

TECFA Seed Catalog

Daniel Schneider
Mourad Chakroun
Pierre Dillenbourg
Catherine Frété
Fabien Girardin
Stéphane Morand
Olivier Morel

Paraskevi Synteta

<http://tecfa.unige.ch/proj/seed/catalog/>
TECFA, University of Geneva

This is an evolving document !

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Chapters:

- (see also the full table of contents below)
- “Introduction” [p. 7]
- “Conceptual and technical framework” [p. 9]
- “Catalog of scenarios (activities)” [p. 22]
- “Catalog of elementary activities” [p. 42]
- “Catalog of C3MS bricks” [p. 50]
- “Selection and installation of portalware” [p. 92]
- “The executive summary” [p. 97]

Revision 0.8 focussed on the “Catalog of C3MS bricks” [p. 50] which is now usable (although some details need polishing). We also may add software modules for another Portal, e.g. Drupal.

Revision 0.9 made changes to the “Catalog of scenarios (activities)” [p. 22] and improved somewhat all the other chapters

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1 Introduction

Purpose of this document

This document was originally designed by TECFA for the SEED project and aims at supporting teachers in classes and virtual communities to design innovative **activity-based** educational scenarios and make the most of supporting portal technology. This first version - to be enriched over time thanks to the contribution of teachers and the gain of experience - is designed as a catalog in which teachers can find both pedagogical ideas and necessary technical advice put them into practice. Thus, it aims to be a “cook book” recipes that need adaptation to particular contexts.

On the technical side, we would like to reveal the potential of C3MS lightweight tools (Community, Content and Collaboration Management Systems), and to provide a framework for teachers to appropriate this technology in order to design activity-based pedagogical scenarios, including collaborative, cooperative and collective group activities. The activities described in this document can be performed with different sets of tools and are not restricted to the C3MS lightweight tools (portal modules) described here. Teachers should feel free to associate the use of portal technology to whatever tools are convenient and familiar to them. For most activities, technology is not absolutely necessary but the most realistic way to achieve interesting pedagogical results.

We are convinced of the efficiency of socio-constructivist pedagogies and by the possibilities stemming from the use of C3MS to put them into practice more easily. Currently, constructivist scenarios are quite popular (Wilson & Lowry, 2001) but the technology available to allow their operation is still incomplete. There exists a need for tools allowing to design and support activities through which learners are led to carry out complex tasks and build their own knowledge.

Version, production tools, perspectives

You are reading a version of an evolving document. It is first feature complete version, but plan to add new enhancements. The text is written in XML with an extended version of the DITA 1.2 DTD (designed by IBM). The organization and the writing of this catalogue are thus for the authors an opportunity to explore the field of electronic management of documents. Later versions of its contents may be served from a XML database.

This first version of the catalogue provides a framework for standalone activities that can be performed and adapted to more global projects according to different themes and objectives and can be freely chosen by teachers. The goal of this document is above all to help teachers and students to feel at ease with portal technology and get to consider these systems as very useful tools for communication and group work while providing an openness to the world. In a later version, we will provide more detailed examples of scenarios made of several activities structured into global projects.

How to handle this document?

First of all, you may read through the “Introduction” [p. 7] in order to become familiar with the pedagogical and technical frameworks we are using here.

The next chapter contains a “Catalog of scenarios (activities)” [p. 22]. Each scenario (for which we also use the term “activity” is composed of a certain amount of steps that can be described in terms of generic elementary educational activities (see the “Catalog of elementary activities” [p. 42]) and which we labelled with a tag. Most of these labelled generic activities can, in their turn, be supported by C3MS bricks which are types of software modules (see the “Catalog of C3MS bricks” [p. 50].) and associated software.

Individual scenario activities can be integrated in different ways. See “Integration of scenarios and activities” [p. 20]

If you use an online version of this document, cross-references are clickable ! For the moment we recommend the PDF version, HTML and XML versions are experimental.

2 Conceptual and technical framework

This chapter gives a short introduction conceptual and technical frameworks used

2.1 The activity-based approach

What do we mean by “activity-based learning”?

“Activity-based learning” can be tied to various socio-constructivists thoughts. Our definition of socio-constructivism is quite large. First of all as an understanding of learning that stresses the importance of knowledge construction based on previous knowledge and interaction with the social environment, e.g. theories that have grown out of constructivism (Piaget) and socio-culturalism (Vygotsky). Second as a set of pedagogies that use strategies like project, problem, case-based learning and/or working within authentic contexts. We call these new pedagogies “construction-based” teaching, since both internal meaning and artefacts are to be constructed. We can also call them “activity-based”, since the teacher has to design, to facilitate and to monitor student **activities**.

Socio-constructivist pedagogies present a certain amount of differences but it is possible to isolate common denominators. Regarding the efficient use of Internet for learning Wilson (2000) distinguishes three key principles for an efficient use of the Internet for learning:

- Provide access to rich sources of information
- Promote fruitful interaction with contents
- Get learners to overcome challenges, support each others and answer to others’ inputs

Powerful learning environments that aim at the development of general problem skills, deeper conceptual understanding and more applicable knowledge include according to Merriënboer and Pass (2003) the following characteristics:

- “(1) the use of complex, realistic and challenging problems that elicit in learners active and constructive processes of knowledge and skill acquisition;
- (2) the inclusion of small group, collaborative work and ample opportunities for interaction, communication and co-operation; and
- (3) the encouragement of learners to set their own goals and provision of guidance for students in taking more responsibility for their own learning activities and processes.”

Our own common denominators are:

- A certain kind of task authenticity, including information richness
- (repeated) student productions leading to a final “product”
- exchange and discussion
- some openness regarding the solution process, e.g. the student has to do some goal setting

Socio-constructivist pedagogical strategies including project-based and collaborative learning do not guarantee automatic results. Framing and support by teachers is crucial to their success. Both learners and teachers are frequently “lost” and it therefore is important that teachers do not just propose “projects to do” and provide “help whenever needed”. In other words, effectiveness is not guaranteed by adapting vague pedagogical strategies. One way to achieve pedagogical effectiveness is to use somewhat structured scenarios where the teacher fulfills a triple role of **orchestrator** (designer), **facilitator**, and **manager** of pedagogical scenarios which we will elaborate in more detail below.

However, this catalog may also be useful to teachers who favor more instructionalist (behaviorist designs). Our concerns also can be expressed in more classical instructional design theory. Merrill's "First Principles of Instruction" identifies the following five components:

- Learning is facilitated when learners are engaged in solving real-world problems.
- Learning is facilitated when existing knowledge is activated as a foundation for new knowledge.
- Learning is facilitated when new knowledge is demonstrated to the learner.
- Learning is facilitated when new knowledge is applied by the learner.
- Learning is facilitated when new knowledge is integrated into the learner's world.

What is common between more socio-constructivist design and modern instructional theory à la Merrill and that can be found in influential readers like Reigeluth (1999) is the idea that learners have to “do” things and that “doing” must be meaningful.

The community factor

The community factor is particularly important in open and distance learning situations. As formulated by e-learning practitioner Gilroy (2001) “E-learning should be first and foremost about creating a social space that must be managed for the teaching and learning needs of the particular group of people inhabiting that space”. Going one step further, one can claim that: “In order for individuals to learn how to construct knowledge, it is necessary that the process be modeled and supported in the surrounding community. This is what occurs in a learning community” (Bielaczyc & Collins 1999: 272). While a large part of our knowledge comes indeed from formally planned learning scenarios, people learn a lot from informal exchange with fellow learners, with professors, experts, i.e. from exchange within tightly or loosely defined communities. We can define communities as networks, made up of individuals as well as public and private institutions. They share a certain amount of practices, common goals and common language. They do have a social organization including formal or informal hierarchies and some idea of “social service” (members helping each other). To support community creation we believe that learning environments should be a social “place”.

Intensive pedagogics, flow and creativity

It is very important to us that teaching generates enthusiasm, enhances concentration and favours creativity, which are very distinct but somehow interconnected phenomena. Lloyd P. Rieber (1998) convincingly argues that learning process itself - and not just the result - should be interesting, if one seeks higher motivation among learners. “Serious play” or “hard fun” are intense learning situations where learners engage large amounts of “energy” and time and that do provide equally intensive pleasure at certain moments and which have been identified as “flow” or “optimal experience” by Mihaly Csikszentmihalyi in 1990

Conditions in which flow happens are characterized in the literature by an optimized level of challenge, a feeling of control adapted to the learner, a touch of fantasy, and feedback of the system. There are multiple lessons that we could draw for the design of learning environments. An open, active and project-based learning is favorable to trigger challenge, curiosity, leave some control to the student. However, “flow” theory contains principles known from more “behaviorist” instructional designs, like optimizing the level of difficulty and providing fast and appropriate feedback or otherwise appropriate positive reinforcements. While we don’t argue, that open and active learning should be “programmed” like an e-learning environment, the teacher has to make sure that at least some tasks are very affordable and lead to quick results and more importantly that quick and informative feedback is provided by the system, co-learners or the teacher (whatever appropriate).

Creativity is a far more complex issue and its relation to flow is not obvious. “Optimal experience” has been described by gamers or programmers and enhances without doubt productivity, but does not necessarily entail creativity. Creativity arises as combination of (1) the social field, (2) the domain (symbol systems of knowledge) and (3) the individual traits. Education can act upon conditions, i.e. on educational tasks and the general learning environment like the “class spirit” with the help of specially designed technology that we will introduce below. By exposing students to open-ended, challenging, authentic and partly self-defined projects on one hand and by providing scaffolding and support on the other, the teacher does create situations where individual traits can be exposed and developed.

2.2 Project-based learning

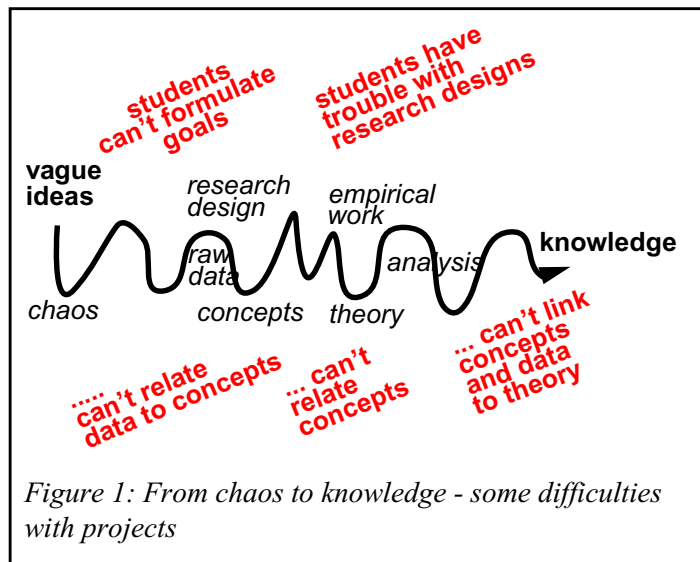
The notion of project is central to socio-constructivism. A project allows learners to identify and formulate their own problems. The goals they set as well as the unexpected discoveries they will make during their interaction with the environment serve as guides (Collins et al, 1989). It is therefore important to divide scenarios into sequences and to divide problems into sub-problems so that learners perform only one task at a time and that these tasks are flexible enough in order for learners to be able achieve them whatever their basic level.

Project-based learning is a model which distinguishes from traditional teaching since the focus is put on the learner and his project. Learners have the opportunity to work more autonomously and build their knowledge.

Synteta (2001) defines project-based learning as follows:

- Engaging learning experiences including learners in complex and concrete projects through which they can develop and apply skills and knowledge
- Leading learners to turn to various sources of information and disciplines in order to solve their problems
- Learning with identified and formulated goals but towards which challenges and the results of knowledge acquisition processes are neither predefined nor totally expectable.
- Experiences through which learners get to manage and handle resources such as time and various material

Projects are complex endeavours involving many different activities. In particular students have trouble for (a) initiating inquiry, formulate coherent research questions; (b) define a research project; (c) direct investigations; find resources, (d) manage time; keep deadlines, estimate time needed to do a task, (e) collaborate and give feedback; articulate work of others and give regular feedback, (f) follow-up the project; revise products. In addition to the difficulty of setting clear goals for various phases, students have trouble relating data, concept and theory.

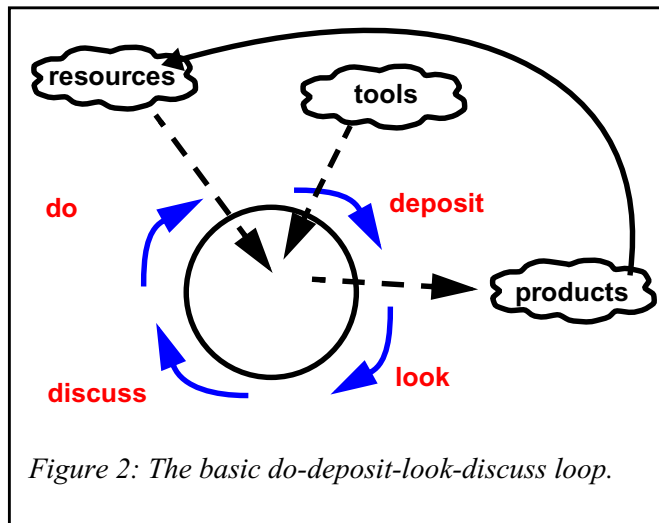


A teacher should orchestrate a project into several more or less sequential scenarios who in turn can be broken down to smaller phases. This will insure that learners will focus on smaller sub-problems, will do things in the right order (e.g define research goals in the beginning of the project and not in the middle).

2.3 Activity-based pedagogical design

Activity-based, collaborative, and construction-based pedagogies can be implemented at three levels: (1) the micro-level, i.e. smaller pedagogical scenarios or projects which can be components for larger projects, (2) long term projects, i.e. project-based classes and (3) the general study environment favoring student initiative and community building on which we will come back later. While micro activities (lasting only over a single or a few lessons) can not reach the same goals as true project-based teaching, they nicely can complement traditional instruction and are often the only realistic alternative in today's organization of the school and university system. We now will examine particular instructional design issues, first at the level of smaller scenarios and then for larger project-oriented classes.

Design of smaller scenarios



A key feature of structured socio-constructivist teaching involves sequencing scenarios and therefore breaking the “problem” into parts so that students are challenged to master as much of a task as they are ready to handle. From a more abstract perspective, scenarios evolve in cycles. Atypical teaching/learning phase has more or less the following ingredients (in whatever order):

- Do
- Deposit
- Look
- Discuss

As the figure shows, resources, tools and products play an important role. Each time a student does something, there should be a product (even as small as a little message) that is deposited somewhere and that can be looked at and discussed. Below is an alternative but very similar loop showing that there are variants of the same principle: Things are looked at, things are produced and discussion happens. It is the principle of information seeking, production and interaction that counts.

