links mgmt.
- Download mgmt.
- (many other tools)

Authentication

Administration
WOW ...

- it works (thousands of sites, some of which thrive)
- people even learn from them
- some good communities of practice or communities of interest
- many people join to improve these systems and write modules:
  - like: collaborative hypertexts (wikis), pictures galleries, simple content management systems, event calendars, chats, project managers, file-upload, glossary management, weather, shout boxes, chats, ....
- **might** be useful to support educational scenarios

STRANGE ...

- major use in education is limited to student portals (or faculty in situations where expensive software won’t work)
- a few weblogs (SF area + Holland)
- little creative use in education (few documented socio-constructivist scenarios)
4. The TECFA "SEED catalog" & scenario scripting

- Catalog = *cookbook* with "half-baked" *scenarios* and *tools*

![Diagram showing the relationship between projects, pedagogic strategies, activities, elementary activities, C3MS bricks, and software (modules).]
4.1. Example: Study architectures of Rhodes old-town

<table>
<thead>
<tr>
<th>Steps</th>
<th>Activities (scenarios)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teach portal to students</td>
</tr>
<tr>
<td>2</td>
<td>Make a glossary</td>
</tr>
<tr>
<td>3</td>
<td>Make a research plan</td>
</tr>
<tr>
<td>4</td>
<td>Field trip</td>
</tr>
<tr>
<td>5</td>
<td>......</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stages</th>
<th>Simple activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Participants think about terms</td>
</tr>
<tr>
<td>2</td>
<td>An alphabetic list of terms is entered</td>
</tr>
<tr>
<td>3</td>
<td>Students search (any place)</td>
</tr>
<tr>
<td>4</td>
<td>Work is synthesized and combined</td>
</tr>
<tr>
<td>5</td>
<td>Teacher moderates</td>
</tr>
<tr>
<td>6</td>
<td>Students produce final definitions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Simple activity</th>
<th>Description</th>
<th>Available C3MS bricks (software)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoEdit</td>
<td>Creation of collaborative documents</td>
<td>Wiki (phpWiki PN module), simple CMS (PN module EzCMS)</td>
</tr>
<tr>
<td>BrainStorm</td>
<td>Generate Ideas</td>
<td>Wiki, News Engine, Forums, Bulletin Boards</td>
</tr>
</tbody>
</table>
4.2 So what is "Scripting"?

1. Define scenarios
2. Configure & edit tools
3. Select tools
4. Plug
5. Configuration
6. Installation?
7. Modify
8. Program
5. Design decisions and implementation strategies

5.1 Features of the system
- not much development, it’s NOT a system but a strategy
- based on popular open source kits & some development on top
- compromising (good price/quality relationship)

5.2 how do we help teachers (in progress) ?
- some training (both technical & pedagogical)
- repackaging and documenting C3MS software
- support & exchange portal
- good best (affordable) case examples

5.3 openness, e.g.:
- make it multi-purpose (e.g. also support community building)
- support for different user categories
- future integration with micro-worlds
5.4. Our hypothesis on cost and acceptability issues

Our strategy: better educational performance at reasonable cost and better acceptance by using semi-familiar light-weight tools.
6. State of our research & outlook

• This is part of a 3-year - 7 man/years applied research project
• within a larger EC project (SEED)

First results:
• several portals / projects launched with teachers
• teacher’s catalog (2nd draft in french)
• good reception of technology by "power teachers"
  ... despite difficulties of installing/configuring such systems
• adoption of "scenario planning" is slow (6-24 month latency)
• usability difficulties - most can be addressed with time

Outlook:
• Keep in touch: tecfaseed.unige.ch/
• We don’t know wether the idea will really work
  (socio-constructivism for masses by adopting C3MS)
• Next: towards "real" CSCL (adding workflow to the system)
First results (expressed as slogans):

(1) Shift the focus from learning *materials* to learning *activities*.

(2) Protect our children from too much behaviorist e-learning!

(3) We should not overscript, be somewhat "authentic" e.g. not transform constructivism into programmed learning.

(4) Work *from the middle out*, i.e. combine "perfect small scale studies" with many "little low-support projects" and other initiatives. Teachers never will get much support for anything, so we must find out how to do it in "real conditions"!

(5) Start with pedagogies & technologies that are somewhat *familiar*. Adoption rate for new things is slow!
Disclaimer: This is work in progress

Just born:
Tecfa SEED community site

http://tecfaseed.unige.ch/door/