

E-learning 2.0 - Social Computing in the Future of Learning

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ICOOL 2007

Part I: Web 2.0 ? E-learning 2.0 ?

What do we mean by this ?

Refers to Web 2.0 (1)

Web 2.0: A set of **technologies** that enables an approach to deal with Information & communication

An **approach** that in turn creates new technologies at a rapid pace.

1.0 ...	vs.. 2.0
Unstructured small texts Structured large texts	Structured small texts
Isolated databases	Data everywhere, microformats
Repositories	Feeds
HTML forms	AJAX (nice interfaces)
Monolithic applications	Aggregation through services (APIs)
logins	An identity
Metadata	Folksonomies

What is web 2.0 ? (2)

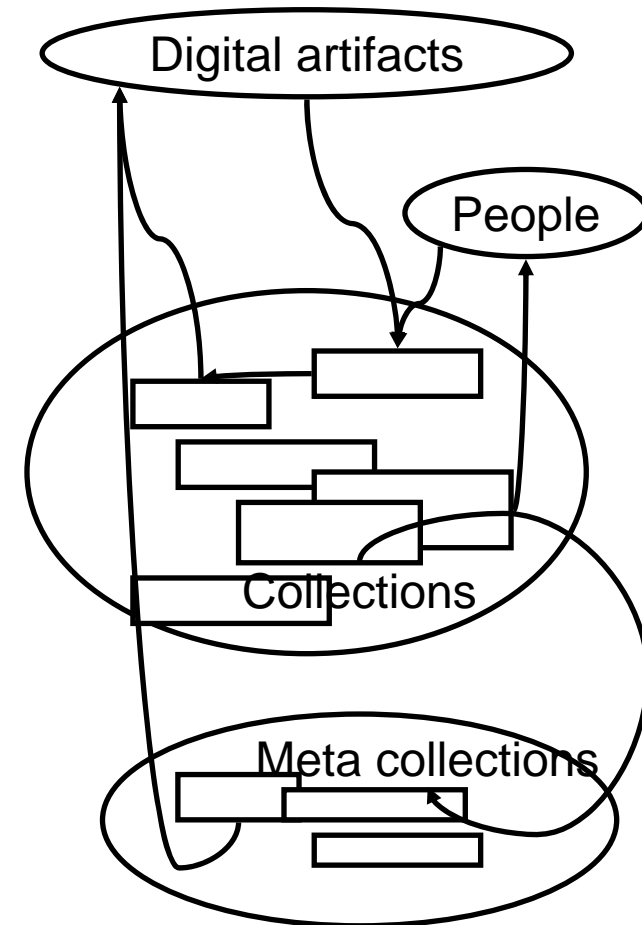
Three important characteristics:

The web as platform	Feeds, services ... Mashups (combine, mix)
A network	Connect people, information, things, ... (= social software)
Read/write	Contribute, have an identity, be present,...

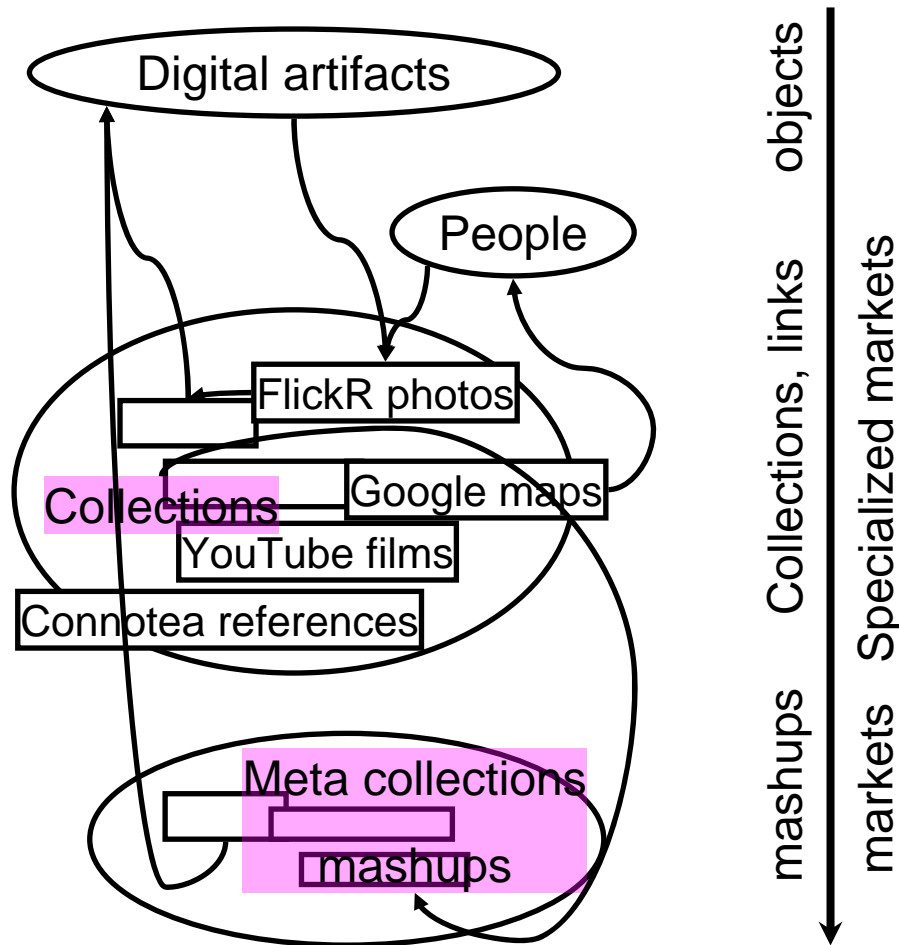
Social software

= (tools + services + aggregation) ^scale:

- **Sharing of links and feeds (Del.icio.us, Feedburner)**
- **Sharing of digital artifacts (YouTube, Flickr, Furl..)**
- **Social citations and reference managers (CiteSeer, Connotea)**
- **Social shopping (Amazon,..)**
- **Social networking (LinkedIn, FOAF)**
- **Reputation systems and collaborative filtering**
- **Large Wikis (Wikipedia, ...)**
- **Office 2.0 (iGoogle)**
- **Web 2.0 mashups (Pakeflakes, ...)**