- Look (discovery)
- Discuss (interaction)
- Do (production)
- Deposit (sharing)
- Feedback (discussion of results)

The teacher’s manager role is to make sure that such loops are productive, e.g. that the students produce something, that it is task related, that they engage themselves in meta-reflection (look critically at their own work) and that they discuss and share with others. The teacher’s facilitator role is to help students with their tasks, e.g. help them to select resources and tools, explain difficult concepts and procedures, “debug” when they are stuck etc. The teacher’s orchestrator role is to implement (or most frequently also to create) the scenarios or scripts as they are also called. This means basically to define a scenario as a sequence of clearly identifiable phases in a way that learners focus on a smaller amount of tasks at the same time and that these tasks are not too difficult to be solved at some point. Let’s have a look at a simple example. Imagine that for a given purpose, students need references for a project. We can turn this into a pedagogical activity with a scenario that includes the following steps:

- The teacher introduces the theme, gives clues and asks students to consider the different aspects of the subject (Discuss).
- Students search the web with various search engines and bookmark the links they find interesting (Look, Deposit).
- Students then try to work out a certain amount of categories and sub-categories for this theme (Look, Do, Deposit).
- The results are put in common and a hierarchy is worked out (Look, Do, Discuss).
- The approved categories are entered in a common space (e.g. the classroom wall, a sheet of paper or an electronic links management system) (Deposit).

- Students classify, enter and describe their links (Do, Deposit).
- Teacher provides an evaluation (Discuss).

As this example clearly shows, most activity-based, constructive and collaborative pedagogies do not necessarily need any special tools, but work can be made more efficient (after some adaptation period) and certainly more powerful by adopting some support technology. Walls in a classroom run out of space, paper is lost and collaboration within the classroom is under heavy time constraints and “home work” lacks the sort of support that classroom activities have. Content needs to be managed, knowledge exchange must be organized, discussion tools must favor exchange of arguments, projects must run, and generated knowledge must be managed. Such scenarios are suggested in the “Catalog of scenarios (activities)” [p. 22], its constituent elementary activities in the “Catalog of elementary activities” [p. 42] and supporting technology in the “Catalog of C3MS bricks” [p. 50].

As we said before, scenarios should not be “over-scripted”, the student should in general be its own master of the tasks and tasks should have some flavor of authenticity. Along similar lines, the teacher should not directly interfere with student’s products, but only give feedback and evaluation and let the student fix things himself. Defining a scenario therefore is a workflow design problem, but with the idea that pedagogical workflows are different from the ones in industry. In industry the goal is the product, in education the goal is apprenticeship, i.e. what the student has learnt from performing a set of activities

Project-based teaching

[To DO]

2.4 Community, Collaboration and Content Management Systems (C3MS)

Simple Internet technologies (web pages, forums and e-mail) have been successful in education because they answered basic needs for information exchange, communication and collaboration needed for constructivist scenarios. In addition to being simple, yet powerful, the “standard” Internet lets the user (teachers) have control. While simple web technology does enable creative scenarios it has 4 drawbacks: (1) Maintaining static web-sites (including the student's pages) is time-consuming, (2) simple discussion systems like forums or mailing-lists do not do very good knowledge management. (3) More sophisticated scenarios (like co-authoring or work-flow) are badly supported and (4) there is no glue for putting all these together.

Community web-sites actually face quite similar problems and seem to have found at least a partial answer. Within the last two years an impressive number of what the authors coin C3MS (Community, Content and Collaboration Management Systems) have sprung into existence. Inspired by personal weblogs (also called blogs, which are increasingly popular journaling systems), slashdot-like weblog/news systems, simple content management systems and various popular groupware applications, they offer a modular

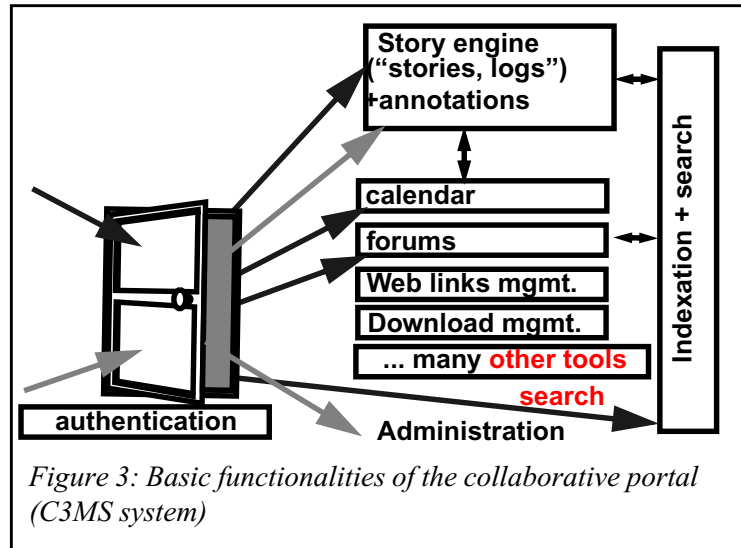


Figure 3: Basic functionalities of the collaborative portal (C3MS system)

system for configuring interactive community web-sites. In addition, most of these systems provide documented extension mechanisms allowing third party persons to contribute modules with additional functionalities. C3MS systems are a form of Web portals. A portal gathers a variety of useful information and communication resources into a single, 'one-stop' web page (Looney and Lyman, 2000). A portal therefore is a collection of objects (information bricks) and services (operation on these bricks) that can be accessed from the portal (web) page. When the user works with a specific resource, e.g. a collaborative hypertext, only a part of the interface changes. A portal therefore is a kind of "cockpit" where the central views changes, but the other instruments stay in reach.

Portals can be adapted for specific communities and sometimes users can tailor them to their needs. More sophisticated systems like PostNuke offer a good set of core portal functionalities, such as a good user administration system, a news/journal system, web links sharing, search, FAQs, Polls and more. In addition, an impressive amount of extra modules (many from autonomous developers) like collaborative hypertexts (wikis), pictures galleries, simple content management systems, event calendars, chats, project managers, file-upload, glossary management are available. Many web-applications popular in education that existed beforehand as stand-alone applications (e.g. Forums and Wikis) are adapted (or being adapted) for integration into portal systems like PostNuke. In addition, specific pedagogical applications based on the needs of teachers exist and others are being developed., e.g. by our research team.

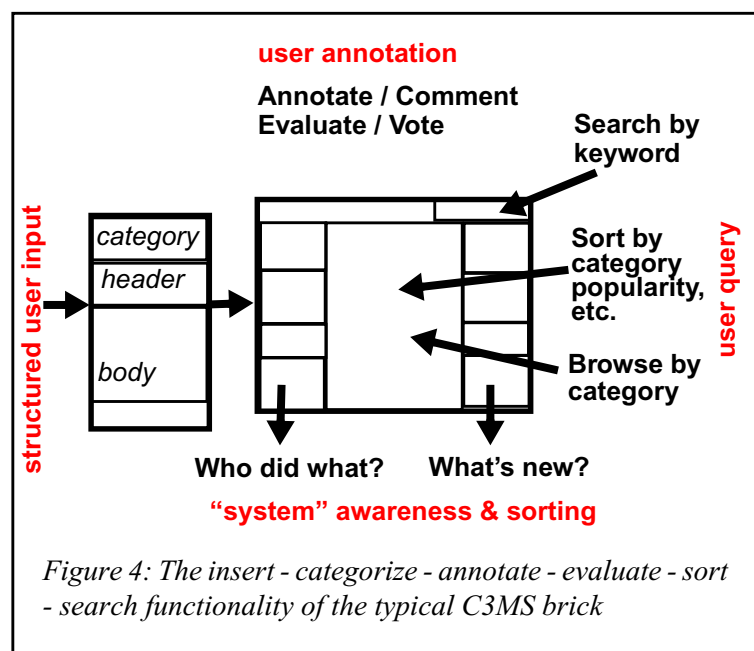
The table shows a non-exhaustive list of standard tools available in a typical portal system and how they can provide support for various functions that a pedagogical information and communication system should provide for activity-based teaching:

Function	C3MS modules (tools of the portal)
----------	------------------------------------

Content management	News engine (including a organization by topics and an annotation mechanism) Content Management Systems (CMS) Collaborative hypertexts (Wikis) Image albums (photos, drawings, etc.) Glossary tool or similar Individual weblogs (diaries)
Knowledge exchange	News syndication (headlines from other portals) File sharing (all CMS tools above)
Exchange of arguments	Forums and/or new engine Chats
Project support	Project management modules, Calendars
Knowledge management	FAQ manager Links Manager (“Yahoo-like”) Search by keywords for all contents “top 10” box, rating systems for comments “What’s new” (forum messages, downloads, etc.)
Community management	Presence, profile and identification of members Shoutbox (mini-chat integrated into the portal page) Reputation system Activity tracing for members Event calendar News engine

C3MS bricks

We use the term “C3MS brick” for a component that takes care of a specific task, can be easily separated from others, can be configured and administered, can be combined and orchestrated with others. Usually such bricks are available through the main portal environment. Thus most bricks described in the “Catalog of C3MS bricks” [p. 50] are modules that exist in standard C3MS portals or can be plugged in. Portalware like PostNuke is sometimes called a “Content Management System” (CMS) because it is a container providing many little, but powerful tools to manage



smaller bits of information and that allow the community to contribute with comments and sometimes votes. In addition, various applications provide self-ordering and awareness mechanism to the users, e.g. what is new, what is popular, etc. Therefore such portals are particularly useful to manage informally generated knowledge, e.g. the result of educational activities. Portals usually have incorporated search engines, some have functionalities for rating information, so that good information “floats” to the top. For more structured information, e.g. web links, hypertexts etc. there exist special applications that allow users to make quick updates (instead of going through the process of editing HTML files and uploading them). A simple C3MS brick usually offers **insert - categorize - annotate - evaluate - sort - search** functionality as the figure shows. Such features define the core of a “living documents” and knowledge management system and are essential to support student activities engaged in complex pedagogical scenarios.

A C3MS platform is not limited to the kind of simple tools we describe above, there are just predominant and relatively easy to develop. Other applications like complex forum systems or educational special purpose tools like computer-supported collaborative learning applications do also exist. E.g. our team developed “ArgueGraph” (Chakroun 2003), a Computer-supported collaborative learning (CSCL) discussion tool according to a model developed by Dillenbourg. The major advantage of embedding such applications into a portal is to have a central access point for scenarios and to profit from existing libraries (e.g. for user and permission management) and from all the other C3MS bricks.

2.5 Scenario implementation

Pedagogical story-boarding with a C3MS follows a simple principle. The teacher creates a pedagogical scenario (activity) by defining different phases of the work process. Each phase contains at least an elementary activity which in turn should be supported by a tool (portal brick). Larger projects can contain several smaller scenarios. The scenario building bricks, i.e. elementary activities are something like “search on the Internet”, “insert a link”, “make a comment”, “coedit a text”, “vote for something”, “enter an item to a glossary”. It is needless to say that portals can not provide all the tools than can be imagined, e.g. on-line drawing programs are hard to find. Anyhow, it should be planned that at least the products of some activity should be posted to the portal, in order to discuss, annotate and reuse them.

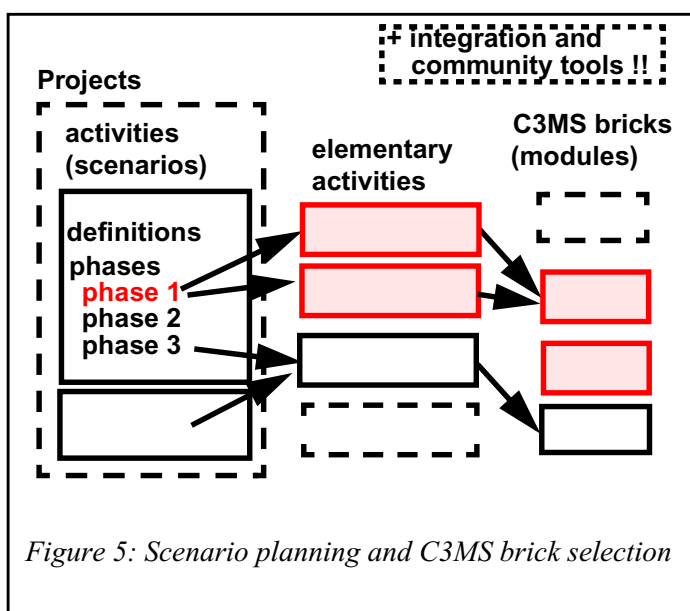


Figure 5: Scenario planning and C3MS brick selection

Each scenario described in the “Catalog of scenarios (activities)” [p. 22] is composed of a certain amount of steps that can be described in the “Catalog of elementary activities” [p. 42] in

terms of generic elementary educational activities, which we labeled with a tag. like “BrainStrom” or “SubmitComment”. Technical “C3MS bricks” described in “Catalog of C3MS bricks” [p. 50] can in their turn, support most of these labeled generic activities. A teacher can therefore plan educational scenarios with the help of a more abstract vocabulary that will help him to choose from a set of supporting technology.

A complex scenario template at high-school level

Let’s examine now a larger, but not too complex scenario template that illustrates the basic principles of scenario planning that could happen in a specialized biology class a high school level. Imagine a class where students have to study wild-life of the area. One could imagine that each student can select an animal for study (including more “exotic” genres like insects and fish) and that for each animal a certain amount of options remain open, e.g. study of habitat, behavior with humans, reproduction, etc. Each project should be defined individually, but the general approach could remain similar for all participants as expressed in the figure. There also could be a certain amount of collective activities, like the construction of a glossary that defines essential terms. If the teacher considers glossary making important for reasons like “students will better understand terms if they search and write and discuss them” or “students really should put some effort into understanding the vocabulary of a domain before they work within”, then he can look at our template and fit it to his own needs which are driven by constraints such as education level, time constraints and available technology.

PROJECT “study wild life”	
Main activities (scenarios)	
1	Learn how to use a portal
2	Make a common glossary (including links to resources)
3	Define research subjects
4	Make research plans (including research goals)
5	Field work
6

Figure 6: Scenario planning and C3MS brick selection

GLOSSARY activity (scenario)		
Phases	Generic activities	
1	participants identify interesting “words”	IntroWork, BrainStorm
2	agree on a provisional list	EditGlossary or EditPage
3	search for information and share links	SearchWeb, EditLink
4	synthesis and editing	CoEdit
5	teacher feedback	CheckWork
6	editing of final definitions	CoEdit

Generic activities	description	Available C3MS bricks
CoEdit	creation of collaborative documents	Wiki, ContentExpress GlossaryTool
BrainStorm	generate ideas	Wiki, News Engine, forums, Bulletin Boards
...

