Collaboration, Discussion & Information Portals in Education

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1. Contents

2. Goals

Technology update

- Look into various portal technology, compile features & identify types

Community portals and education

- Small teacher communities
- Larger communities (including outsiders)
- Pedagogical scenarios using portals

Internet spirit & technology for open learning

- Share things
- Leverage from others
- Let's do it simply (KISS)

3. Introduction and more motivation

3.1 Informal open learning is needed in many situations

- Internet is nice place for exchanging knowledge (and TBL designed it for this)
- Knowledge (and knowledge production) helps learning

=> Internet is alive outside academics

- Best practise example: computer people
  - use newsgroups & mailing lists order to solve hard problems, collaborate on open projects via the Internet, share code, etc.
  - use and produce quick & dirty tutorials and examples
  - do both “on the spot” and “just in time” learning

=> Internet is barely alive inside academics

- Worst practise example: higher education in Switzerland
  - don’t use Internet very much
  - don’t produce much of knowledge of interest on the Internet
  - concentrate on formal teaching & learning: use tech to redo old stuff
- Exceptions: a few, e.g. Staf (somewhat)

3.2.Pedagogical platforms have problems

- have closed contents
  - makes sharing difficult (even for those who wish so)
  - against the Internet spirit
  - leaves Internet to more “open” cultures (U.S. domination of the Web)
- are course-oriented
  - old pedagogics I: learning = knowledge absorption
- are course-structure-oriented, i.e. turn pages and do quizzes
  - old pedagogics II: learning = controlled knowledge absorption
- Advanced platforms tools
  - produce useless control statistics instead of helping students to get something done and learnt.
- contents are sometimes difficult to manage
  - materials have to be imported and are processed into non-standard formats
  - very hard time to repurpose things
  - informal knowledge produced by students and teachers is lacking attention
- .....

3.3.Why are pedagogical platforms over-used?

- Decision makers and many teachers
  - are conservative, they want to continue old practices with new software
  - are afraid and believe that teaching must be sealed off from the world
  - think that something that everybody is selling for a lot of money must be good
  - don't know anything else
- Platforms offer many nice tools
  - installing each tool separately is expensive and often impossible. Web administrators of the schools system hate Internet applications
  - Platforms offer some kind of content management
  - Platforms offer a coherent look and feel for the user and the author
- (sometimes an old-fashioned instructionalist teaching strategy is useful ...)

=> Some of these problems can be addressed quite easily

- environment for administration / authoring
- show open-minded teachers the benefits of an open information, discussion and collaboration environment

3.4.Save the Internet Spirit (Political)

- Internet as a whole has a problem with contents
  - There isn't enough contents in many areas
  - Too frequently contents are lost (in particular informal ones)
- Internet is becoming unfriendly to common folks
  - Due to the preasure of professionally made up site, the common user (teacher/ student) is afraid of managing his own contents
  - Even if he is not afraid, he has to spend too much time on details
- Content problems are no so bad, but typical users are:
  - they don't know how to find things, in particular use good keywords to search contents and specialized portals
  - they don't necessarily want to constitute knowledge themselves
  - they think that Internet content is "magic"

=> We must train better Net citizens

=> We must do cool stuff with simple things

=> More complex things have to be made simpler

3.5.Save the Internet Spirit (Educational)

- Education was supposed to open up to the world
  - people “in the street” should have access to knowledge, contribute to knowledge
  - parents and future learners should be able to “see” at least part of what is going on in school
  - teachers and students should share and build knowledge world-wide
- Students should learn to deal with “dirty” information
  - In real life knowledge can’t be always found in manuals
- Some learning domains require project-based learning
  - Teacher should facilitate, not teach
  - Students must construct knowledge not just in his head but also on their sites