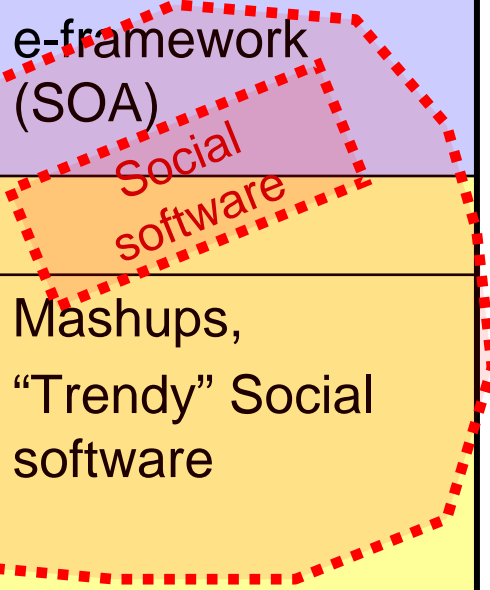
Social software is about (self-organizing) collections and “markets”



- Blog entries, photos, films, learning objects, textbooks, assignments, slides,
- Blogs, wikis,...
- Portfolios, profiles, digital identities, virtual identities
- News feeds, ratings, “43 things”, reading lists, friends of friends, research lists,...
- Best conferences on a google map, virtual portfolios, public webtops,...

E-learning 0.5 to 2.5: growing social soft.

0.5 (1967-)	0.5 (1980's)	1 (1995,-)	2 (2000,-)	2.5 (2005,-)
"Official"				
Plato TenCore	Virtual classrooms CBT/CBL	WEST WebCT Metadata SCORM	Moodle LAMS LD	Personal Learning Environments e-framework (SOA)
"Teacher-driven"				
Basic	BBS Hypercard	Web servers, Forums, CGI Scripts	Blogs, Wikis, Portals (old social software)	Mashups, "Trendy" Social software



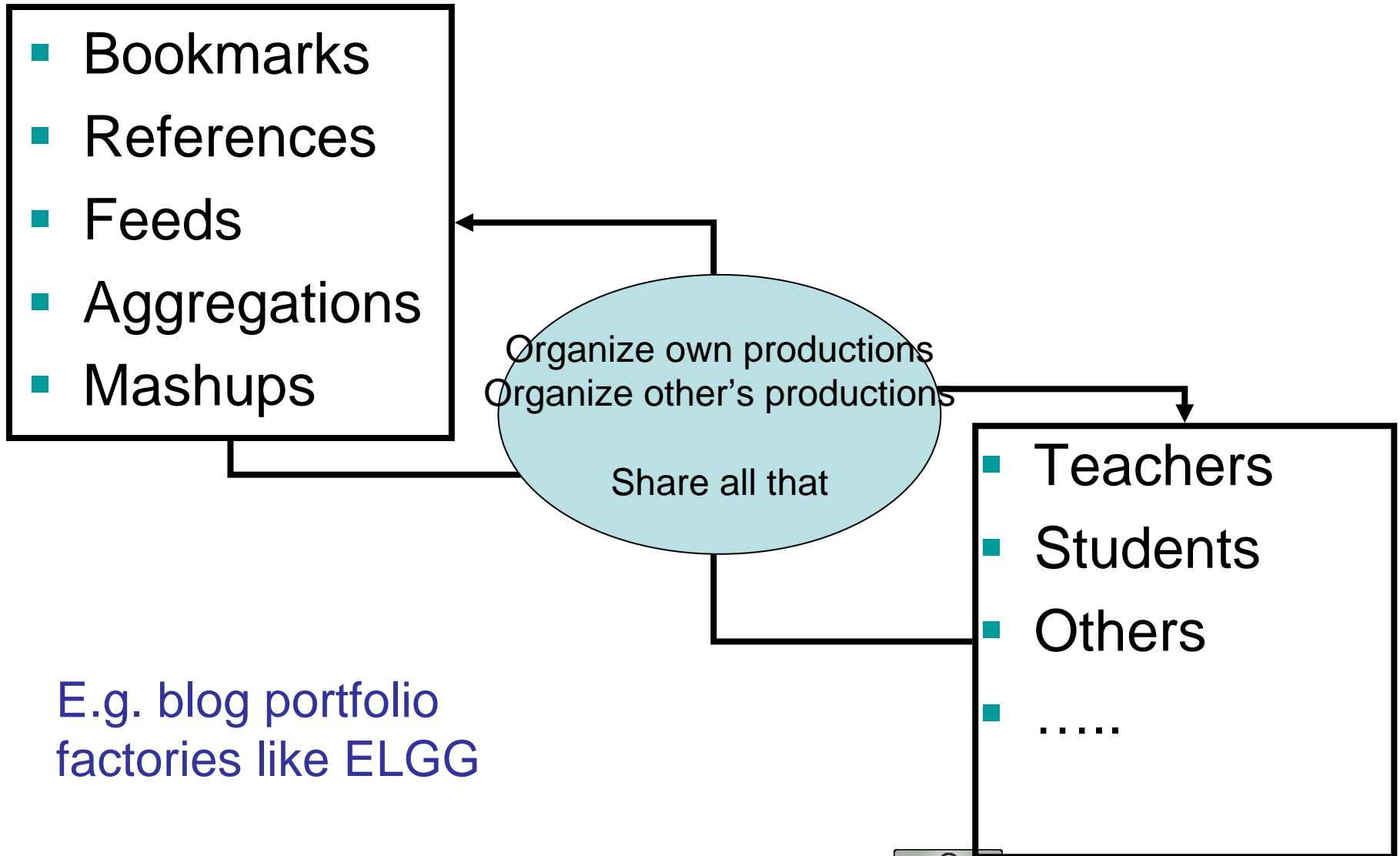
Part II: E-learning 2.0 / social software in education

Some use cases

Use cases for education

1. Manage the information space
2. Write to the information space
3. Computer enhanced project-oriented learning
4. Personal learning environments
5. Integrated authoring and management of activities
6. Microlearning
 - ... more

1) – Manage the Information space



E.g. blog portfolio
factories like ELGG

2) – Write to the information space

■ Digital story telling

- “Be there” with (multimedia) stories
- Connect them to other stories, to resources, ..
- Kids to it all the time, some teachers do it too
 - MySpace, YouTube, Blogs,