Figure 7: Glossary scenario, possible generic activities and available bricks

The template for the glossary activity (see “Collaborative glossary” [p. 28]) is just a suggestions. It is important to state again that we only provide ideas regarding the different phases and that we do not even suggest a single mapping to elementary activities nor a single mapping of elementary activities to a technical module. In other words, the teacher must be in control throughout the whole design process. Educational technologist should only offer “half-baked” solutions. Ideally, teachers have to adapt a pedagogical-technical implementation to their conceptual and technical skills and to what they have available. There is also a technical compromise to made between selecting the best tools for each task and not to overwhelm the students with too many tools to be used within a scenario. This example nicely shows some of the “open decision space” teachers may have. After examining the situation he may for instance come with the following solution (table below). As one can see, our hypothetical teacher winds up with 3 tools (Wiki, Links Manager and the News Engine):

	Phase	Tools	Instructions to students
1	participants identify interesting “words”	Wiki	After discussion in the classroom, each student has to select three terms and enter them to the wiki as homework (first come, first goes)
2	agree on a provisional list	Wiki	In the classroom, the list is discussed and cleaned up and each student will receive 3 items to work on.
3	search for information and share links	Google, Links manager	Each student has to produce 4 links (day 1) and comment 2 other links (day 2 of homework)
4	synthesis and editing	Wiki	Each students receives 2 links and has to edit them. Students are encourages to link to other items and external links.
5	teacher feedback	News engine	Teacher writes a feedback article which is also discussed in class.
6	editing of final definitions	Wiki	Students make final modification to their work and will be evaluated on this.

This example illustrates the structure of exploratory scenarios. Generally speaking, a teacher should think about the following setup which reflects the principles of pedagogical workflow introduced in “Design of smaller scenarios” [p. 13]:

- Activities should start with some sort of conditioning that will generate curiosity, interest, motivation and also show the interest of technology in our case. The initial classroom discussion and the perspective of publishing a nice glossary on the Internet should do this. In addition, entering 3 words on a Wiki is not very difficult and will make students familiar with the particularity of this tool
- Activities should give space to discovery by induction and therefore include exploration, search for information, experimentation and formalization of working hypothesis that can be confronted to the others. Activities in phase 3 partly implement this.
- Learners should be active and creative, even when they are involved in seemingly simple tasks like glossary making. They should discuss and cooperate with their pairs. Our glossary scenario has some “build-in” collaboration requirements.

- Feedback is important for each student activity. Therefore, we also suggest a formal evaluation of the final product (including a score). The teacher may also give bonus points for cooperative behavior, e.g. forum messages or helpful comments for the other's work. More details are discussed below.

2.6 Community, flow and creativity boosting with C3MS portals

While as we showed before, C3MS portal provide rich functionalities for pedagogical “story-boarding” they have been designed first of all as community portals and therefore are ideally suited to boost collective learning, creativity and optimal experience.

First, the portal should be a rich information space for “**domain support**” and it should encourage students add their own contribution. Such a space also encourages **exploration**. Typical tools are links managers, wikis, news engines and RSS feed that keep users up-to-date about articles posted to other interesting portals or individual weblogs. **Intellectual support** is provided via forums, annotations and articles. Student productions are always accessible to all (including visitors) and therefore provide for **recognition**. One could **manage** activities by using various standard tools like articles, forums and the calendar, but it may be more appropriate to use special purpose tools. In our experience, it has been shown that students are more like to contribute to an environment if they own an **identity**. In the student's partly automatically generated home page on the portal one can see their contributions, read public parts of their personal weblog and conversely each production in the portal is signed with a clickable link to the author. A successful teaching by projects pedagogy needs to provide strong **emotional support** and it is therefore important to encourage spontaneous, playful interaction and corner's for humour that will augment quality of on-line life and contribute to class spirit. Tools like the shoutbox or a little quotation box can do wonders. Lastly, but not least, a personal weblog (diary) can stimulate **meta-reflection**, in particular if the teacher requires that students write an entry after the completion of each activity

2.7 Integration of scenarios and activities

Various learner activities need to be integrated. Since C3MS currently do not provide any integrated workflow capabilities, the teacher must select one or two special tools in order to “drive” a scenario or a larger project. The easiest solution for scenario management (i.e. setting tasks, describing resources and providing feedback) is to use a “News engine” [p. 67], “Forums” [p. 63] or a “Wiki” [p. 78]. Our team developed two additional tools:

ePBL is a “Project-Based e-Learning” module and it provides the following functions: (1) Scaffold students during their projects by “forcing” them to fill in their project specification (through an XML grammar); (2) help students write their final article and (3) help teachers

monitor easily several projects in parallel and give them feedback on time. We will describe an example course using ePBL later . See “ePBL” [p. 84]

pScenario is a tool that allows teachers to define complete and rich scenarios for various pedagogical formats (face-to-face, at distance or mixed) and to associate student activities with other tools. It is up to teacher to clearly identify needed tools and to combine pScenario with other PostNuke tools (e.g. Wiki, Links Manager, News Engine or special educational tool) into a teaching portal. pScenario also could be used to administer a typical American graduate course that features readings, short exercises and a term paper. Finally, the CRAFT laboratory at EPFL developed a project management tool that allows a teacher to run larger project-based courses. See “pScenario” [p. 86]

2.8 Notes and plans for further editions

Notes

Most of these activities can be performed with and adapted to teenagers (lower and upper high school) having variable degrees of autonomy and basic knowledge. Some activities can be led a upper primary school level or at university level. The role of the teacher in helping them performing their tasks and the length of the activities will thus vary accordingly and are not precisely defined in this first version whose aim is primarily to generate ideas and provide a framework for imaginative uses of portals.

Moreover, most of the activities may be performed with different levels of technical support according to the available resources. They may also be adapted to diverse situations: interactions can take place between the individuals of an online community whose members are disseminated all over the world, between classes located in the same city, country, between the individuals of a same class, or even by isolated individuals.

Further work

For the moment, our analysis of scenarios does not go beyond labelling generic activities that form the core of the steps of each scenario. Here is a list of issues to do with C3MS brick selection and sequencing that future versions ought to address :

- Can/should we identify central core activities for a scenario?
- Should we also further formalize central acts (finer grained activities within activities) performed by certain roles? E.g. « BrainStorm » implies : students generate, teacher orchestrates and writes down, students generate again, etc.
- We also should ask ourselves wether we need to integrate more long term and more complex project-based scenarios or wether it is (at least for the moment) enough to point out that catalog entries can be combined and recombined.

3 Catalog of scenarios (activities)

Catherine Frété and Daniel Schneider

This catalog aims at supporting teachers in classes and virtual communities to design innovative learning activities and indirectly make the most of portal technology to collaborate, create and manage contents. This catalog does not aim to be complete nor do described scenarios pretend to be optimal for all situations. Their purpose to inspire teachers who at some point must “cook” their own scenarios.

“Activities” are used as synonym for “smaller and medium sized pedagogical scenarios”. Below you will find scenarios that are rather abstract, others are based on concrete examples. We plan to add more scenarios, but also will try to add more (commented examples) in further editions.

Description of the learning activities

The various learning activities are thus made of:

- Learning objectives to be adapted (in most cases) to the learning content and discipline
- A detailed description of the different steps necessary for their realization, each step being associated with one or several alternative generic activities
- These activities are, in their turn, defined more generically in the “Catalog of elementary activities” [p. 42] and linked, when possible, to the C3MS bricks to be found in the “Catalog of C3MS bricks” [p. 50]

General design principles of pedagogical scenarios

See “Activity-based pedagogical design” [p. 12]. Let’s just recall a few principles that may apply to many situations

- Most scenarios (activities) should start by a warming up in order to generate curiosity, interest, motivation and lead the student to realize the point in using technology in this context (technology not being an activity in itself).
- The activities should incorporate inductive discovery boosters: exploration, information research, experimentation, hypothesis formulation.
- The learners should be active and creative and be led to discuss and cooperate with peers, interact and share their knowledge.
- The different steps in the learning process are thus globally: discovery, interaction, production, feed back, end-product...

Classification of the learning activities

The activities will be classified according to the following categories :

Gathering and distribution of information

Teachers and learners share resources and the activities are designed to help them gather information and make it available to all. See “Gathering and distribution of information” [p. 23]

Creation of collaborative documents

Here the students can write definitions, analyze cases, solve problems, write documents and create illustrated documents together around specific themes. See “Creation of collaborative documents” [p. 26]

Discussion and commentaries around productions

Learners identify together facts, principles and concepts and clarify complex ideas. They formulate hypothesis and plan solutions, make links between ideas, compare different points of view, argue, evaluate, etc. See “Discussions and commentaries around productions” [p. 30]

Project management

Teachers can orchestrate scenarios, manage and facilitate student activities. Learners can decide work plans, share tasks and form groups, decide a schedule, etc. See “Project management” [p. 40]

3.1 Gathering and distribution of information

[Introduction: ToDo]

Scenario activity-1 References list

Goal:

Web search, classifying, conceptualization, synthesis...

Target audience:

11 years old and more

Description:

The students have to work on a theme they don't master for a project. They have to create together a list of web sites that will help them work in a later phase. These sites will have to be described and classified

Duration:

From several days to several weeks

Notes:

According to the level of students, the teacher can choose to identify the categories with them before they start searching the web.

Steps:

- 1 The teacher introduces the theme, gives clues and asks students to consider the different aspects of the subject.
“IntroWork” [p. 46]“BrainStorm” [p. 42]
- 2 Students search the web with various search engines and bookmark the links they find interesting.
“SearchWeb” [p. 47]“KeepReference” [p. 46]

- 3 Students then try to work out a certain amount of categories and sub-categories for this theme.
“CreateCategories” [p. 43]
- 4 The results are put in common and a hierarchy is worked out
“CoEdit” [p. 43]
- 5 The approved categories are entered in the portal
“CreateLinkSpace” [p. 44]
- 6 Students classify, enter and describe their links
“SubmitLinks” [p. 48]“CommentLinks” [p. 43]

Scenario activity-2 Creation of a help system to master a portal

Goal:

Analysis, discovery, synthesis, technical skills...

Target audience:

13 years old students and more

Description:

Can be considered as a meta reflection on the use of a portal. Students have to use the portal for a project. Their task is thus to learn how to use the different functions they will need for the different activities and to create help pages to explain.

Duration:

From several days to several weeks

Notes:

For this activity, students must be administrators and already have some knowledge of the functioning of the portal. The FAQ module of the portal can be used for this activity, which suppresses web page and links creation.

Steps:

- 1 The teacher and the students determine what functionalities in the portal they will need to carry out their project.
“BrainStorm” [p. 42]“Interact” [p. 46]
- 2 Each group of students is given a functionality to understand and explain.
“DistributeTasks” [p. 44]“PlanProject” [p. 47]
- 3 Hands-on : students try to understand how to do
“HandsOn” [p. 46]
- 4 A « Help » link is created un a box or a new links category is set in the weblinks space of the portal
“EditMenu” [p. 45]“CreateLinkSpace” [p. 44]
- 5 Students take notes, write a “recipe” and decide how to classify the different functions in the help system
“CoEdit” [p. 43]
- 6 They can then enter links to the help pages they have created
“SubmitLinks” [p. 48]

Scenario activity-3 Creation of a collaborative FAQ (frequently asked questions)

Goal:

Analysis, discovery, synthesis...

Target audience:

12 years old and more

Description:

Goal : to keep track of the already asked questions and their answers. Questions can be about technical problems or linked to a particular theme.

Duration:

Unlimited, it depends (The FAQ can be linked to a specific time-limited project or about more general problems)

Steps:

- 1 Students and the teacher discuss about questions that may arise
“IntroWork” [p. 46]“BrainStorm” [p. 42]“Interact” [p. 46]
- 2 Questions are entered in the portal FAQ space as soon as they arise
“SubmitQuestion” [p. 49]
- 3 When someone finds the solution, he can write it and post it
“SubmitAnswer” [p. 48]
- 4 The teacher checks if there are no mistakes and modifies the productions if necessary
“CheckWork” [p. 43]“Moderate” [p. 47]

Scenario activity-4 Professional orientation

Goal:

Knowledge of the different types of professions in the workplace, insertion in professional life, defining one’s objectives...

Target audience:

From 14 years old

Description:

Students have to search for the characteristics of different professions and have then to make a synthesis and introduce them briefly.

Duration:

About three sessions

Steps:

- 1 The teachers and students determine the main professional fields (according to their own initial choices or not)
“BrainStorm” [p. 42]“IntroWork” [p. 46]
- 2 Students choose the field that most attracts them and try to work out a certain amount of specific jobs related to it.
“DistributeTasks” [p. 44]“CreateCategories” [p. 43]
- 3 Categories and sub-categories are created for each domain and each student chooses a different job to investigate.
“CreateLinkSpace” [p. 44]
- 4 Students search for information on the Internet about the different jobs. They enter and comment their links in the portal

“SearchWeb” [p. 47]“KeepReference” [p. 46]“SubmitLinks” [p. 48]“CommentLinks” [p. 43]

- 5 Students can then make a brief synthesis of the different jobs, which they enter in the portal on a specific space
 “CoEdit” [p. 43]“CreatePage” [p. 44]

Example-1 WKTO Collaborative learning

<http://www.ac-grenoble.fr/wkto/>

3.2 Creation of collaborative documents

[needs to be revised]

Scenario activity-5 Review of the press

Goal:

Analysis, discovery, synthesis, curiosity, critical mind...

Target audience:

13-14 years-old and more

Description:

Creation of a review of the press on a subject that matches both actuality and their interests. Students search the web to find out what has been said on the subject and classify their results according to sources and themes. The results are then rearranged for an illustrated presentation page.