=> Portal technology can contribute a bit to this

=> We must do cool stuff in education with simple things

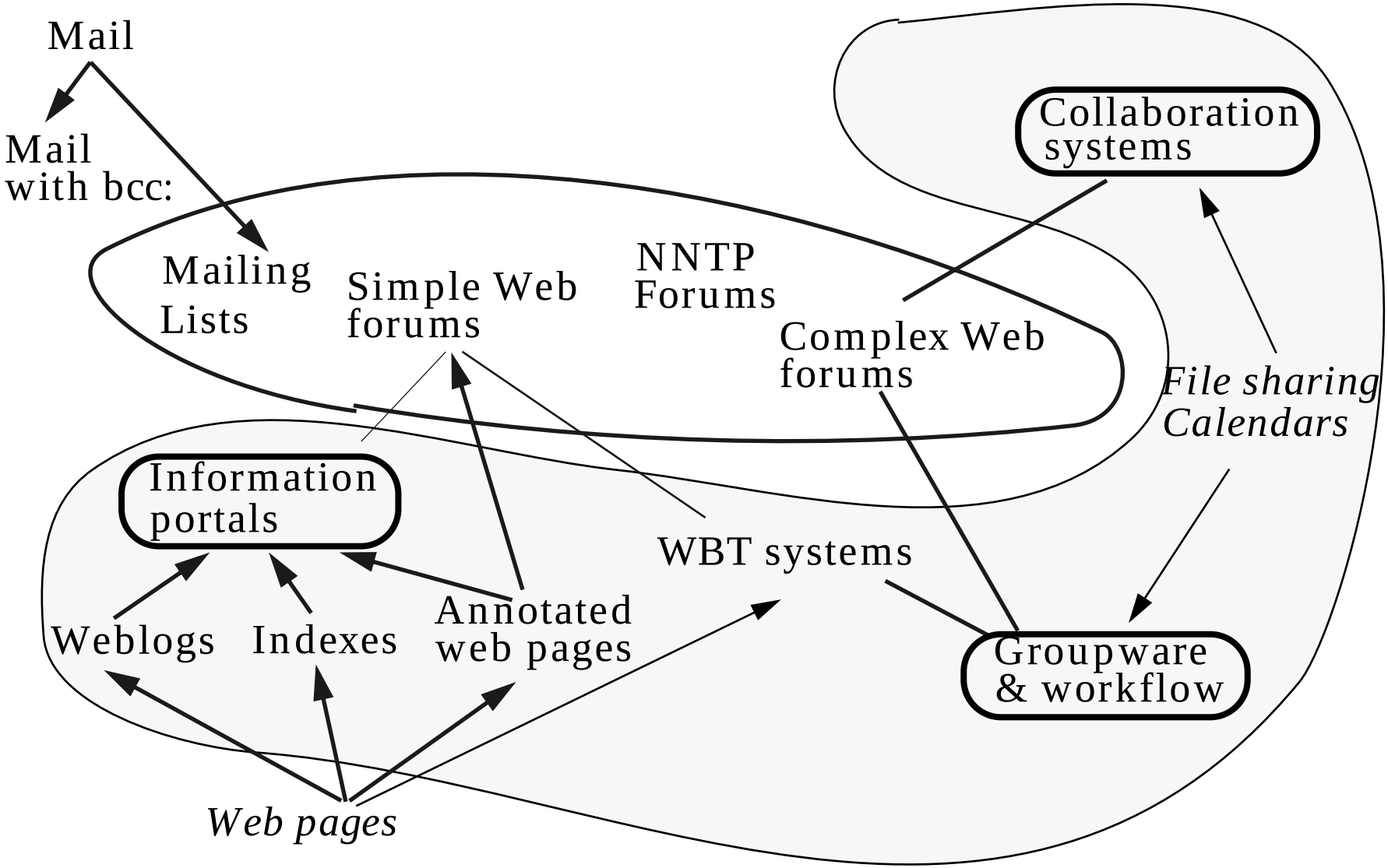
4. Information++ Portals

- The hot Internet application in 2000
- lots of variety, focus here will be on so called Weblogs
- many easy to use tools (administering and authoring)
- astonishing under-use in education