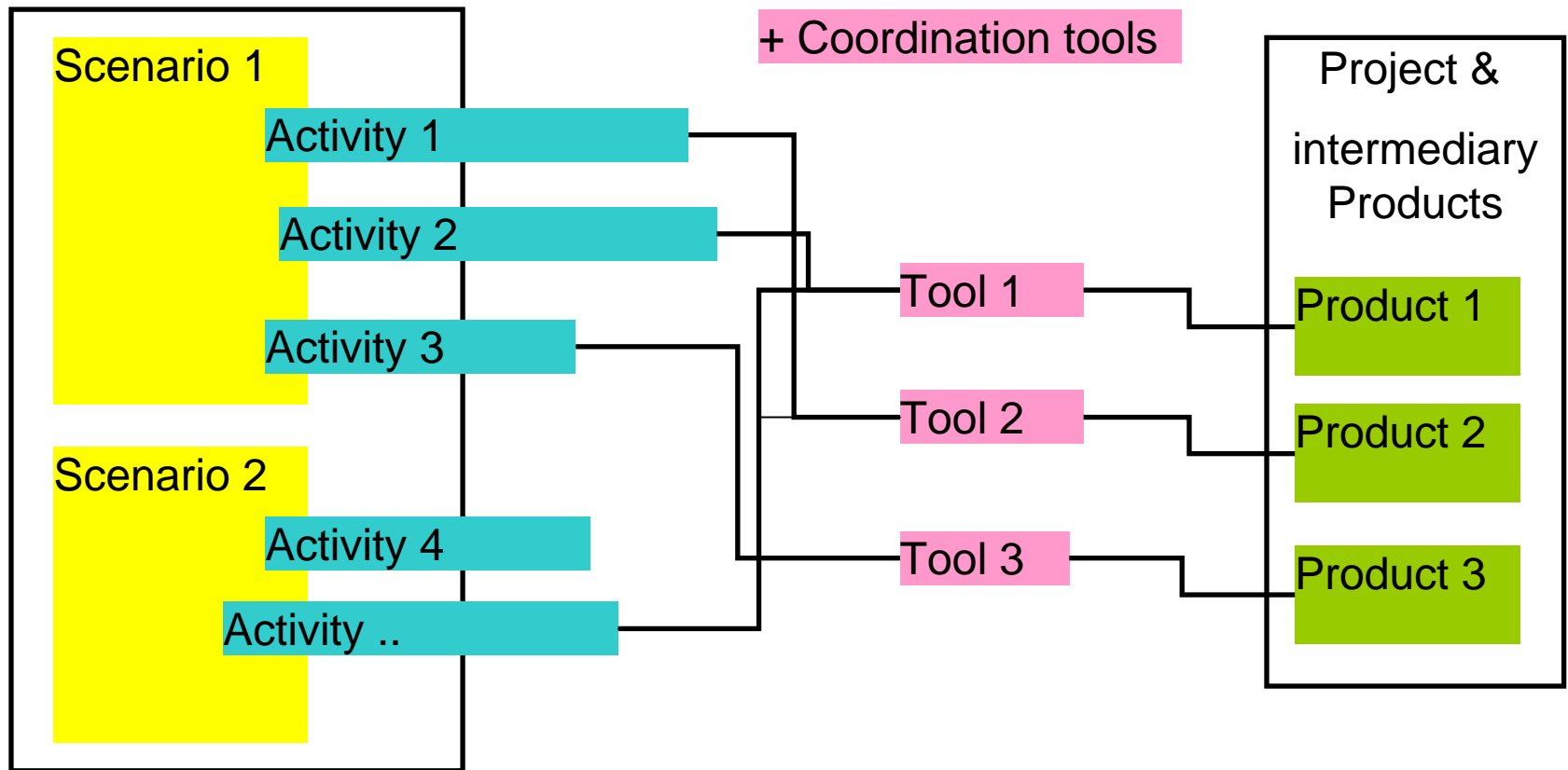
■ Contribute to expertise

- Add articles to wikis, post podcasts to YouTube, upload slides to Furl, ...
- Fix / comment productions
- Link ideas, remix productions

3) Project-oriented learning (design example)

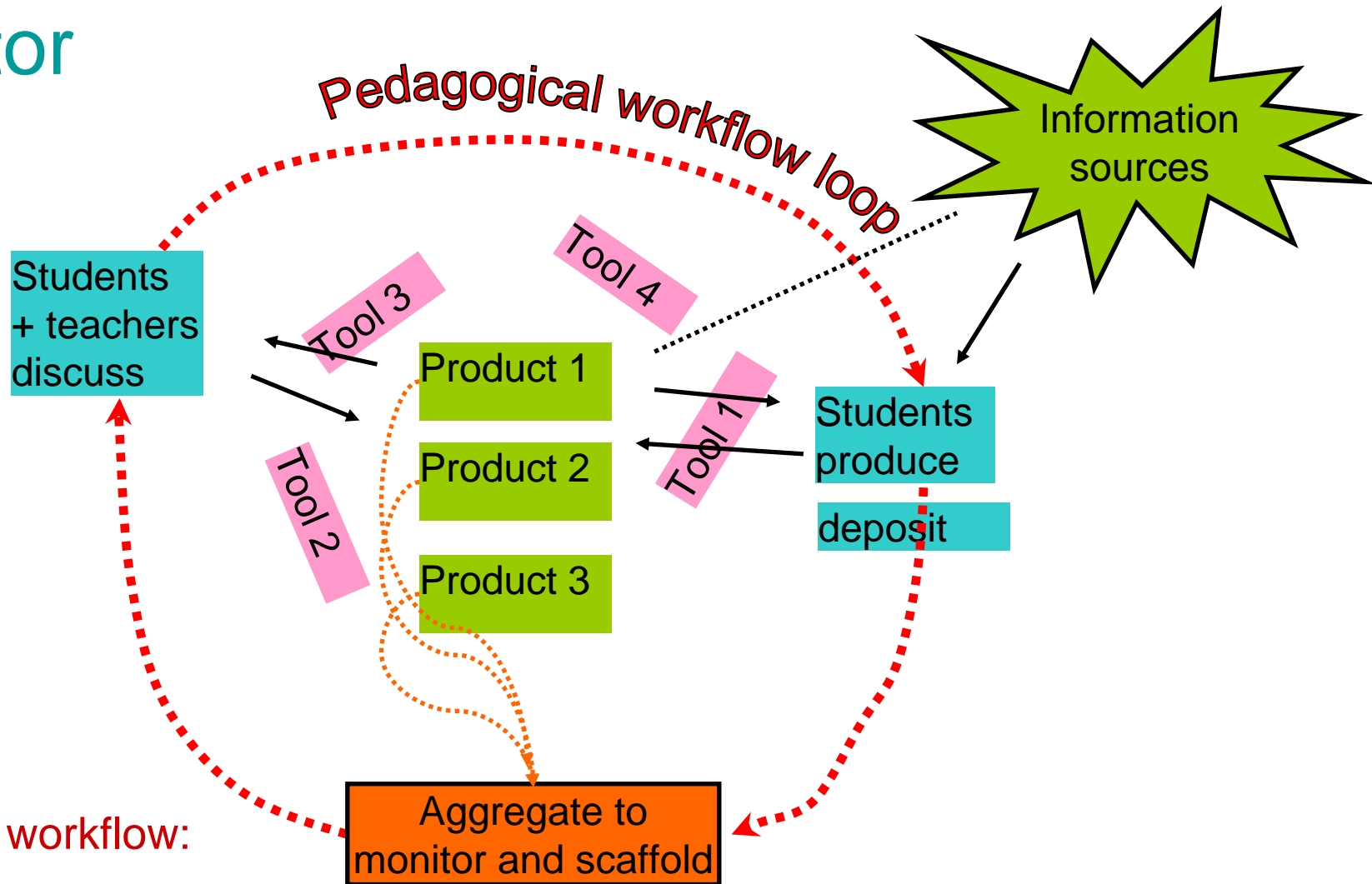
- Organizing and augmenting the information space does not guarantee formal learning ...
- Teachers have to engage in storyboarding:
 - Orchestrate
 - Monitor
 - Scaffold (Tutor)
- Levels of cooperation between learners:
 - Individual, group
 - Class, school (social environments !)
 - Virtual community, world (social environments !)