Duration:

Two to three sessions

Notes:

The students can work alone or in groups of two or three

Steps:

- 1 The teacher introduces the subject and launches a discussion. (The teacher explains to students that everything that is written on the web is not necessarily reliable. He gives the name of some “official” papers)
 “IntroWork” [p. 46]“BrainStorm” [p. 42]
- 2 Students search the web for articles on the subject -whatever sources- and bookmark the links to the most interesting pages
 “SearchWeb” [p. 47]“KeepReference” [p. 46]
- 3 Students try to work out a certain amount of categories: sources, trends, bias...
 “CreateCategories” [p. 43]
- 4 The results are merged and classified
 “CoEdit” [p. 43]
- 5 A space is created to enter these categories
 “CreateLinkSpace” [p. 44]
- 6 Students classify, enter and describe their links
 “SubmitLinks” [p. 48]“CommentLinks” [p. 43]

- 7 They can then use these resources to create illustrated synthesis pages
“CreatePage” [p. 44]
- 8 Links to these pages are inserted in the portal
“EditMenu” [p. 45]
- 9 A vote is organized to select the best productions
“EditVote” [p. 46]“VoteFor” [p. 49]
- 10 Links to the three best pages (best of) are kept on the portal
“ShowBest” [p. 48]

Scenario activity-6 Collaborative story

Goal:

Written expression creativity, imagination...

Target audience:

11 years old and more

Description:

The students write a story together. At each step, a vote is organized to select the best production

Duration:

About 5 to 6 sessions

Notes:

The “illustrated page” step is facultative but might be a way to motivate students poor at writing and good at creating visual documents

Steps:

- 1 The teacher posts a text to be commented
“SubmitStory” [p. 49]
- 2 Students write a following (alone or in pairs)
“CoEdit” [p. 43]
- 3 Students post their production
“SubmitComment” [p. 48]
- 4 Students read what others have written
- 5 A poll is created with the identifier of each production
“EditVote” [p. 46]
- 6 A vote is organized to select the best production
“VoteFor” [p. 49]
- 7 The selected production is inserted after the introduction
“EditStory” [p. 45]
- 8 And so on until the end of the story...
- 9 Students create an illustrated page to display the story (groups of three)
“CreatePage” [p. 44]
- 10 Links are created to each groups’ production
“CreateLinkSpace” [p. 44]
- 11 A vote is organized to select the best productions
“EditVote” [p. 46]“VoteFor” [p. 49]
- 12 Links to the three best productions are inserted in the portal
“EditSummary” [p. 46]

Scenario activity-7 Collaborative glossary

Goal:

Written expression, vocabulary, semantics...

Target audience:

10 years old and more

Description:

The students write a collaborative glossary to give the definition of terms related to a specific project

Duration:

About 5 to 6 sessions

Steps:

- 1 The teacher and students identify and determine the terms to be defined related to a theme they don't master
"IntroWork" [p. 46]"BrainStorm" [p. 42]"Interact" [p. 46]
- 2 The alphabetical list of terms to be defined is entered in the interactive space chosen
"EditGlossary" [p. 45]"CreateLinkSpace" [p. 44]
- 3 Students search the web or in dictionaries resources on the theme
"SearchWeb" [p. 47]
- 4 Students synthesize their results to create short definitions
"CoEdit" [p. 43]
- 5 The teacher checks if the definitions are right
"CheckWork" [p. 43]
- 6 Students enter their definitions
"SubmitAnswer" [p. 48]

Scenario activity-8 Commentary on a text

Goal:

Written expression, analysis, synthesis, vocabulary, semantics...

Target audience:

14-15 years old and more

Description:

Students have to comment upon a text by annotating it or adding links to commentary pages

Duration:

2 to 3 sessions

Steps:

- 1 The teacher posts a text (the text should bear multiple investigation tracks: society problem, current issues, etc.)
"SubmitStory" [p. 49]
- 2 Students read the text and select two issues trying to find out a good problematic for each
"BrainStorm" [p. 42]
- 3 They post their results (commentaries)
"SubmitComment" [p. 48]
- 4 The teacher determines who does what according to students' wishes
"DistributeTasks" [p. 44]
- 5 Students search the web (or in libraries) resources on their respective theme

- “SearchWeb” [p. 47]
- 6 Students write their commentary
- 7 They can then post their production “SubmitComment” [p. 48], or use the WIKI to insert commentaries directly in the text
- “CoEdit” [p. 43]
- 8 The teacher can then read what has been written
- “CheckWork” [p. 43]
- 9 The teacher sends a general or particular feed back to the students according to the chosen commenting mode
- “SubmitAnswer” [p. 48]“SendFeedBack” [p. 47]

Scenario activity-9 Illustrated album on a theme

Goal:

Depends on the subject...search skills, image processing, technical skills

Target audience:

12 years old and more

Description:

The students have to work together to create a commented album of illustrations on a particular subject (biology, history, art...)

Duration:

2 to 3 sessions

Steps:

- 1 Students, with the teacher’s assistance, try to determine important aspects of an unknown theme
“IntroWork” [p. 46]“BrainStorm” [p. 42]“Interact” [p. 46]
- 2 Students work in groups (3 to reduce the amount of albums produced) and choose a particular aspect of the subject with the agreement of the teacher
“DistributeTasks” [p. 44]
- 3 Students search the web to find resources and illustrations allowing to explain things with integrated visual elements
“SearchWeb” [p. 47]
- 4 Students process images to make them fit the targeted result
“CreateImage” [p. 44]
- 5 They then organize the displaying of their images and commentaries either on a web page or using the portal « gallery » module
“CreatePage” [p. 44]“EditGallery” [p. 45]

Scenario activity-10 Geographic location

Goal:

Geographical and archaeological knowledge,.image processing, synthesis, creativity...

Target audience:

12 years old and more

Description:

The students have to build together a world map on a particular theme and locate some places like, for instance, monuments, archaeological sites...

Duration:

2 to 5 sessions

Notes:

For this activity to be really rich, students must be provided with a world map they can modify to place their discoveries

Steps:

- 1 The teacher introduces the theme and asks students what they already know on the subject. Keywords necessary for further research are then worked out
“IntroWork” [p. 46]“BrainStorm” [p. 42]
- 2 According to the chosen theme, groups of two or three students are made, each having to explore a part of the world
“DistributeTasks” [p. 44]
- 3 Students search the web and in encyclopaedias the resources necessary for the location of the places where are the elements to be identified
“SearchWeb” [p. 47]
- 4 Students then create a list with connections between sites and elements and with links to resources and references
“CoEdit” [p. 43]
- 5 The teacher checks if there are no mistakes and gives a feed back
“CheckWork” [p. 43]“SendFeedBack” [p. 47]
- 6 Each group of students use these resources to create an illustrated and annotated world map
“CoEdit” [p. 43]“CreateImage” [p. 44]
- 7 The teacher creates a poll to determine the best production
“EditVote” [p. 46]
- 8 Student vote for the best production
“VoteFor” [p. 49]
- 9 The most successful maps are displayed in the portal
“EditSummary” [p. 46]“ShowBest” [p. 48]

3.3 Discussions and commentaries around productions

Introduction: To do !

Scenario activity-11 Argumentation Graph

Goal:

Concept building

Target audience:

Upper secondary and higher education

Description:

Students are engaged in pseudo-activities that will trigger discussion and meta-reflexion before they have to write a paper on some conceptual issue. This scenario is directly implement as C3MS brick, see “PN ArgueGraph” [p. 81] in the “Argumentation Tools” [p. 81]

Duration:

One longer session + homework, or several smaller sessions

Steps:

- 1 Students fill in a questionnaire on a certain topic. Each question is formulated as MCQ, but students also have to fill in a free text form and motivate their choice
- 2 The module produces a summary of replies, including a graphic map that reveals conceptual differences among students.
- 3 The teacher forms pairs with contrasted opinions (see step 2) and asks students to fill in the questionnaire again. They have to debate and agree on a compromise.
- 4 The module shows again obtained results. The teacher can now engage the class in some discussion (either in the classroom or via forums). He can go through each question, look at means from both rounds of the survey. (Each question can be documented with the theory that is also available now)
- 5 Students have to write a short paper as homework and the result is published on the Web.

Scenario activity-12 Information race

Goal:

Information search, synthesis, quick-mindedness...

Target audience:

From 9-10 years-old

Description:

The goal of this racing game is to search for precise information on a theme on given web pages. Students have to find the information and answer questions related to it as quickly as possible

Duration:

One session

Notes:

According to the level of students, it is possible either to only make them search for sporadic information on motivating topics or to organize the research around curricular issues

Steps:

- 1 The teacher gives students a “mission” sheet on which are written the links to the websites on which are to be found answers to each questions (this could be done directly on the portal)
“IntroWork” [p. 46]“SubmitStory” [p. 49]
- 2 Students, alone or in pairs, race through the web to find the answers
“SearchWeb” [p. 47]
- 3 Once all the information is gathered and all the questions answered, they post their results
“SubmitAnswer” [p. 48]“SubmitComment” [p. 48]
- 4 The teacher checks if the productions are right
“CheckWork” [p. 43]
- 5 The exact moments at which the answers were posted appear on the portal, which allows to determine the winners
“SendFeedBack” [p. 47]

Example-2 Our Lady of Peace School Web Hunt

<http://www.qesn.meq.gouv.qc.ca/schools/olp/internet/webhunt.htm>

Scenario activity-13 Debate**Goal:**

Argumentation, hypothesis formulation, conceptualization, comparison, critic, evaluation, curiosity, synthesis, language...

Target audience:

12-13 years old students and more

Description:

The students have to analyze a society problem and work out key issues

Duration:

1 to 2 sessions

Steps:

- 1 The teacher initiates the debate giving some clues
“IntroWork” [p. 46]“BrainStorm” [p. 42]
- 2 He posts the question like in a forum“SubmitStory” [p. 49]or he can even create a special forum for the occasion“CreateForum” [p. 44]
- 3 The students think about the different issues and give a first advice in the shape of a commentary“SubmitComment” [p. 48]or interact directly in the forum
“Interact” [p. 46]
- 4 Each student reads what all the others have said and builds a short list synthesizing the different points of view.
- 5 They post their production
“SubmitComment” [p. 48]“SubmitAnswer” [p. 48]
- 6 The teacher enters the name of the participants in the « polls » section“EditVote” [p. 46]and the students vote for the best list
“VoteFor” [p. 49]
- 7 The most successful list is then displayed in the polls section so as to organize a larger scale poll
“EditVote” [p. 46]

Scenario activity-14 Proverb elucidation**Goal:**

Semantics...

Target audience:

11 years old students and more

Description:

The students must try to understand the sense of proverbs or sayings

Duration:

One session

Steps:

- 1 The teacher posts a proverb like « There are plenty of fish in the sea » (The proverbs must be sibylline enough for the students to doubt and wonder a lot)
“SubmitStory” [p. 49]

- 2 The students try to understand the sense of the proverb and communicate by sending comments
“SubmitComment” [p. 48]
- 3 After a certain amount of interactions, each student sends an answer
“SubmitComment” [p. 48]
- 4 They check if an agreement has been worked out
“CheckWork” [p. 43]
- 5 The teacher sends a feed back to give details
“SendFeedBack” [p. 47]

Scenario activity-15 Crime in Northern Ireland

Goal:

Argumentation, conceptualization, history, information research, organization and structuring of information, group work...

Target audience:

15 years-old and more

Description:

A crime was committed in Northern Ireland. The students in the class have to prepare a trial. The class is divided into groups : the protestant team, the catholic team, the journalists. Each group will be given a role to play as well as each individual in the group

Duration:

Three sessions

Steps:

- 1 The teacher and students say what they already know about this conflict
“BrainStorm” [p. 42]
- 2 What is at stake for each community in the situation is determined and the teacher distributes the roles according to the students’ wishes
“DistributeTasks” [p. 44]
- 3 A set of links categories is created in the portal for the students to organize information
“CreateLinkSpace” [p. 44]“CreateCategories” [p. 43]
- 4 According to the team to which they belong, students search the web for information on which to build their argumentation and then enter and comment their links
“SearchWeb” [p. 47]“CommentLinks” [p. 43]
- 5 Students work together to prepare a talk and the staging of the trial
“CoEdit” [p. 43]“Interact” [p. 46]
- 6 They can then either play the trial or create a sort of comic which will be displayed on the portal
“SubmitLinks” [p. 48]“CoEdit” [p. 43]

Example-3 Le cas de la Norvège. Etude comparative

by Eric Bruillard (ToDo: find URL again)

Scenario activity-16 Ethical questions

Goal:

Argumentation, understanding of systems

Target audience:

From 16 years old (particularly suited to marketing and commerce students)

Description:

The students must investigate ethical questions on a particular case related to a precise topic they study in class

Duration:

One session

Steps:

- 1 The teacher introduces a case to the students
“IntroWork” [p. 46]“SubmitStory” [p. 49]
- 2 Students discuss and work out the different aspects of the topic
“BrainStorm” [p. 42]“Interact” [p. 46]
- 3 Two opposing teams are created (by chance or according to their wishes)
“DistributeTasks” [p. 44]
- 4 Students react, interact and produce a text: one team must adopt an ethical behavior, the other a counter-ethical one
“CoEdit” [p. 43]“SubmitStory” [p. 49]
- 5 Each team reads and comments what the others have produced
“SubmitComment” [p. 48]
- 6 The teacher gives a feed back to both teams
“CheckWork” [p. 43]“SendFeedBack” [p. 47]

Example-4 Le cas de la Norvège. Etude comparative

by Eric Bruillard (ToDo: find URL again)

Scenario activity-17 Quiz creation

Goal:

Peer tutoring, meta cognition, synthesis

Target audience:

From 14-15 years old

Description:

Students must create a multiple choice questions quiz based on some material studied in class. They must also write the precise explanations to each question .

Duration:

Three sessions

Steps:

- 1 The teacher gives to pairs of students special aspects of a topic to be seriously investigated
“DistributeTasks” [p. 44]
- 2 Students study the documents and take notes so that they can produce appropriate questions for a quiz
- 3 Each pair select about ten questions to be formulated briefly and precisely. They also prepare a set of short answers for each
- 4 They then write the explanations (feed back)
- 5 They can then edit their quiz, a short feed back for each question and can even give links to more detailed explanations
“CreateQuizz” [p. 44]

Example-5 Reciprocal peer tutoring - RPT

<http://www.users.mucho.edu/shermalw/aera91AA.html>

Scenario activity-18 The right definition

<http://www.thiagi.com/game-glossary.html>

Goal:

Semantics. Understanding of the different levels of language, intuitive discovery of meanings.