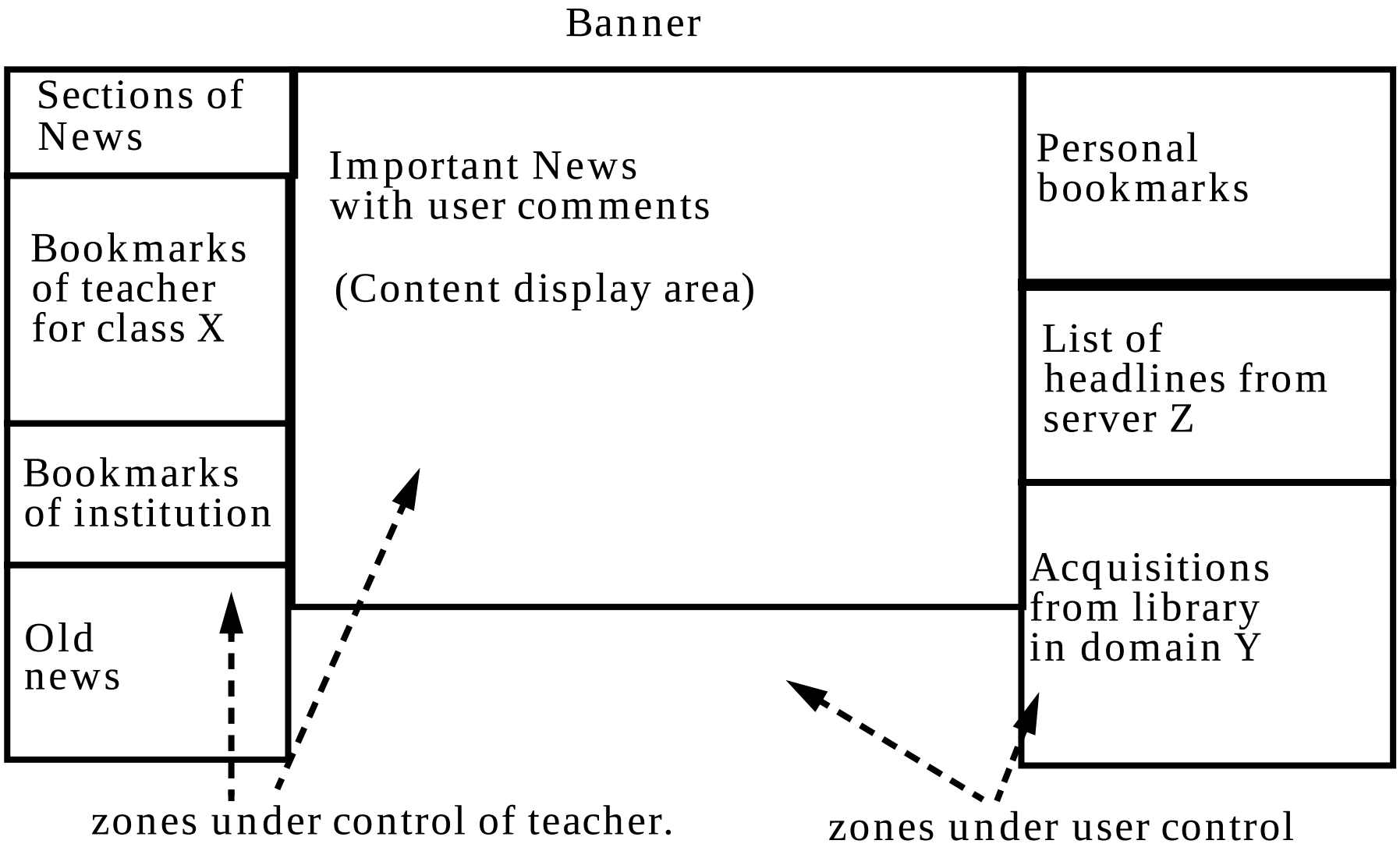
Weblogs are an interesting variety based on simple principles:

- A weblog, also called a blog, is a web-based writing space.
- Think of something like an on-line journal, a web site an individual uses to write everyday, where all the writing and editing,
- and the whole look and feel of the site, is managed through a web browser from wherever the writer happens to be.
- A weblog is designed so that, just like a journal, the page can be turned each day, and the web site itself keeps track of the date and archiving of all the writing.
- ... most recent weblogs have other features, a lot of other portals have weblog functionalities etc. (see later)

4.1.Information portals in the global communication picture



4.2.Structure of a simple collaborative information portal



4.3.Typology of Portals

Main types:

- Information: news, weblogs, customer support
- Transaction: sales, auctions, ...
- Collaboration: (weblogs, news) + discussion

Orientation (not really orthogonal categories)

- vertical: (e.g. a community)
- horizontal (e.g. data analysis people)
- geographic / tribal /corporate / etc.
- network of portals

=> we will focus on weblogs and other simple information portals here

4.4.Features

A. Basic

- Easy, web-based administration - minimal computer experience is needed to maintain site content.
- Flexible layout control - site page layout can be changed at anytime
- Topic-based announcements - organize site announcements by category with automatic history rollover.
- Interactive content - visitors can post comments, submit articles, announcements and web links.
- boxes for headlines from other sites (via RDF imports)
- boxes for other information

B. Additional (some of it is basic groupware stuff)

- Surveys and polls - create “quick look” surveys using a few mouse clicks.
- Full featured event calendar - post events by category and subcategory in a flexible cross-referenced calendar.
- Customized user experience - themes allow each visitor to customize the web site for his or her preferences or special needs
- File upload/download
- Headlines export / import from other sites (news syndication)
- standards compliance (in particular news syndication formats)
- multiple client support
- API support
- ....

5. Current use/state in Education

(After a few hours of searching through the Internet)

Found evidence of interesting use of weblogs

- for educational newsletters (of course)
- as portals for a course
- as tool to engage students and younger into personal projects (each student has a portal)

Other kinds

- information portals (resources, articles, lectures)
- all sorts of complicated stuff

5.1.Best example I found:

- The Interactive University (IU) http://iu.berkeley.edu/
- Here is a longer quote

The goal of UC Berkeley's Interactive University Project (IU) is to enable Berkeley to make its unique resources of people and knowledge available on the Internet to K-12 educators. IU is developing a new model [5] that involves collaborative communities (between the university and K-12) producing, creating, and disseminating curricular materials and learning objects, “digital resource[s] that can be reused to support learning”[28]. Packaged as XML and associated with relevant K-12 and discipline-specific meta data, these learning objects will be flexible and reusable documents, assembled and distributed in the IU Open Learning Environment (IU-OLE), a web environment in which California's teachers, students, and family members will be able to find and access, manipulate, assemble, and share these documents.

[http:/ /iu.berkeley.edu / on sept 11 2001]

6. Potential for Education

- several possibilities
- don't forget pedagogical scenarios
  - e.g. students maintaining portals
- types of exploitation not yet fully known (I think)
- ... let's see some

6.1.Portals for classes or topics

Information portals

- Can be used to handle certain pedagogical strategies: resource-based learning, project-, problem-based learning
- "do it now, learn it later" to some extent
- shared links

Weblogs

- make above more dynamic, e.g. profit from user-generated knowledge
- share information about good things on the web

Social Utility:

- "after sales support" & diffusion of informations

Pedagogical utility:

- new learnings (see above)
- global contribution to general knowledge

A few quotes from the weblog pages around the IU project mentionned before (Laura Shefler, Chris Ashley):

- The weblogs represent a body of work that has both academic and literary substance.
- students exercise critical thinking, take creative risks, and make sophisticated use of language and design elements
- students acquire skills that may be useful to them in both scholarly and professional contexts
- "Indisciplinary Education" making reference to Dewey's and Vygotsky's ideas difficult to integrate into a classroom setting.
- The weblogs are an undertaking in which adults and students learn together as equals, in which the process is as important as the product, and in which cognitive development results from a student-driven exchange of ideas.
- As such, it suggests possibilities for how our educational system might promote the development of rationality, as David Moshman (1999) proposes, by showing students respect and supporting their intellectual freedom.

url: **http://interactiveu.berkeley.edu:8000/CA/stories/storyReader$192**

url: **http://yinzgandantananat.editthispage.com/stories/storyReader$365**

6.2.Group work / project management

Quote from the Berkeley project:

- Examples of groups blogs are more rare but not without potential.
- The IU staff weblog is used for team communications, planning, and brief discussions, and for sharing news, ideas, links, and files.
- Regular posting of IU activity has made the team better informed about the work of other team members.
- The archiving feature provides content management, and creates a record of work over time.