Orchestrate: Activities, tools, products



Teachers design projects that contain scenarios with smaller activities supported by some technology (web 2.0 tools). Activities lead to products.

Monitor

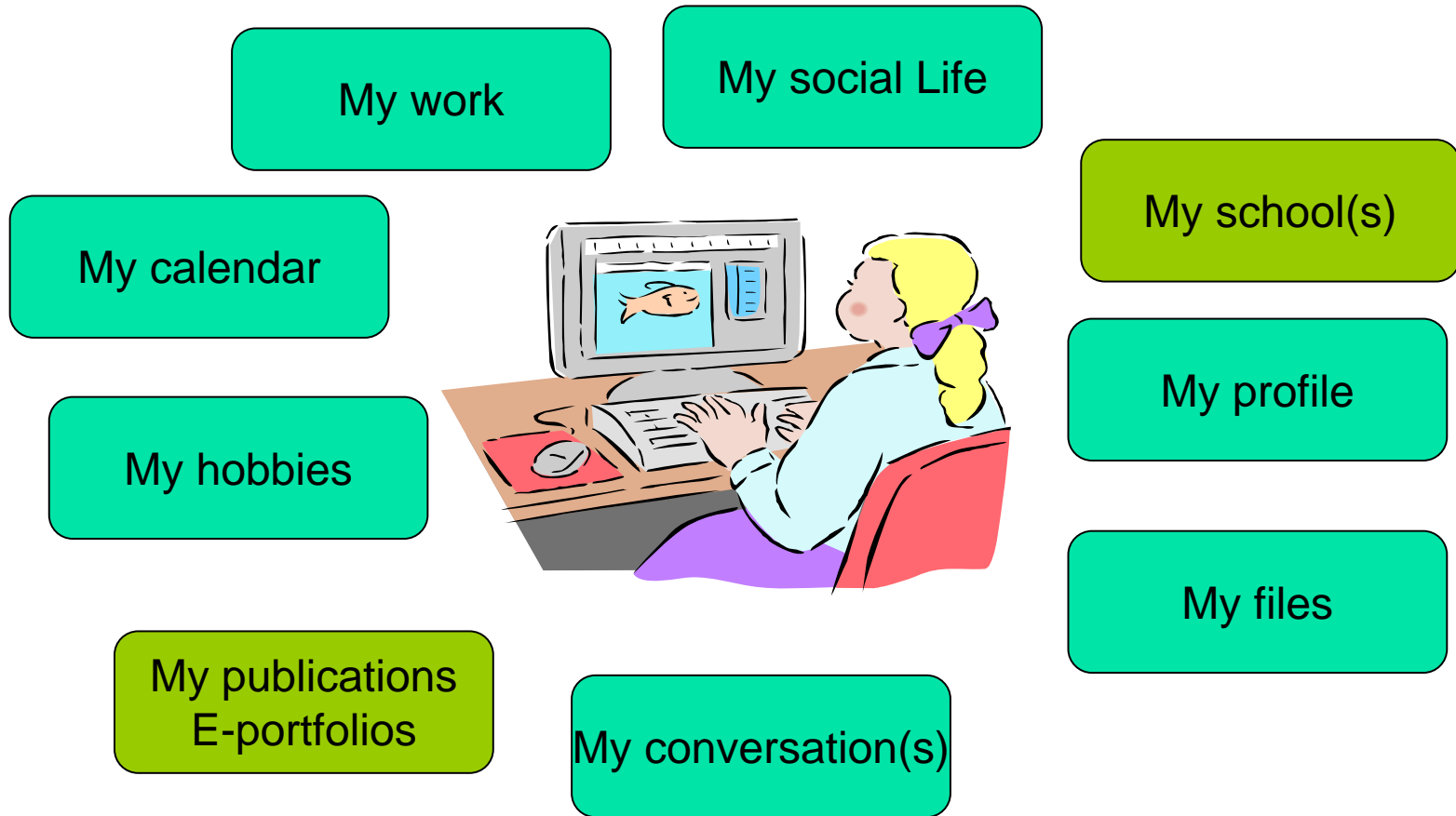


A basic workflow:

students make products & teacher monitors and engages

Work is centered around a living digital artifacts system (web 2.0 places)

4) Personal environment: a MY Space (Anderson & Hutrum 2006)

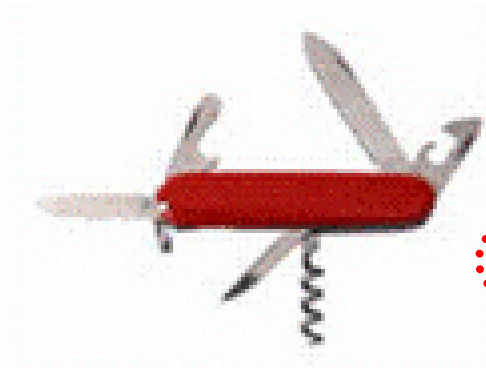


Learners do have an environment, and school is part of it
But **they** organize it ...