Target audience:

From 13-14 years old

Description:

Students must find a correct definition for an abstract term whose meaning they don't know and then find the correct definition inside a list of incorrect definitions in which it will have been inserted

Duration:

One session

Steps:

- 1 The teacher proposes a term to students, making sure they don't know its meaning
"IntroWork" [p. 46]"BrainStorm" [p. 42]
- 2 Students try to write a definition in "dictionary" style (they can work alone or by groups of two or three)
"CoEdit" [p. 43]
- 3 Each student or group posts a definition
"SubmitComment" [p. 48]
- 4 The teacher corrects mistakes if necessary and create a list with all the definitions produced in which he inserts the right one
"CheckWork" [p. 43]"SubmitStory" [p. 49]
- 5 The students have to find the right definition and post their answer
"SubmitAnswer" [p. 48]
- 6 The teacher gives the correct answer and explains
"SendFeedBack" [p. 47]

Scenario activity-19 Training for an examination**Goal:**

Depends on the subject

Target audience:

Classes with an end year examination

Description:

The students have a case to study, a problem to solve which is of the same type as what they will be given for their examination. The problem will have to be difficult and require method and problem solving skills

Duration:

1 or 2 sessions

Steps:

- 1 The teacher posts a case
"SubmitStory" [p. 49]

- 2 The students ask questions and interact until they feel ready to solve the problem
“SubmitComment” [p. 48]“Interact” [p. 46]
- 3 Students work alone or in pairs and post a solution
“SubmitComment” [p. 48]“CoEdit” [p. 43]
- 4 The teacher checks the answers
“CheckWork” [p. 43]
- 5 He sends a feed back to each
“SendFeedBack” [p. 47]
- 6 Students readjust their productions and post a last version of their work
“SubmitAnswer” [p. 48]
- 7 Once checked by the teacher, the solution is displayed in a special block in the portal dedicated to solved problems
“SendFeedBack” [p. 47]“EditMenu” [p. 45]

Scenario activity-20 Expert advice

Note: The steps need to be revised, this is too close to some example

Goal:

Link to the workplace

Target audience:

technical classes

Description:

The students submit a project (architecture, something specialized and « professional »). Experts are asked to give a piece of advice and comment upon the different productions. Experts and students can communicate

Duration:

Depends on the time experts can dedicate to the task...

Steps:

- 1 The students have realized a project (architecture, circuits...)
“CoEdit” [p. 43]
- 2 A space is created in the portal with links to each referenced project
“EditSummary” [p. 46]
- 3 In a forum, the teacher posts an introduction and explanations for the experts to navigate and interact easily in the portal
“CreateForum” [p. 44]“SubmitStory” [p. 49]
- 4 The teacher will have found experts, who examine the projects and send comments by quoting references
“CheckWork” [p. 43]“SubmitComment” [p. 48]
- 5 Experts comment the projects using references in the forum
“SubmitComment” [p. 48]
- 6 Students can react, ask questions, ask precision...
“SubmitComment” [p. 48]

Scenario activity-21 Photo gallery

Goal:

Information organization, analysis, synthesis...

Target audience:

11 years old students and more

Description:

The students go for a day out on a given theme (biology, ecology...). They have to produce an illustrated account of their experiment and discoveries. Instead of making photos, it also works with drawings.

Duration:

3 to 4 sessions

Notes:

A numeric camera is necessary

Steps:

- 1 The students go for a day out, each having a particular goal in relation to the theme, which will have been discussed before. They can work in groups
“IntroWork” [p. 46]“BrainStorm” [p. 42]“DistributeTasks” [p. 44]
- 2 They take photos while keeping their goal in mind
- 3 They may search for resources on the web
“SearchWeb” [p. 47]
- 4 They create an illustrated and commented album of their discoveries
“EditGallery” [p. 45]“CoEdit” [p. 43]“CreateLinkSpace” [p. 44]“SubmitLinks” [p. 48]
- 5 A poll is created with the name of each project
“EditVote” [p. 46]
- 6 They vote for the best productions
“VoteFor” [p. 49]
- 7 It is then possible either to enter links to the best productions “EditSummary” [p. 46] or “CreateLinkSpace” [p. 44]“SubmitLinks” [p. 48]“CommentLinks” [p. 43]or classify the galleries according to their success
“ShowBest” [p. 48]

Scenario activity-22 Design of an online educational contents

Goal:

Analysis, synthesis, data management

Target audience:

From 16 years old

Description:

Students have to collaborate to create contents for a lesson or a larger teaching unit. This lesson will be available online

Duration:

4 to 6 sessions

Notes:

It could be interesting, for this activity, to use a numeric camera

Steps:

- 1 The teacher introduces the topic to be investigated and students discuss to determine the different research questions
“IntroWork” [p. 46]“BrainStorm” [p. 42]“Interact” [p. 46]
- 2 The different questions are entered in a wiki type space, allowing to edit pages together
“CoEdit” [p. 43]
- 3 The teacher gives everyone a special mission according to their wishes

- “DistributeTasks” [p. 44]
- 4 Depending on the chosen topic, students can go for a day out (See activity “Photo gallery” [p. 36]), and search the web and in encyclopaedias to find out illustrations and information they will use to design their lesson
“SearchWeb” [p. 47]
 - 5 All these resources are inserted on the wiki in a somewhat disorganized way
“CoEdit” [p. 43]
 - 6 The teacher checks the authenticity of the information gathered on the wiki and inserts comments
“CheckWork” [p. 43]
 - 7 Students can then make a synthesis of their discoveries and organize all the data
“CoEdit” [p. 43]
 - 8 Students interact to progressively work out their production and agree on the structure of the document
“CoEdit” [p. 43]“Interact” [p. 46]
 - 9 The teacher helps but tries not to be too intrusive
“SendFeedBack” [p. 47]
 - 10 The end product is then ready to be printed and is displayed in the portal

Example-6 Biology teaching in higher education

<http://tecfa.unige.ch/~lombardf/cyber-2os/>

<http://idefix.gymliestal.ch:8888/>

Scenario activity-23 Web sites record

Goal:

Analysis, synthesis, critical mind, web research...

Target audience:

12 years old students and more

Description:

The students have a particular subject to investigate and search the web for resources

Duration:

Two sessions

Steps:

- 1 The teacher introduces the subject, gives clues and ask the students to choose a particular aspect
“IntroWork” [p. 46]“BrainStorm” [p. 42]“DistributeTasks” [p. 44]
- 2 A space with categories and sub-categories is created to enter the links
“CreateLinkSpace” [p. 44]“CreateCategories” [p. 43]
- 3 The students (in groups) search the web for sites well exposing the subject and book-mark them
“SearchWeb” [p. 47]“KeepReference” [p. 46]
- 4 The students select about ten sites they find most interesting and insert them in the categories with comments
“SubmitLinks” [p. 48]“CommentLinks” [p. 43]
- 5 The teacher checks the quality of the selected sites
“CheckWork” [p. 43]“Moderate” [p. 47]

- 6 The students can then visit the others' sites "CheckWork" [p. 43] and rate them "RateLinks" [p. 47]

Scenario activity-24 Problem solving

Goal:

Depends on the subject

Target audience:

3-14 years old students and more

Description:

The students have a problem to solve and interact to find a solution

Duration:

Two sessions

Steps:

- 1 The teacher submits a problem to students
"SubmitStory" [p. 49]
- 2 The students discuss to define the learning goals and what they have to learn to solve the problem
"BrainStorm" [p. 42]"SubmitComment" [p. 48]
- 3 The students produce a synthesis of what has been said (in groups of 3)
"CoEdit" [p. 43]
- 4 They post their production
"SubmitComment" [p. 48]
- 5 The teacher comments upon each group's results
"SubmitComment" [p. 48]"SendFeedBack" [p. 47]
- 6 The students can then solve the problem

Scenario activity-25 Getting ready for an essay

Goal:

Analysis, synthesis, critical mind, argumentation, hypothesis formulation

Target audience:

14-15 years old students and more

Description:

The students interact on the portal to define a problematic and build a plan for an essay

Duration:

One or two session

Steps:

- 1 The teacher posts the subject for the essay. According to the level of students, he can give clues
"IntroWork" [p. 46]"SubmitStory" [p. 49]
- 2 The students ask questions and discuss in the forum "CreateForum" [p. 44]. They can also search the web for resources
"BrainStorm" [p. 42]"Interact" [p. 46]"SearchWeb" [p. 47]
- 3 The students make a synthesis of what the others have written to define a problematic by analyzing the different ideas and points of view
- 4 The students make a plan, alone or in pairs
"CoEdit" [p. 43]

- 5 They post their plans and the teacher can comment upon what everyone has produced
“SubmitComment” [p. 48]“SendFeedBack” [p. 47]
- 6 The students can then write their essay

Scenario activity-26 Intercultural exchanges

Goal:

Foreign languages learning, communication

Target audience:

13-14 years old and more

Description:

The goal is to make students from different cultural backgrounds interact

Duration:

About four sessions. The exchanges should take place at least twice in both direction

Steps:

- 1 Foreign language teachers agree to collaborate, for instance english and swiss teachers teaching classes of the same levels
“PlanProject” [p. 47]
- 2 Students produce a text on a given topic (in pairs)
“CoEdit” [p. 43]“CreatePage” [p. 44]
- 3 The french speaking students insert their work on the portal
“SubmitStory” [p. 49]
- 4 The english speaking students read these productions and add comments (in english) to help their peers understand their mistakes
“SubmitComment” [p. 48]“SendFeedBack” [p. 47]“CheckWork” [p. 43]
- 5 The english speaking students enter their own productions in the portal and the process goes the same
- 6 Students in both countries can then produce a better text and submit it again for comments

Example-7 WKTO Collaborative learning

<http://www.ac-grenoble.fr/wkto/>

3.4 Project management

For the moment we describe here rather smaller activities where learners can determine work plans, share tasks and form work groups, decide of a schedule, a program, etc. Project-based teaching scenarios will be developed in a further edition.

Scenario activity-27 Shared calendar

Goal:

Organization, project management, sense of collaboration

Target audience:

14-15 years old students and more

Description:

The students interact in the portal to establish a common work plan

Duration:

Depends on the project

Steps:

- 1 The teacher introduces the subject to students and discuss with them explaining what will have globally to be done
“IntroWork” [p. 46]“BrainStorm” [p. 42]“SubmitStory” [p. 49]
- 2 The students think together (groups of 3 or 4) about the different steps, goals and sub-goals
“BrainStorm” [p. 42]“PlanProject” [p. 47]
- 3 The groups post their results
“SubmitComment” [p. 48]
- 4 They can then comment upon what the others have produced and find the best solution together
“SubmitComment” [p. 48]“CoEdit” [p. 43]
- 5 The students enter their results in the calendar
“EditCalendar” [p. 45]
- 6 They can then work on the plan in detail and continue until they are happy with the result

Scenario activity-28 Election of a person in charge

Goal:

Organization, project management, sense of community, creativity

Target audience:

14-15 years old students and more

Description:

Several classes participate to a project and interlocutor-spokesman must be chosen for each class. The students interact on the portal to elect the best

Duration:

1 to 2 sessions

Steps:

- 1 The students discuss to work out what this role consists in
“BrainStorm” [p. 42]
- 2 Each student produces a « programme » to define his role and explains his motivation. Each program is posted and referenced to remain anonymous
“SubmitStory” [p. 49]
- 3 A poll is created with the references
“EditVote” [p. 46]
- 4 A vote is organized to choose the best“VoteFor” [p. 49] : The elected candidate will be the most motivated and convincing one and not necessarily the most popular

4 Catalog of elementary activities

What we mean by “elementary activities” or “simple acts” is to be related to the action and interaction units identified in the different steps of the scenarios and activities described in this catalog, see the “Catalog of scenarios (activities)” [p. 22]. We wish to make things easier for teachers willing to put these scenario into practice or to design their own. It is important that they can quickly know “how to do what” with a complex portal as a tool. These units of elementary pedagogical acts are not to be systematically associated to technological support. Though we linked them, whenever possible, to the corresponding C3MS bricks. Several bricks can be related to each simple act and teachers will thus have the possibility to choose according to the context in which he will have to operate. The aim is therefore here to find the best means to manage contents, sustain workflow and foster a rich and constructive interaction both between learners and between teachers and learners according to the types of situations in which activities will take place.

In order to allow teachers to freely use this catalog and foster a more creative approach of portal technology for teaching, we also identified, for most of these simple acts, differences in contexts leading to turn to different C3MS bricks. Finally, experienced teacher may directly design their own scenarios and then directly jump to C3MS bricks without doing any deeper analysis of elementary activities.

It is possible to identify the following collaboration and teaching situations:

1. Interactions between individuals in the same class

The pooling of resources which will be made available to all at anytime, create together, annotate, discuss, re-use and recycle what will have been produced, store productions that can be retrieved in the portal

2. Interactions between classes in the same city, the same country

Creation of communities (inter-classes projects), sense of collectivity, communication between teachers, learners, discovery, thematic portals for a specific course.

3. Interactions between classes located all around the world

Discovery of other cultures, openness to the world, communication and mutual enrichment, collaboration between teachers to boost communication between learners (for instance, language teachers)

4. Interactions between members of a community (parents, persons interested by a specific topic)

Collaboration between teachers, parents, specialists , creation and development of communities having the same interests.

This catalog is mostly concerned by activities that concern a single class, but also (2) and (3) to a lesser degree. Categories used are still quite provisional. They have been created sometimes at the beginning of the project and need an update at some point.

Act-1 BrainStorm

Everyone says what he knows or imagine on a subject. Before starting an activity students try to figure out all they already know so that they can integrate knew knowledge better.

C3MS Bricks:

- “Wiki” [p. 78]
The teacher wishes to lead his students to collaborate and get to an agreement
- “News engine” [p. 67]
The teacher just wishes to initiate a debate making sure that each individual will give a piece of advice
- “Forums” [p. 63]
It is also possible to use a forum pour to get students to interact before starting an activity

Act-2 CheckWork

Checking of students’ productions by the teacher. OBSOLETE ?

Act-3 CoEdit

Creation of collaborative documents. They all can modify a unique document or at least annotate it

C3MS Bricks:

- “Wiki” [p. 78]
Creation of collaborative documents that can be edited by all members. The identity of “actors” doesn’t appear on the screen if they don’t wish
- “CMS” [p. 71]
Content can be edited through forms and will be inserted into a menu structure it will be possible for others to modify it but this will be less adapted to collaborative work.
- “Annotation” [p. 75]
Annotation of a given text (in various forms)

Act-4 CommentLinks

Insertion of commentaries under the links entered in the portal. Useful to give hints on websites content. See “CreateLinkSpace” [p. 44]

C3MS Bricks:

- “Web Links” [p. 69]
Links management system

Act-5 CreateCategories

Determining categories for a theme, entering categories in an interaction space

C3MS Bricks:

- “Web Links” [p. 69]
Entering categories and sub-categories in the portal in order to classify the links that are inserted
- “Wiki” [p. 78]
Getting students to interact in a collaborative space to determine together the categories they will then enter in the portal in a more structured way

Act-6 CreateForum

Installation of a forum module (ADMIN) or creation of discussion topics in an already installed forum

C3MS Bricks:

- “Forums” [p. 63]
A forum allows participants to have an asynchronous discussion. Currently, there are 2 types of forums: threaded ones or “boxed” ones, which are mostly used and developed for portals

Act-7 CreateImage

Formatting, modifying and adding legends to images to make them fit the project- OBSOLETE ?