Student project portals

- Weblogs can be simple, but effective project management tools
- can collect, comment and discuss resources + ideas
- can memo (useful but unknown QR method)
- discuss ideas
- share all of the above

Blogs in industry (e.g. at Macrofocus)

- Used within small dev teams, also with their clients

7. Other Challenges

(besides things discussed before)

7.1 Make them participate

also: “I built it and nobody came”, “most of the time it’s junk”, “why the f* does it work with busy professionals but not with students?”

Levels of participants:

1. Surfers: people just looking at it sometimes
2. information seekers: people seeking answers
3. participants (questions plus answers)
4. leaders (highly visible on forums and other channels)
5. moderators (keep it going)
6. technical & conceptual support (not just at start phase)

We must turn 1's into 2's then 3's => (next page)

A. Basic (contextual)

- The magic occurs when individuals come to understand the potential of technology and acquired the skills to use it.
- Technology initiatives imposed on a community by outsiders are often ineffective.
  - Devote time to identifying and then cultivating relationships with key local leaders and organizations.
- no more than one-third of the funding should go to technology itself
  - use the rest to help people and organizations understand and apply the technology.
- Building electric communities with people from a same area and who know each other and who did work together towards a shared vision before in some physical location (goal finding event) increases chances of success a lot.

B. System

- Individuals tend to participate if some sort of pay back exists and is perceived (like pair recognition).
  - E.g index contributions of people, implement ranking system where participants can judge usefulness of messages etc. Popular in informatics (e.g. site likes advogato and slashdot) or in e-commerce (e.g. Amazon).
- Simple knowledge management of participant generated knowledge show participants that their contributions are not lost.
  - It's a database that will help rise quality and attract new users.
- interface must both accommodate users with various levels of expertise and types of involvement.
  - It is not clear how to achieve portals that help beginners to become quickly active or even power-users (Carles).
- Portal should serve the needs and aspirations of all its stakeholders: visitors, regular users and active members.
  - E.g. up-to-date news-to-use from the cutting edge of a subject or topic important to the community should be provided

7.2.Knowledge management

- Message posted are a database of informal knowledge (e.g. hints of lessons learned, case stories, comments, pointers to other bodies of knowledge)
- such knowledge tends to be underused - but is needed for many just-in-time learning situations (e.g. “how to do questions”)

A few technical questions:

- what can be done by the machine? what needs humans?
- tools for finding topics / Reusable Learning Objects (RLOs)
- content structuring (for combining, linking retrieving).
  - How much do we need?
  - What helps without being bureaucratic
- how can we avoid meta data (users don’t like to make that additional effort) ?
- How easy is it to "reuse", repurpose, aggregate, etc. ? (also on other sites)
- ...

8. Portal networks (new Internet)

- News syndication (sharing of headlines)
- Some portals support an API allowing clients to into the databases)

2 kinds

- spontaneous (people spontaneously do it)
- controlled (a network is planned and negotiated)

=> How can we foster networks of portals where the right information circulates roughly to the right places ?

9. Something else ? / Resources

[This talk was really a kickoff for more things to come]

- Currently I look at portals within the following activities:
  - SEED Project (portals network for each research group, for the whole, for selected networks of teachers, for some of their classes, for all together ...)
  - RUIG Proposal (portals network for public health in the third world)
  - Staf2-x course (student-driven programming lab)
  - TECFA's home page (Pierre's suggestion, make it more dynamic)
- Pointers:

  url: **http://tecfa.unige.ch/guides/portals/pointers.html**