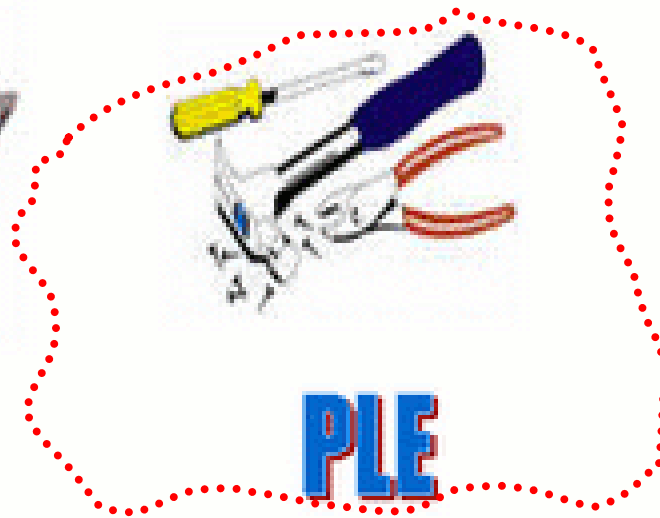
Personal learning environments (2)

- The most compelling argument for the PLE is to develop educational technology [...] which allows them to themselves **shape their own** learning spaces, to form and **join communities** and to **create, consume, remix, and share** material” (Graham Attwell)
- **There is no reason why schools should run the learning environment**, the school should just teach (they throw away learner’s work anyhow)

The PLE is made with a collection of tools



LMS



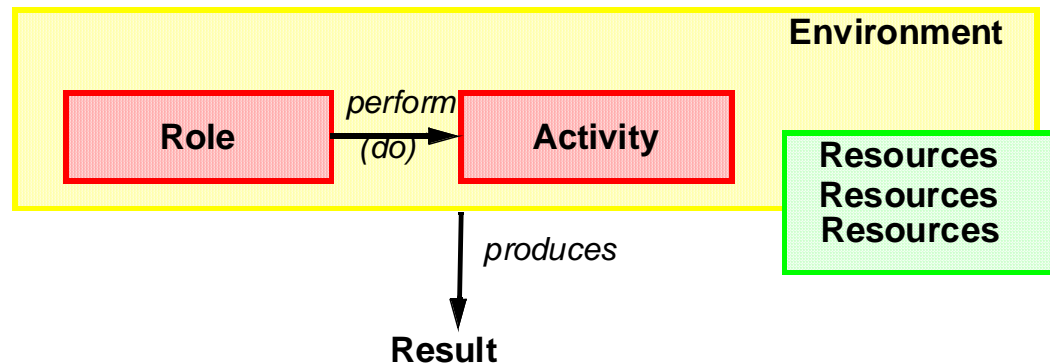
PLE

(M. Chatti)

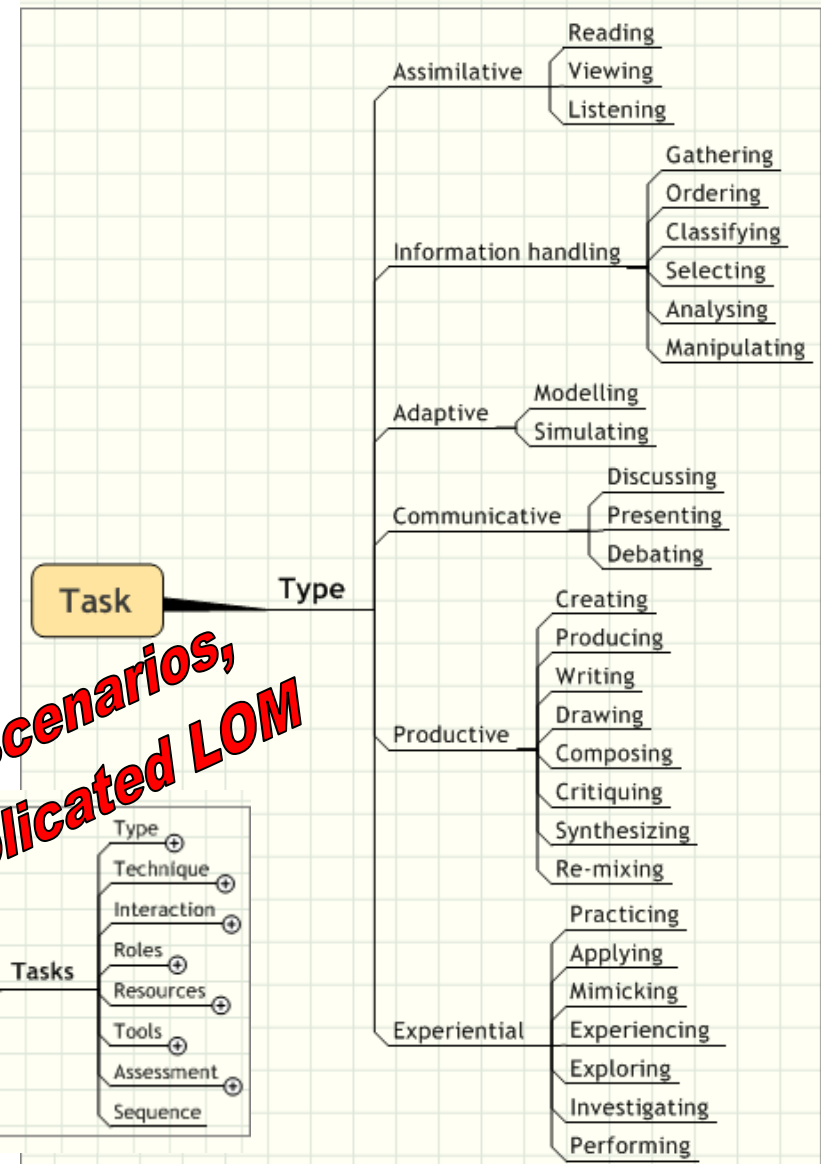
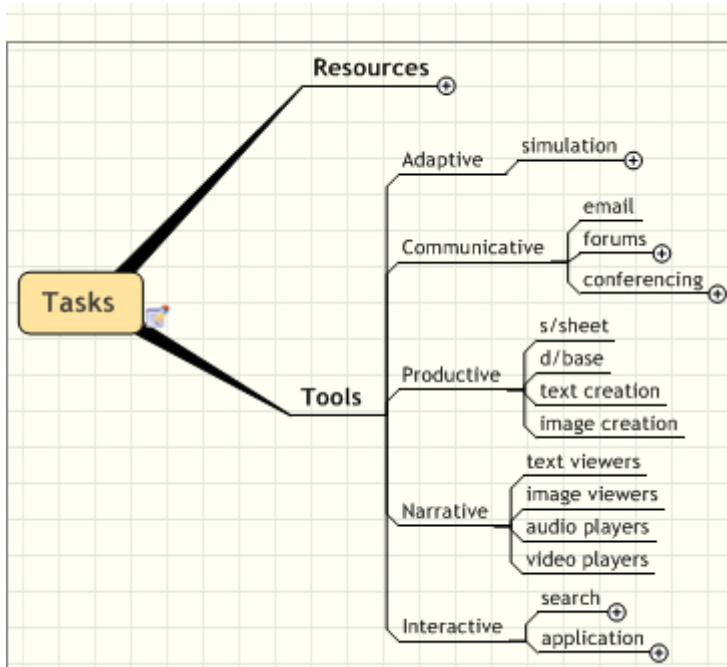
- A PLE is a portfolio, generates profile and identity
- It's private, but **most is shared with different groups** (e.g. a class), some shared with public
- Learner **has control** over his environment,
Teacher **has access to productions required for a class**