Act-8 CreateLinkSpace

Creation of a space in which to enter links. It is possible to create new links category, that can be described, and inside which it will be possible either to enter links directly or to define sub-categories

C3MS Bricks:

- “Web Links” [p. 69]
A links management tool allows to insert web links inside categories. Most of the simple tools to be found in portals only allow the creation of one sub-category. Functionalities are not as sophisticated as in yahoo or DMOZ.

Act-9 CreatePage

Web pages creation outside the portal with an editor. Links to these pages can be added in the portal - OBSOLETE ?

Act-10 CreateQuizz

Creation of a quiz either by the teacher to check if the students have well understood some points or by the students to synthesize what they have just learnt

C3MS Bricks:

- “Quiz” [p. 87]
Quizzes are modules that can be configured and adapted to any content

Act-11 DistributeTasks

Dispatching of tasks by the teacher. Allows everyone to know exactly what to do and to manage time.

C3MS Bricks:

- “Task Management” [p. 86]
This module is specifically designed to make project management easier.

- “Wiki” [p. 78]
Can be used to plan a project by making an agreement on tasks to be performed according to wishes. The advances in the project can be traced back with the “Page History” function which saves the previous versions of pages.

Act-12 EditCalendar

Use of the calendar to set a timetable. Each participant can add a particular event and describe it, and it is therefore easier to plan a collaborative project.

C3MS Bricks:

- “Calendar/Planner” [p. 83]
There are several types of calendars. Most allow to edit everyday events and to indicate their duration. Calendars often include a special block which displays what’s in the air.

Act-13 EditGallery

Use of the « gallery » module to display images, photographs and commentaries.

C3MS Bricks:

- “Gallery” [p. 70]
The “gallery” module allows to upload graphic elements (gif, jpeg, png, etc.) directly from your computer to specific “albums” to which it is possible to give a name. The tool automatically generates a “thumbnail” for each album. All “thumbnails” are displayed in one or several pages and each picture in the albums can be commented.

Act-14 EditGlossary

Configuration and use of the glossary to display words, expressions and their definition. The teacher can enter the words to be defined and the students can enter the definitions of the words or expressions whose meaning they had to find out.

C3MS Bricks:

- “Glossary” [p. 74]
A glossary editor is a simple CMS which allows to add words and definitions.

Act-15 EditMenu

Adding internal or external links in the menus on sideblocks. This allows to organize links according to a specific theme, which makes things clearer. - ADMIN

Act-16 EditStory

Modification of an already displayed text

C3MS Bricks:

- “CMS” [p. 71]
This is a simple CMS (Content Management System)

Act-17 EditSummary

Creation of a specific displaying space on the portal - ADMIN

Act-18 EditVote

Creation of a quiz, poll, survey...

C3MS Bricks:

- “Polls/surveys” [p. 88]
Creation of a multiple choice question mini quiz.

Act-19 HandsOn

“hands on” on the portal to understand how it works. The students can test the different functions so that they understand underlying mechanisms. Students must be administrators.

Act-20 Interact

Discussions on forums or in the news engine (add comments to stories)

C3MS Bricks:

- “News engine” [p. 67]
It is possible to add comments to what is generally displayed in the central frame of the portal and also to comment upon comments.
- “Forums” [p. 63]
Communication in a classical forum is more direct and it is possible to choose the forum the most adapted to the type of communication that one wants to initiate.

Act-21 IntroWork

Warming up before starting an activity. The teacher introduces the subject to students and gives clues.

C3MS Bricks:

- “Wiki” [p. 78]
It is possible for the teacher to display an introduction and research questions in the wiki. Students will then collaborate to find answers by interacting in the wiki.
- “News engine” [p. 67]
The teacher can choose to display the theme of the ongoing project on the central frame of the portal. The students can then react by adding comments.

Act-22 KeepReference

Bookmarking visited sites before selecting, classifying and displaying them -OUT

Act-23 Moderate

Suppressing of what is “wrong” by the teacher... - ADMIN

Act-24 PlanProject

Common planning and management of tasks and projects

C3MS Bricks:

- “Task Management” [p. 86]
This module is specifically designed to support project management: specification, organization, distribution of tasks...
- “Wiki” [p. 78]
More flexible way to organize a project. Rather based on discussions aiming at deciding “who does what”. All participants edit a special page dedicated to this task.

Act-25 RateLinks

Giving one’s opinion on the value and interest of the displayed links by voting. The links are then classified.

C3MS Bricks:

- “Web Links” [p. 69]
This function is associated to a links manager module.

Act-26 SearchWeb

Information seeking on the web

C3MS Bricks:

- “Search Web” [p. 68]
Use of a search engine. It is possible to include a form in the portal and to reduce research fields.

Act-27 SendFeedBack

Evaluation and commentaries upon productions by the teacher or experts (during and/or after the activities). The feed back can be individual or collective.

C3MS Bricks:

- “Mailing Lists” [p. 64]
The teacher can send a feed back to sub-groups of students or to the entire group. The feed back will be received by E-mail.
- “News engine” [p. 67]
It is possible for the teacher to display a general commentary on the portal.
- “Wiki” [p. 78]
The teacher can also insert comments in students co-productions.

Act-28 ShowBest

Displaying of the best productions according to chosen criteria, which can be quite motivating.

C3MS Bricks:

- “Top List” [p. 59]
Displays the de “best of” lists. Possibility to configure the portal according to chosen criteria.
- “Rating” [p. 56]
This is not really a brick but it is rather a functionality allowing to vote and classify in preference order.

Act-29 SubmitAnswer

Post answers to questions or definitions of words or expressions. Students productions following a given task.

C3MS Bricks:

- “FAQ Manager” [p. 66]
Entering answers to questions displayed in the FAQ section
- “Glossary” [p. 74]
Entering definitions to words and expressions in the portal glossary section.
- “News engine” [p. 67]
Answers can be given in the shape of commentaries displayed directly on the central page of the portal.

Act-30 SubmitComment

Annotations, e.g. comments, reactions, complements to a text or any presented material. Can be done an unlimited amount of times

C3MS Bricks:

- “News engine” [p. 67]
Commentary inserted directly after the texts displayed on the central frame of the portal.
- “Annotation” [p. 75]
Same principle as the previous, but applied to other kinds of entries (Poll questions, WebLinks, FAQs, CMS, pictures, articles) for which we don’t make a separate entry here.
- “Forums” [p. 63]
This is more a forum-like discussion. The answer is given directly to the person who gave a piece of advice or introduced new ideas.

Act-31 SubmitLinks

Insertion of a link in the link space, which will have been configured - see “CreateLinkSpace” [p. 44] and “CreateCategories” [p. 43]

C3MS Bricks:

- “Web Links” [p. 69]
Links management system
- “Wiki” [p. 78]
The Wiki allows to insert easily links in pages.

Act-32 SubmitQuestion

Insertion of a question to be answered or a word or expression to be defined

C3MS Bricks:

- “Glossary” [p. 74]
The teacher enters words or expressions in the glossary.
- “FAQ Manager” [p. 66]
Students or the teacher enter questions of general interest. These questions will be answered progressively.

Act-33 SubmitStory

Insertion of a text to be commented or to which a following or commentaries will be associated, exposition of cases...

C3MS Bricks:

- “News engine” [p. 67]
It is possible to display stories, problems to be solved...to which students can react by inserting comments.
- “Forums” [p. 63]
Initiating a debate on a theme expressed shortly.

Act-34 VoteFor

Vote for a project, an idea, etc.

C3MS Bricks:

- “Polls/surveys” [p. 88]
It is possible to display the results automatically on graphics, to organize mini polls.

5 Catalog of C3MS bricks

Paraskevi Synteta, Daniel Schneider and Stephane Morand

Introduction

Information and communication portals, which we call C3MS (Community, Content, & Collaboration Management Systems), are made of numerous bricks that can be assembled in several possible ways and can be used to compose the scenarios such as those described in this document. In this section, we provide an inventory of these “bricks” in order to underline their functionalities. When possible, we will also define the potential of each one in an educational scenario. We wish to provide support to any teacher or actor in the educative sphere for freely designing their own scenarios and use portal technology as a pedagogical tool or simply as platforms dedicated to generating and sustaining of communities of practices.

C3MS bricks and software modules

C3MS systems are nurtured by a strongly competitive and innovative open source environment and can be adapted/combined/configured according to specific needs and to different scenarios of usage. These systems have a modular architecture based on different components. Most of the information and communication portals (especially the ones that we adopted for our school networks) already include in their default installation several kinds of such components that take care of specific tasks (e.g., a collaborative story/news/journaling system, a links manager, etc.) and are called “modules”. Moreover, there are other available “modules” that can be easily added to the core system of such portals. An example of such a third-party module might be a “Weather block”, a Glossary, a Photo Gallery, etc. So, we can say that there are two kind of modules: “core” and “3rd party” ones. For many portals, there exist documented APIs for programming these modules.

For this project, we have chosen to work with the PostNuke system (<http://postnuke.com>) and most modules refer to this environment. In the chapter “Selection and installation of portalware” [p. 92] we provide in addition to a short description of PostNuke descriptions of alternative environment and give a few hints regarding the selection of portalware.

The Tecfa SEED team developed some of their own PostNuke modules and we hope that over time, a lot of modules specially made for educational purposes will “appear”. Many web-applications that existed beforehand as stand-alone applications (e.g. Forums and Wikis) are adapted (or being adapted) for integration into portals like PostNuke. Finally, there exist several interesting Internet applications that can not be easily integrated, i.e., Virtual environments like MOO, but which we still list in this catalogue. These systems are not C3MS bricks in the usual sense, but they are technical bricks that can enhance pedagogical scenarios and this is why we list them here.

“C3MS bricks” are generic modules and applications. A “C3MS brick” is a kind of component that takes care of a specific task, can be easily separated from others, can be configured and administered, can be combined and orchestrated with others and all these through the main core portal environment (with the exception of a few). For each kind of C3MS there may exist several implementations from which you may choose. We call these implementations “software modules”. In this catalog we often provide several software modules for one C3MS brick among which you may choose.

As most development communities for these open-source environments are rather large, there is a prolific production of new external “bricks”, we can have several new modules every new month! That’s why we would like to note down that the inventory that follows in the next chapter, is not complete and the official and support websites should be consulted for the latest ones.

Inventory of C3MS bricks

The following entries refer strongly to the “PostNuke” portal software that we have chosen to use for most of our activities. Similar “bricks” exist for other portal software and we may add them later. We have to note, though, that the “software bricks” collection of PostNuke is probably one of the richest and most modules are relatively easy to install. We judge also important to inform that all this C3MS technology is in its infancy steps, so bugs should be expected (in particular with some 3rd party modules that is not endorsed by the makers of the portalware). Also be aware of certain “skins” which are called “themes” and which are often done by beginners that have low HTML/CSS skills and that can break on certain Web browsers. Therefore, in some cases, some technical expertise with MySQL/PHP will be needed to install and configure various modules.

We describe each C3MS brick in general terms and we summarize a few of its characteristics. We then describe a selection of available software, including functional and technical details. Sometimes in the future we also may provide an evaluation based on usability and technical criteria. Before downloading and installing modules, please make sure that the module is made for the kind of environment you have (e.g. a PostNuke 7.2 system) and that it is reasonably stable. Usually, authors are quite frank about its development state (alpha, early beta, good beta, release, etc.)

In order to help users of this catalog, we also maintain a database of interesting modules in the **downloads section** of our TecfaSEED portal: <http://tecfaseed.unige.ch/door/>. We even made copies of some bricks that are difficult to find (however they may not correspond to the latest version)

5.1 Explanations

Below is an example of a C3MS brick entry and a Software Module entry with explanations in place of contents. Note that not all fields are always used.

In principle, you should find most of the entries in the [downloads section](#) of the TecfaSEED Portal.

C3MS Brick-1 Name of the Brick

C3MS bricks are described in generic terms, i.e. as a kind (or class) of software. Specific software (e.g. modules for the PostNuke system) are separately described as “software module”)

Alternative names:

Often there exist several possible names for a type of software, e.g. “Photo galleries” can be called “Image galleries” or “bitmap repositories”

Functional description:

This is summary of which functionalities the type of software describes

Pedagogical interest:

This entry provides a few ideas on how it might be used in pedagogical scenarios

Activities support:

This entry provides pointers to supported elementary activities....

Community Support:

This entry concerns more general community-support functions.

Notes:

Other miscellaneous informations

Software Module-1 Name of the Module

Type:

Defines the environment it runs in (e.g. PostNuke)

Description:

General description

Functions:

What it does

Technical details:

Some technical details

Download:

Where you can find it.

Administration:

Tips for using it as administrator/teacher

Installation:

Installation hints

5.2 Awareness tools / Community building

Awareness tools usually interact with some other tool, e.g. “Content Management” [p. 66] modules.

C3MS Brick-2 Headlines

Alternative names:

News Syndication

Functional description:

News syndication - Import/export headlines with other portals

Functions : Import, export, configure

Pedagogical interest:

Community building with other similar portals, dissemination of results to other interested parties, resources, get the web spirit (web culture)

Software Module-2 PostNuke RSS blocks

Type:

Standard PostNuke Block

Administration:

Go to Administration/Blocks. Add an RSS block (you need to know the URL of the RSS feed).

Software Module-3 PostNuke RSS feed

Type:

Standard PostNuke functionality

Administration:

Headline from the news engine are exported as "http://your.portal/backend.php".
Extra modules may also offer RSS feeds.

Software Module-4 ShortNews

Type:

Nuke module adapted to PostNuke

Description:

Meant for sites which don't create own news content. ShortNews lists remote articles with a 'short' abstract of the 'news' and links against them. Users who read the abstract may click on a 'more ...' link and get redirected to the article on the remote (or even local) site.

Functions:

Add content, inform...

Download:

<http://nuke-modules.gading.de/>

Software Module-5 My Headlines

Type:

Adapted for different CMS and even exists as standalone

Description:

Content syndication at its finest. MyHeadlines allows each of your users to subscribe to many headlines from the DB of over 1000 sources. As an added bonus this version includes a Stock Ticker that lets your users monitor their portfolio performance.

Functions:

Customize headlines, find information sources

Download:

<http://www.jmagar.com/>

Administration:

Very user-friendly and a clear navigation. Each user can administrate his own headlines

C3MS Brick-3 Member Profile and groups

Alternative names:

Home Page, YourAccount, Your Own Page

Functional description:

Description of each user (usually on his portal “home page”). Some entries are user defined (e.g. URL of home page, interests, address, etc. Other information is dynamically created by the portal (e.g. shows submitted stories, comments made, forum entries, etc.)

Functions: Edit, browse

Pedagogical interest:

Ask students to present themselves in an interesting way (ex: speak for their nationality, their country, their town) or present another student the way that they see him. Also for community building (as a side-effect in pedagogy) since having a portfolio provides identity. A teacher can also get a quick overview of various portal activities of a student. Students can find resource persons among portal users by looking at what these did, etc.

Notes:

Complementary with other portal functionalities like “Members List”, “New Users” blocks, etc. and “Top List” [p. 59].

Software Module-6 pnAddress Book

Type:

PostNuke module

Description:

pnAPI/pnHTML compatible address book with lots of features, inspired by the Palm Address Book. Easy to install, multi-language, with administration.

Functions:

Provide information on members or persons related to a project, depending on the context

Download:

<http://www.smiatek.com/>

Software Module-7 GuestBook

Type:

Nuke module adapted for Postnuke

Description:

This guestbook is based on Guestbook 0.9b by Nexia from postnuke (nexialys at mac dot com), based on the NukeBook, and corrected from the nukeAddon version. There are no changes in the look and feel of the last version, but many changes were made in the code and some features have been added.

Functions:

Comment, give one's opinion

Download:

<http://www.smiatek.com/>

Software Module-8 pncGroups**Description:**

Addon that allows users to subscribe to groups defined by the administrator and gain the permissions created for this particular group.

Functions:

The pncGroups AddOn gives the possibility to the registered users of your site to subscribe to a given group. Users subscribing to a group gain all permissions an administrator gives to this particular group. Easy interface.

Technical details:

Tested version: 0.1b. Languages english and french. pnAPI compliant.

Download:

<http://dev.pnconcept.com>

Administration:

Nice Online manual. The administrator of the site must make a group Public to enable this possibility. BE EXTREMELY CAREFUL ! If you change the Admins group to Public, anybody will be able to register as an administrator. Functions: Modify a Group Information-Removing a User from a Group-Making a group invisible.

Installation:

Postnuke Standard. No installation READE file.

Software Module-9 BSCI permissions**Description:**

Overrides the default system for group permissions.

Functions:

Every Block has visible/hidden for all groups per group. Every Module has visible/hidden for all groups per group. Missing: Module overview/read/add/moderate/admin/edit/ (etc) for all groups per group.

Technical details:

The current version of the module is designed to use Xanthia and pnRender. There exists one without Xanthia. Tested the one without (BSCIpermissions-no-xanthia-1.0.4). This version contains the modified includes/pnMod.php file as there is a bug in the pnAPI that causes the NS-Comments to not work properly with this module.

ATTENTION: Replaces some core files: index.php, modules.php and includes/pnMod.php.

Download:

<http://noc.postnuke.com/projects/bscipermissions>

Administration:

Easy interface for end-users, still to do advanced stuff, the default is more powerful.

Installation:

Read the installation guide as even though it looks like a Postnuke standard installation you have to be careful with some details (see technical details above). ATTENTION: If you don't follow the instructions carefully you risk to be locked outside of your site!

C3MS Brick-4 Rating

Functional description:

Rate an information entity in the portal. A lot of tools have an integrated rating facility.

Pedagogical interest:

Motivate peer interactions by having them look at entries and provide ratings (and comments). Make students participate in knowledge management of resources (they decide what was useful)

Activities support:

“ShowBest” [p. 48]

Notes:

See also “Annotation” [p. 75]. This functionality is typically (same as annotations) underused. If you want students to make use of it, you have to integrate the task into some activity, e.g. “please look at 5 entries of your choice, annotate and grade them” or “let’s rate all our productions and the discuss the 3 best and the 3 lowest ones”.

C3MS Brick-5 Shoutbox

Shoutbox

Alternative names:

Shoutbox

Functional description:

Synchronous or asynchronous manifestations, little commentaries (blurbs)

Functions : submit, read

Activities support:

“BrainStorm” [p. 42]“Moderate” [p. 47]“CoEdit” [p. 43]“DistributeTasks” [p. 44]

Notes:

Complementary to “Who is Online”. Some shoutboxes allow to add “smilies”

Software Module-10 ShoutBox

Type:

PostNuke module

Functions:

The persons online can write little sentences that everyone can read and add smileys that reflect their mood

Technical details:

This is a block. (TODO add link for save shoutbox hack)

Download:

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

Installation:

Once the modules regenerated, must be activated in the Blocks menu in the administration panel

C3MS Brick-6 User statistics

Alternative names:

stats

Functional description:

Allows to have a general idea of what's going on on the portal, can also be an element of motivation to encourage users to participate by attributing them points according to their contributions.

Pedagogical interest:

Allows to know who are the most active participants, what browser they use, the amount of pages viewed, etc. The teacher can thus have elements to adapt his teaching.

Community Support:

Members are less anonymous...

Software Module-11 pnProdAct**Type:**

PostNuke Module

Description:

List productions of selected users and groups

Functions:

User Interface : Detail On/Off for individuals users and/or groups

Technical details:

This module has been developed at Tecfa by Olivier Morel and it has a plugin architecture. To make it work with other PostNuke modules than the one we provide, you can write additional plugins. This module has Beta status (Aug. 2004)

Download:

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

Administration:**Installation:**

Postnuke standard. This module needs the new PostNuke templating engine (Xantiha) !! Tested with PN 0.73x and higher.

Software Module-12 commArt**Type:**

PostNuke Module made by Vivian

Description:

Information visualization tool. A simple module to see contribution to News with articles and comments by the portal's community and situate a specific user in it.

Functions:

It creates the list with all the users and once the user is chosen it generates an "artistic" picture with all contributions.

Technical details:

Uses SVG so a plugin is needed. pnAPI compliant.

Download:

<http://tecfa.unige.ch/perso/vivian/>

Administration:

No administration in current version.

Installation:

Postnuke standard.

Software Module-13 pncUserPoints

Type:

PostNuke Module

Description:

Attribute points to users according to their contributions to the portal and view interesting summaries of these.

Functions:

User Interface : Detail On/Off

Technical details:

(Tested version: pncUserPoints ALPHA 0.13) Has a nice block with progress bars per user with the most active users, but there are still unimplemented parts.

Download:

<http://dev.pnconcept.com/> (Several other modules also here like pncSimpleStats for evaluation)

Administration:

Administrate Plugins (Add, Remove, Activate, points, language define), Exclusions by Usernames, Exclusion by Groups, Reset Table Activity

Installation:

Postnuke standard.

Software Module-14 pncSimpleStats

Type:

PostNuke Module

Description:

Little child of the pncUserPoints that shows count of news, comments, reviews and posts for each user.

Functions:

Count of news, comments, reviews and posts per user.

Technical details:

(Tested version: pncSimpleStats 1.1) Has a block that creates a problem when pncUserpoints is also installed.

Download:

<http://dev.pnconcept.com/> (Several other modules also here for evaluation)

Administration:

Very simple, just limit the results

Installation:

Postnuke standard.

Software Module-15 Statistics module

Type:

PostNuke Module

Description:

Latest version of the statistics module, which is a replacement for the Stats and Referrer modules. The statistics module is faster, has more features and is easier to extend than the modules it replaces.

Functions:

Collect information on users

Technical details:

This module has a small bug

Download:

<http://www.mtrad.com/>

Installation:

A code line has to be added in the pnAPI file. Everything is explained in the Readme file provided. An error arises when the portal is not set to english

Software Module-16 NS-User_Points**Type:**

PostNuke Module

Description:

Distributes points according to user activity. Possible to change the amount of points distributed and to modify the parametres, such as the name of the forum in the portal

Functions:

Motivate, collect information on user activity

Technical details:

This module is an older version of “pncUserPoints” [p. 58] (verify!)

Download:

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

C3MS Brick-7 Top List**Alternative names:**

Top List, Top 10, Top 5 [of various things]

Functional description:

Display top x listings. This functionality can be available in the form of blocks visible to all users or as a module that user has to select.

Functions : View, browse, configure

Pedagogical interest:

Motivate by appreciating students input according to several criteria (the best rated works, the most commented ones, etc.). Associated with tools used for resources (e.g. links) it can be a navigation aid.

Activities support:

“ShowBest” [p. 48]

Notes:

This functionality is integrated with various tools, for some portals (e.g. PostNuke) one can download and install special blocks for extra functionalities.

C3MS Brick-8 Who is online**Alternative names:**

Who is Online Module

Functional description:

Awareness block for users on line and for individual authentication.

Function : Be aware

Pedagogical interest:

Presence awareness – important for community building in communities of practice.

Notes:

Complements with a “Chat/Shoutbox”

Software Module-17 i-lastX user seen**Description:**

Allows to have hints on the last users who connected to the portal

Download:

<http://tecfaseed.unige.ch>

Installation:

This is a block to be set in the blocks section of the admin panel once the modules have been regenerated

Software Module-18 i-lastX registered user**Type:**

PostNuke Block

Description:

Last registred users block.

Download:

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

Installation:

This is a block to be set in the blocks section of the admin panel once the modules have been regenerated

Software Module-19 i-members online**Type:**

PostNuke Block

Description:

Displays the name of the users online

Download:

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

Installation:

This is a block to be set in the blocks section of the admin panel once the modules have been regenerated

Software Module-20 pnBloodhound**Type:**

PostNuke Module

Description:

pnBloodhound is an open-source Postnuke module that tracks users on your website by displaying their username and location in a block.

Functions:

User tracking via block, configurable module correlations for display, error tracking, pnAPI compliance (pn v.726)

Technical details:

(Version tested: pnBloodhound v0.5) pnBloodhound is licensed under the GPL. It is mainly a block.

Download:

<http://www.pnaddons.com/> (Registration is needed.)

Administration:

Modify Module Name Correlations, Edit pnBloodhound Configuration.

Installation:

Postnuke standard.

5.3 Communication

Various forms of synchronous and asynchronous communication tools are described here. Note that “synchronous communication” is a relative term, e.g. the internal messaging system could be used for instant communication. See also the “Shoutbox” [p. 56] which we defined primarily as a community tool. See also the section on “CSCL and structured discussion” [p. 81]. Finally, we are aware that every act of writing is communication :)

C3MS Brick-9 Chat

Chat

Alternative names:

Chat, IRCchat, Webchat

Functional description:

Synchronous discussion (chat)

Functions: Submit, Read

Pedagogical interest:

Synchronous discussion, group building, community building, guest book, reminders

Activities support:

“BrainStorm” [p. 42]“Moderate” [p. 47]“CoEdit” [p. 43]“DistributeTasks” [p. 44]

Notes:

It is now possible to save a discussion from the chat, which could be interesting for further analysis in a pedagogical perspective

Software Module-21 sChat

Functions:

Stores private and public messages exchanged in every rooms and enable a users to retrieve them.

Technical details:

You can use a hack developped at TECFA to access past conversations and keep trace of the activities in WebChat (<http://tecfa.unige.ch/perso/fabien/projects/schat/index.html>)

Download:

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

Software Module-22 SPChat

Type:

PostNuke Module

Description:

Quote: “SPChat is a multiuser chat system for PHPNuke and Postnuke Systems. The application is written in PHP with Javascript portions and uses your MySQL database to store messages and users. This module contains nearly all functions like a professional chat application”

Technical details:

Tested at Tecfa dec 2003, works fine

Download:

<http://www.spchat.org/>

C3MS Brick-10 Private Messages

Alternative names:

messenger, online messenger

Functional description:

Allows to communicate inside the portal on a private message space. Some modules allow to send pop ups to other users and reach them instantly

Pedagogical interest:

Useful for cummunity members to exchange ideas without getting out of the portal

Software Module-23 Online Messenger

Type:

PostNuke Module

Description:

Instant Messenger Module, allows to see and hear new mails incoming, see and hear incoming and vanishing members and to identify user by his or her avatar

Functions:

Every user can customize his own messenger, depending to his own prefers, internet browser and connection performances, SPChat detection, go directly in chat with a user

Download:

<http://mods.postnuke.com/modules.php?op=modload&name=News&file=article&sid=2081>

Installation:

The version tested does not work together with private message

C3MS Brick-11 Feedback

Alternative names:

Feedback Module

Functional description:

HTML form that acts similar to a guest book and allows to give a feedback to the portal by it's users.

Functions : Submit, edit, delete, moderate

Pedagogical interest:

Feedback to projects, activities, grading, suggestions to teachers by students or other teachers, etc.

Notes:

See also “Rating” [p. 56], “Forums” [p. 63], “News engine” [p. 67],

Software Module-24 Feedback**Description:**

This module allows users to send an email to the administrator to report errors and make comments

Download:

<http://sourceforge.net/projects/pn-modules>

C3MS Brick-12 Forums**Alternative names:**

Bulletin Boards

Functional description:

Classical discussion forums

Functions: Submit, comment, moderate

Pedagogical interest:

Discuss, argument, contribute, debate

Activities support:

“BrainStorm” [p. 42]“CreateForum” [p. 44]“IntroWork” [p. 46]“SendFeedBack” [p. 47]“SubmitStory” [p. 49]“SubmitComment” [p. 48]

Notes:

Read carefully first other users comments to see that there is no significant bug and choose according to several criteria: (a) one that fits your needs, (b) ergonomics for your target population, (c) integration with PostNuke, (d) ease of installation. We found out that most children and teachers have trouble using the format of today’s popular forums, so we sometimes use the “News engine” [p. 67] instead.

Software Module-25 PNphpBB2**Type:**

PostNuke Forum (also available as standalone server)

Description:

This is a PostNuke Integration of one of Internet’s most popular Forum software. Reliable and many features.

Functions:

Communicate

Technical details:

At the time of this writing, postnuke groups are and permissions are not integrated into postnuke and you need to recreate groups within the forum. Do not use phpbb2pnmod wich is not supported anymore but use pnphpbb2

Download:

<http://sourceforge.net/projects/pnphpbb2/>

Administration:

Administration link in the forum (not in postnuke administration page)

Software Module-26 Xforum

Type:

PostNuke Forum (also available as standalone server)

Description:

Widely used forum. Used in most PostNukes deployed by TECFA. At the time when we made an evaluation, it was the best overall choice. Now you have other alternatives.

Functions:

Communicate

Technical details:

Simple and easy to use.