(5) - Integrated authoring / management / repository

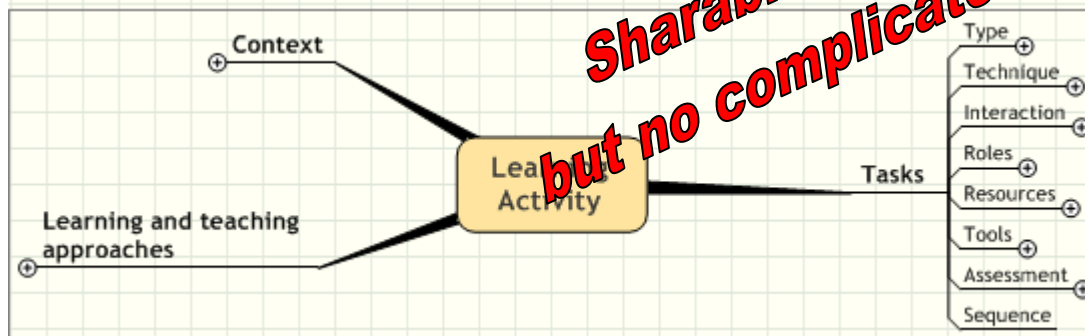
- Can be found in the discourse of Learning Design (LD) systems ...
- Is not web 2, but nevertheless related, since sharing is made simple (not LOM !!)
- LD is meant to be “source code” for education, i.e. distributable learning objects that convey pedagogical information



DialogPlus toolkit



**Sharable scenarios,
but no complicated LOM**



http://tecfasun1.unige.ch:8080 - Author :: LAMS - Mozilla Firefox

File Edit Tools Help

New Open Save Copy Paste Transition Optional Flow Group Preview

Activities Toolkit

Chat
Chat and Scribe
Forum
Forum and Scrib...
Multiple Choice
Notebook
Noticeboard
Q and A
Resources and F...
Share Resources
Submit Files
Survey
Voting

peak-oil-activity

HTML Noticeboard → Share resources → Groups for Q & A → Noticeboard

Forum

Share resources

Groups of 2 to 3

Chat & Scribe + Jour...

chat

Group report

Share resources

Journal

Peak Oil Questions and 5 - Activities

Group 1
Group 2
Group 3
Group 5
Group 4

On-line authoring and execution in the same environment, sharable

Properties

Transferring data from tecfasun1.unige.ch...

Learning Design environments of the future:

- Simple to use (LAMS is)
- Combine authoring and playing in the same environment (LAMS and CeLS do)
- Integrate a large and useful toolset for teachers and also tie into social software, in particular productivity tools & digital artifact collections (hmm ...)
- Also missing: Some commonly accepted digital identity standard

(6) - Microlearning

- Very simple learning objects (LOs), e.g. a few HTML pages, a Podcast, a small IMS/SCORM Content Pack.
- Just-in-time open learning. User decides “on the spot” that he wants to engage in learning ...
- Reputation systems (what are the best learning objects, users rate/annotate).... a true market (under construction)
- Personal LO aggregators (e.g. Mindpicnic)

Part III: E-learning 2.0 ?

Is it just for informal learning or creative classroom
teaching ?
Or can institutional e-learning integrate some of it ?

Let's summarize a bit web 2.0

It's sort of a platform for the whole web (a toolbox)	Feeds, services ... Mashups (combine, mix)
Lots of tools are networked and generate added value	Connect people, information, things, ...
Read/write by users	Have an identity, be present

Can we do this with normal e-learning tools ?

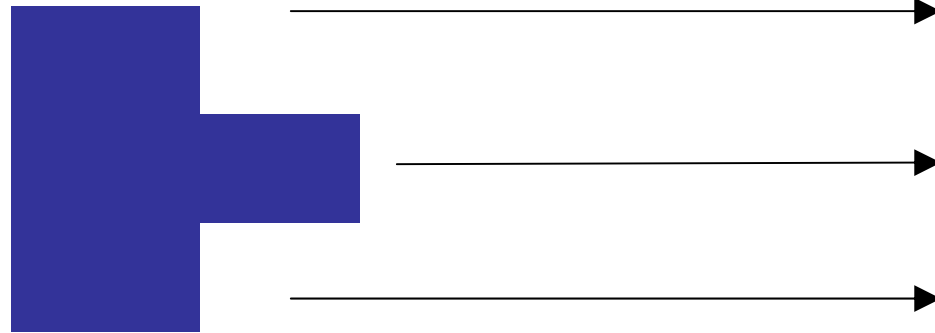
No: e-learning is closed, does not connect and does not engage learners to participate

What's most missing from e-learning 1.0 ?

Flexibility

Interoperability

Variety

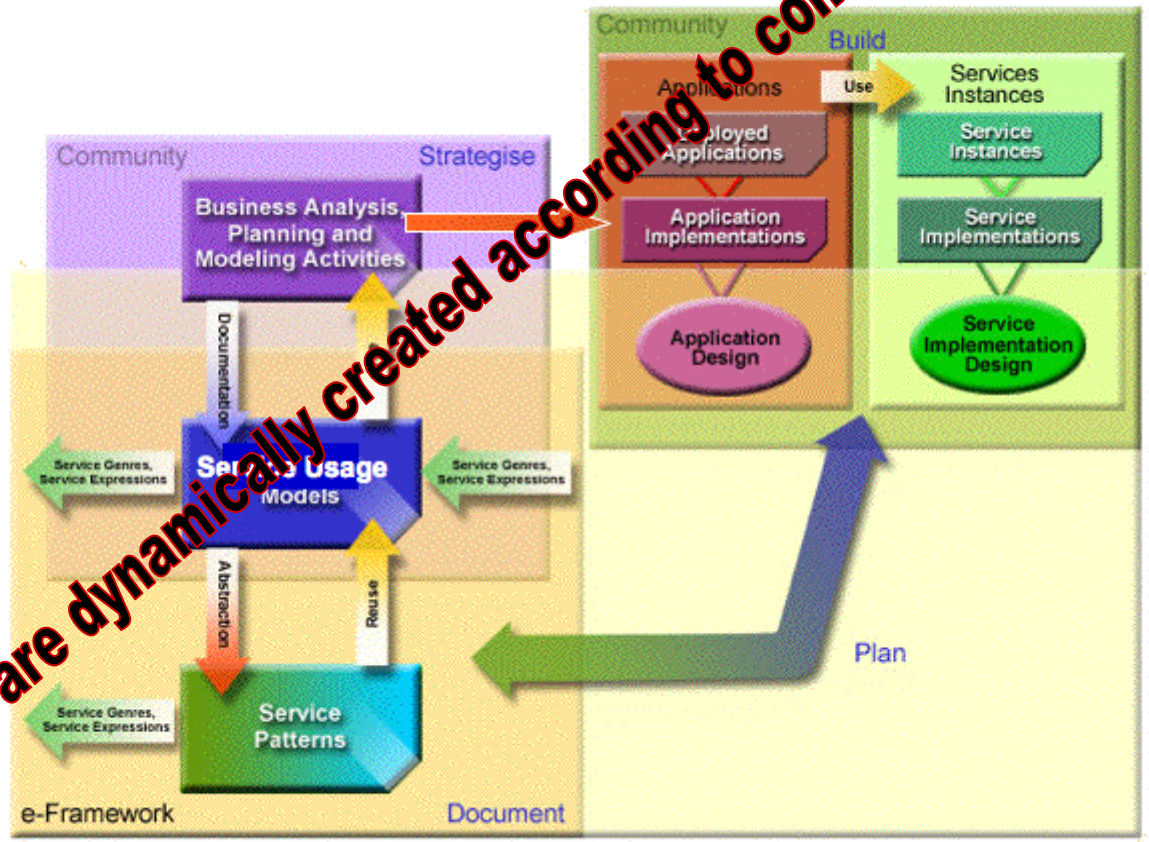


It's not flexible, it's not integrated with Internet,
it's a monoculture,.....

A long way to go

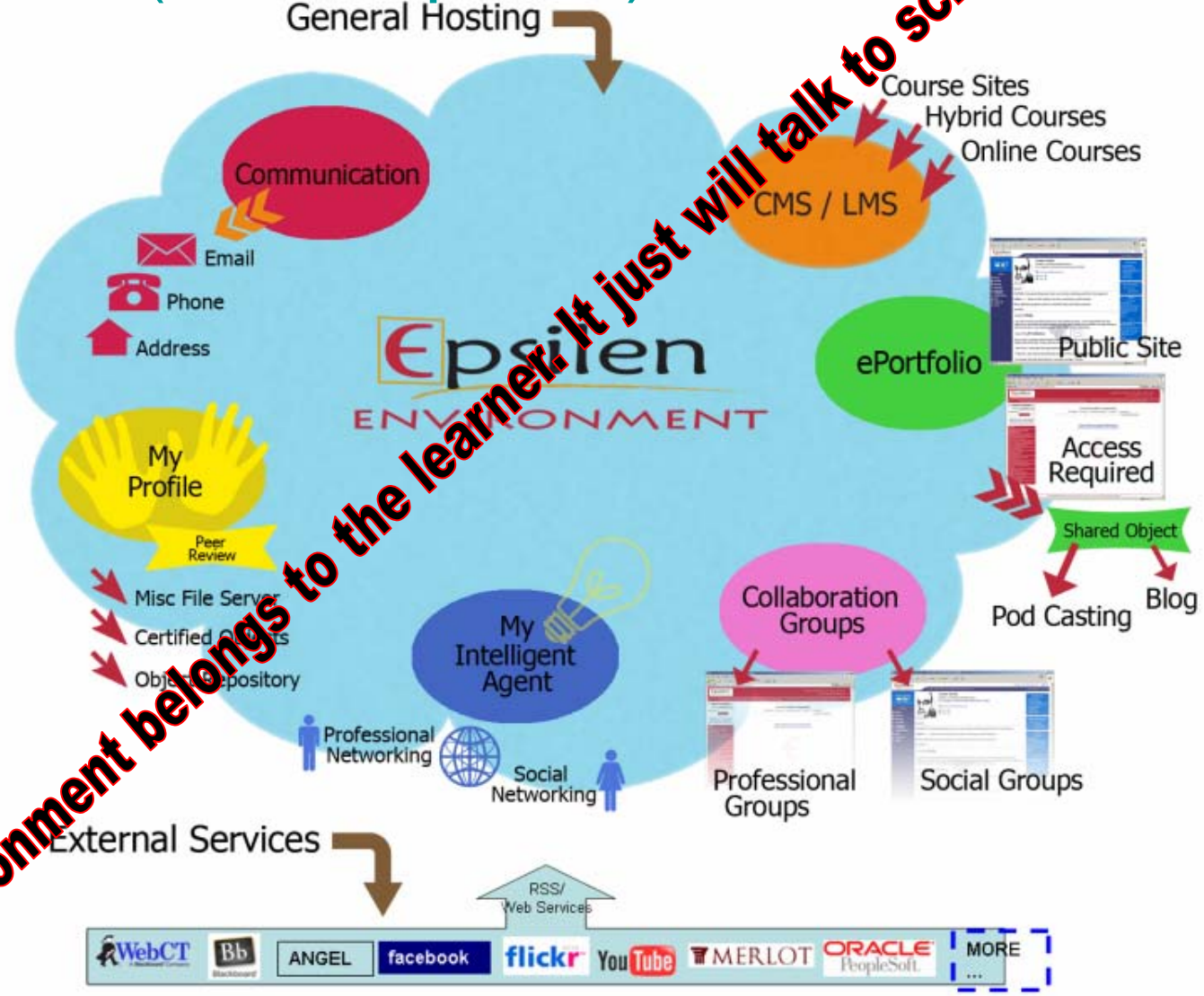
SOA-based platform (Rehak/JISC/...) ?

e-Framework Model



Environments are dynamically created according to contextualized needs

Personal Learning environment (PLE) aggregator (Jafari/Epsilen) ?



The environment belongs to the learner. It just will talk to school sites

PLE as aggregator (Wilson/PLEX)?



The environment belongs to the learner. It just will talk to school sites

How about personal teacher environments ?

The near future

- **Old style e-learning**
 - will survive in its niche market
 - will survive through general purpose campus portals
 - will survive by integrating (some) web 2.0
- **Next generation e-learning**
 - May not work / be too expensive (it's Java-based)
 - May have its own niche market
- **Web 2.0 light-weight technology**
 - Will thrive with active teachers (all such Internet technology did)

What's wrong with this talk ?

- It's propaganda

- Good propaganda, since it is based on examples that really happen(ed)

- The main issue

- E-learning 2.0 is related to cultural change, needs “Internet thinking”. E-learning 1.0 is not !
- E-learning 2.0 may not change e-learning 1.0, but add yet another paradigm/toolset to education.

- Also worked in the past (and even now):

- CBT, CBL (microworlds, simulations), ITS, CSCL, Teleteaching, WBT, simulation & gaming,...

Design-based research (Reeves)

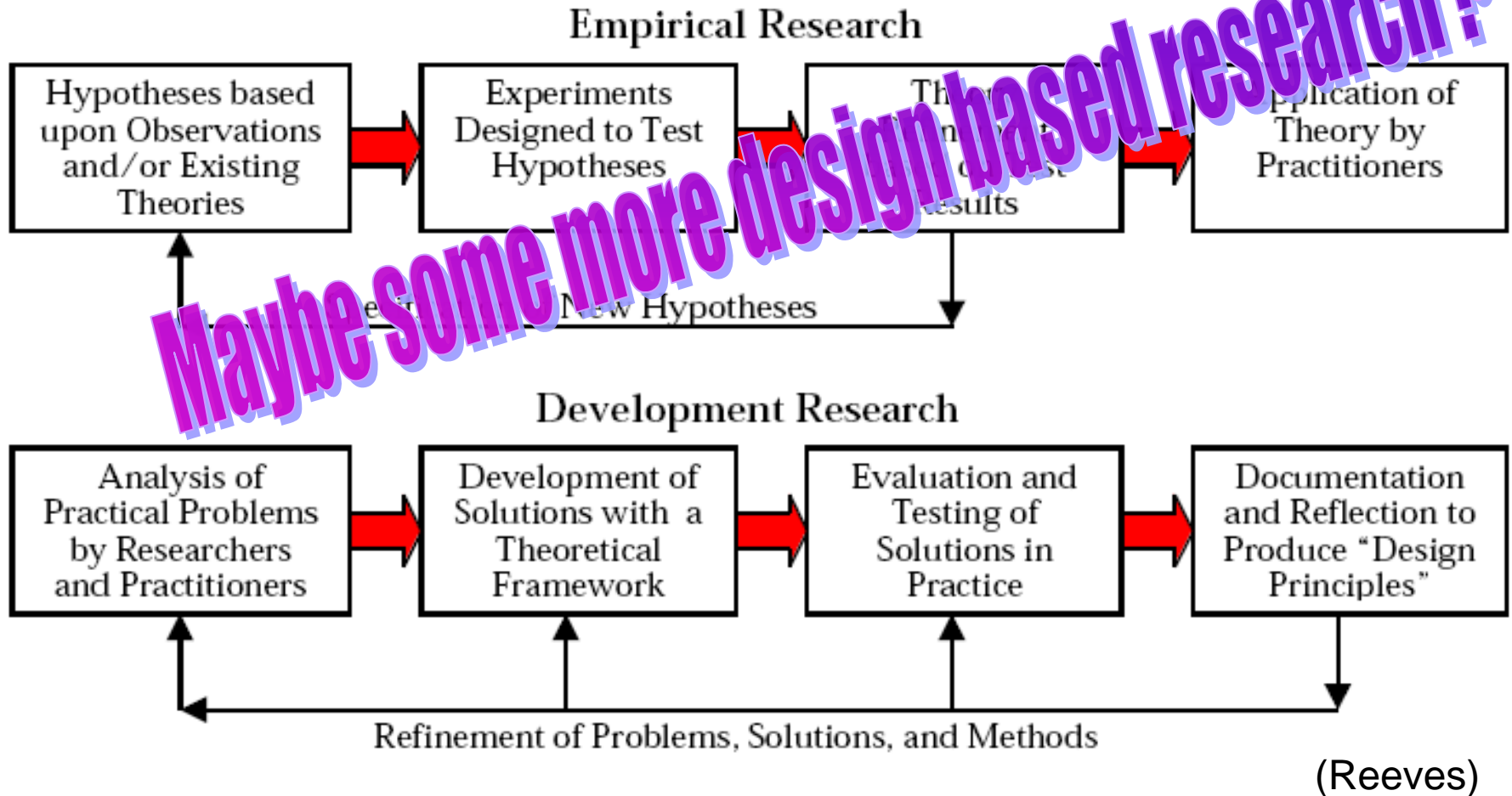


Figure 3. Empirical and development approaches to IT research.

Conclusion

- There is immediate potential, in particular for:
 - Writing-to-learn and knowledge community-building environments (run by creative teachers)
 - Personal learning environments
- For more we need:
 - Political change (acceptance of open and distributed services-based architectures)
 - Give up e-learning systems that were so expensive and difficult to set up (!)
 - Cultural change (in particular in teacher training and national policies)
 - Involvement of the education community

MORE ?

Talk 40: e-learning 2.0

Light-weight e-learning with WebTops

Wed 10:05

<http://edutechwiki.unige.ch/en/icool2007>

Thanks for listening !