Download:

<http://www.trollix.com/>

Administration:

Administration link in the forum (not integrated in postnuke)

Installation:

Not a standard postnuke installation but still easy with web interface.

C3MS Brick-13 Mailing Lists

Alternative names:

Mail Users Admin

Functional description:

Mail all/individual users

Function : Submit

Pedagogical interest:

Inform, give a feedback, stimulate. Mails and similar tools are mostly useful for regulation. Note: if you want to make sure that students use a mailing list instead of individual mail, never answer individual mail

Activities support:

“SendFeedBack” [p. 47]

Notes:

Professionally run mailing lists, usually require special server software, that your institution already may provide to you (inquire!). Unfortunately, some portals like postnuke will not allow to send E-mail only to specific subgroups of users. For the moment, one can mail individuals or all the members. See also “Forums” [p. 63] as an alternative. The advantage of Forums is that information does not clutter mailboxes and always remains available (though true mailing lists servers also provide archives). Forums (or annotation mechanisms) are a better choice for organizing structured discussion around different topics, since students can more quickly go through all the arguments.

Software Module-27 pnTresMailer

Description:

Newsletter module with rich functionalities.

Functions:

A growing collection of Plugin Modules allow the collection of data from many sources, the Newsletter is multi-part mime which allows both HTML and text-only postings, previewing generated Mailers allows checking for problems, and hand customisation

Technical details:

(Version tested PnTresMailer 6.0.2) pnTresMailer 6.02 stops multiple subscriptions to the same e-mail address, to prevent a possible Denial of Service attack. No pnAPI compliant?

Download:

<http://canvas.anubix.net/>The original developer, Foyleman at www.modsonline.com, is currently not working with Postnuke. He has therefore wished to let others take over and has kindly let this group continue where he left.

Administration:

Rich interface and complicated functions to satisfy several needs. Can send to 1, several or all users (for all users you need to run a file to include them all automatically otherwise you need to do it manually one by one). Missing: to send to groups.

Installation:

Postnuke standard but read the installation guide and follow the instructions.

Software Module-28 MultiMailer

Description:

Newsletter Module. Module for managing unlimited mailing lists.

Functions:

MultiMailer is a pnAPI compliant PostNuke Module for managing Unlimited Mailing Lists. MultiMailer allows you to communicate with your site members and customers in a more flexible way by allowing you to break down your email subscriber list by interest categories. Email recipients also have the option to select their own interest categories from a sign-up form. FEATURES: i) Publish and manage unlimited newsletter categories, ii) Import and unsubscribe people to your newsletter, iii) Supports for Plain Text and Rich Text(HTML) format.

Download:

<http://www.hotscripts.com/Detailed/23438.html> <http://corpnuke.com> Disappeared!

Installation:

pnAPI compliant.

C3MS Brick-14 WebCam

WebCam

Alternative names:

MyLivCam

Functional description:

Live web camera

Function : Observe

Pedagogical interest:

Observation, community building (net meeting)

Notes:

Needs also a web camera

5.4 Content Management

See also “Awareness tools / Community building” [p. 52], many of these bricks extract information from CMS bricks.

C3MS Brick-15 Review - Books

Review - Books

Alternative names:

Reviews, Books

Functional description:

Books reviews and/or recommendations with rating, comments, suggesting of books.

Books may have images, descriptions and affiliate links to online bookstores. Not only focused on books, but any catalogue-driven-theme.

Functions : Submit, edit, delete, moderate, rate, comment

Pedagogical interest:

Develop critical mind, argumentation, motivation to read books

Activities support:

“KeepReference” [p. 46]“KeepReference” [p. 46]

Software Module-29 Books

Type:

PostNuke module

Description:

Integrate books recommendations into your site. With rating, comments, suggesting of books. Books may have images, descriptions and affiliate links to online bookstores. Not only focused on books, but any catalogue-driven-shop

Functions:

It is possible to order a book by transferring the user to an online bookstore such as amazon.com, lehmanns.de or equal. With an affiliate agreement with these bookstore, they will give you money for every book that was purchased from your recommendation.

Download:

<http://pn-mod-books.sourceforge.net/>

Administration:

Administration of the books is very easy.

Installation:

Just send the “books” folder in the modules folder and the rest is done through the administration panel

C3MS Brick-16 FAQ Manager

Alternative names:

Frequently Asked Questions Tool

Functional description:

Submit Frequently Asked Questions

Functions : Post, answer, comment, edit, delete, rate, moderate

Pedagogical interest:

Knowledge base / online help. Can be either used to reify highlights from Forum Questions/Answers. Can also be used as mail tool to give the opportunity to students to ask questions and share the answers

Activities support:

“SubmitQuestion” [p. 49]“SubmitAnswer” [p. 48]

Software Module-30 PostNuke FAQ Module**Type:**

Standard PostNuke Module

Functions:

Allows to define a flat list of different FAQs. Users can post questions, administrators will see the question in the “Incoming box” and can reply. Admins can also directly post/answer questions.

C3MS Brick-17 News engine**Alternative names:**

News, Submit News, Story Submission Module, Topics, Newsletter, News Portal

Functional description:

The “news engine” is a kind of Content Management System. Administrators can organize contents into different topics (subject areas) and decide who can post news, look at news, annotate news, moderate news, etc. Frequently the portal is configured to show on the entry page the last stories received. Users usually can submit news (editors with special rights can approve it), display the news on the index page, browse through the topics (click on “topic icons” associated with each story), search through all the contents, annotate contents (i.e. each story has an associated forum). This is a core module of most portals, for some portals there exist also some 3rd party ones with special features.

Functions : Submit, comment, edit, delete, rate, search, browse, moderate

Pedagogical interest:

Interact by providing new information (to start a story, a project, an activity), comment information made by others (e.g. student work or articles found on the web), organize asynchronous debates, present an expert’s view on a theme.

Activities support:

“BrainStorm” [p. 42]“IntroWork” [p. 46]“SendFeedBack” [p. 47]“SubmitStory” [p. 49]“SubmitComment” [p. 48]

Notes:

See also: “CMS” [p. 71] and “Forums” [p. 63]

Software Module-31 PostNuke News Engine**Type:**

Standard PostNuke Module

Functions:

Organization by topics and by language. Submit/Post/Validate News. Administrators can edit contents (but not comments in 7.2x versions). Users can annotate (provided they have permissions). Contents are searchable, special blocks in the portal can show randomly selected old news, most popular news of the day, etc. On each user's home page contributions to this module are listed.

Administration:

By default the module appears on the index page. With user permissions, one can give rights to individuals or user groups to annotate or selectively view certain topics or articles. Topics can be defined within the Administration/Topics Manager. By default there is a special awareness block (called "Incoming" in the Blocks administration) that show "pending entries" to administrators.

Installation:

By default the module is included

C3MS Brick-18 Search Portal

Alternative names:

Search, Find, Search engine

Functional description:

Search information in various modules, e.g. reviews, stories, FAQs, forums, etc.

Functions : Submit, advanced submit, browse

Pedagogical interest:

Learn how to search information in the portal. Treasure hunt inside the portal

Activities support:

"HandsOn" [p. 46]"SearchWeb" [p. 47]

Software Module-32 PostNuke Search

Type:

Standard PostNuke Module

Description:

This incorporated search engine allows to do a full text search of certain module contents, e.g. news, FAQs.

Functions:

Usually a theme (skin) is configured to have a simple search box. Somewhere in a menu users can get access to "advanced search" and decide which modules to search through, whether to use exact words or not, etc. Some third party modules (e.g. various CMS modules), may add additional choices

Installation:

Installation is by default. However if you wa

nt some third party modules to be searchable, you have to follow manual instructions for these (if available)

C3MS Brick-19 Search Web

Alternative names:

Google search, PN DMOZ Search, Web search

Functional description:

Search the web according to different criteria. Some portals may integrate a user interface to external search engines.

Functions : Submit, advanced submit, browse

Pedagogical interest:

Resource-Based learning in information age - Gather resources, learn how to search information, learn how to use search engines

Activities support:

“SearchWeb” [p. 47]

Notes:

Complementary to “Search Portal” [p. 68] and “Web Links” [p. 69]

C3MS Brick-20 Web Links

Alternative names:

Web_Links, Links Manager, Yahoo-like, DMOZ-like, Yellow Pages

Functional description:

Submit web links that can be classified into categories and sub categories, for which a small description is asked. More powerful engines allow link aliases. Links can be searched, viewed by category and submission date. Ratings (automatic or by users) and annotation functionality can exist.

Functions: View (several parameters), submit, edit, delete, rate, moderate, create/edit/delete category or sub categories

Pedagogical interest:

Resource-Based Learning, classification, information visualization. Students/teacher: Gather resources for project based work, mostly at the beginning. Teacher: prepare resources for teaching (both core resources and extra information)

Activities support:

“CommentLinks” [p. 43]“CreateCategories” [p. 43]“RateLinks” [p. 47]“SubmitLinks” [p. 48]

Community Support:

A nice library of links is of interest to any sort of community of practise. It will also be appreciated by occasional visitors you may get

Notes:

Smaller links collections can also be quickly organized with a “Wiki” [p. 78]

Software Module-33 PostNuke Web Links

Type:

Standard PostNuke Module

Functions:

Administrators can define categories (but no aliases, so it’s a hierarchic tree). There is “broken links tester”. Users can submit links including Title, URL, description and name/email of the submitter. Submitted links can be added/edited by administrators. Users can browser through categories, by popularity (visits), rating, etc. They also can give a rating from 1-10 and add a comment to each link.

Software Module-34 dp-Elinks

Description:

This module allows to manage eLinks from eMule/eDonkey/Overnet. You can create Categories and SubCategories, waiting content, votes, commentaries, users can send elinks Includes 6 blocks: Last elinks, top elinks, search in Jigle, waiting content (only for admins), Stats and random elink. It's fully compatible (with "Import elinks option") with other modules of the same type like PH-elinks. Moreover, it is possible to add images according to the categories chosen for the links

Functions:

Classify, rate, organize, inform

Download:

<http://thebix.com/Article1403.phtml>

C3MS Brick-21 Gallery

Gallery

Alternative names:

My eGallery, Image Gallery, PN Imagery, Screenshots

Functional description:

Photo and Movie Gallery

Functions : Browse, submit, comment, edit, delete, moderate

Pedagogical interest:

Co-construct documents around a specific theme

Activities support:

"EditGallery" [p. 45]

Notes:

Most produce the thumbnails needed for the browsing

Software Module-35 PhotoShare

Description:

This is an image gallery that allows to upload your images into your photo albums and then share them with others using the access control system that allows you to specify read/write access to specific PostNuke users or groups, as well as making it public for everybody.

Functions:

Runs on PostNuke systems with SAFE_MODE and OPEN_BASEDIR enabled (this allows Photoshare to be installed on sites with quite restricted PHP access). You may create albums and place albums inside other albums, images can be uploaded into albums and rotated online, thumbnails are created automatically, albums may be shared with specific PostNuke groups or users, the image viewer works as a slide-show where the user may browse through the images

Technical details:

Simple hack needed if GD<2.0 (see <http://www.elfisk.dk/index.php?module=page-setter&func=viewpub&tid=9&pid=3>)

Download:

<http://www.elfisk.dk/>

Software Module-36 Photoshare combined with PageSetter

Description:

The only things added are htmlArea 3.0 support in Photoshare and the ability to select how an image should be pasted into Pagesetter. The last option allows you to paste album links, popup links, and thumbnails in various combinations

Functions:

Insert images in a page setter document. Various options are available (popup link, thumbnail, ...)

Technical details:

Just install the two modules

Download:

<http://www.elfisk.dk>

Software Module-37 My_eGallery

Description:

A photo gallery

Download:

<http://noc.postnuke.com/projects/myegallery/>

Installation:

Create a category in the administration panel. Then you can start uploading pictures

Software Module-38 Coppermine

Description:

Coppermine is a multi-purpose fully-featured and integrated web picture gallery script written in PHP using GD or ImageMagick lib with a MySQL backend.

Download:

<http://coppermine.sourceforge.net/>

Software Module-39 Gallery

Description:

A very good gallery module wich is a standalone program capable of postnuke light integration.

Functions:

Image management (rotate, move), vote, upload pictures, ...

Technical details:

Postnuke permissions systeme do not work. You'll have to set them through this module

Download:

<http://gallery.menalto.com/>

C3MS Brick-22 CMS

Content Management Systems

Alternative names:

Functional description:

A Content Management System allows users to edit contents of a Web Server. There are stand-alone products like large commercial systems or usually smaller open source products like SPIP. C3MS Portals like PostNuke have several smaller 3rd party modules with lesser functionalities. Administrators usually can create a menu structure and sometimes form input. More sophisticated systems have workflow capabilities. Users are allowed to enter and modify contents through the web according to a permissions systems. These contents can be associated with a navigation structure (menus).

Pedagogical interest:

Knowledge production by students, e.g. learning by writing, project reports, etc. Preparation of teaching materials of various sorts by teachers.

Activities support:

“CoEdit” [p. 43] “CreatePage” [p. 44]

Notes:

Instead of using a CMS, one also could use a “Wiki” [p. 78] or a traditional Web Server (students simple manage their own “html space”).

Software Module-40 Content Express

Description:

If you have content you want to add to your PostNuke site that doesn't fit neatly into the standard categories ("news", "articles", etc.), just install this module and you can add regular full-sized html pages, and create menus to navigate them. It's a great all-purpose content manager for PostNuke.

Download:

<http://prdownloads.sourceforge.net/xexpress>

Installation:

Warning: we found a bug in this module (which one ?) that is a bit disturbing

Software Module-41 EZCMS

Description:

If you have content you want to add to your PostNuke site that doesn't fit neatly into the standard categories ("news", "articles", etc.), just install this module and you can add regular full-sized html pages, and create menus to navigate them. It's a great all-purpose content manager for PostNuke.

Download:

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

Software Module-42 PageSetter

Type:

PostNuke Module

Description:

Pagesetter is a page creation module that allows PostNuke administrators to create their own publication types containing any set of relevant data fields. The long term goal is ultimately to be able to implement all of the simple database dependent ideas that normally require separate PostNuke modules. A nice discussion concerning “Pagesetter Versus The Others” in order to help you choose the right CMS can be found at <http://www.elfisk.dk/index.php?module=pagesetter&func=view-pub&tid=7&pid=23>

Functions:

Create document of different type (news, ...) each type can have different fields, use.

Technical details:

Good install tutorial can be found here :<http://www.elfisk.dk/index.php?module=page-setter&func=viewpub&tid=7&pid=33>. Needs pnRender. Cannot write in the news-teaser area with mozilla. Need to investigate

Download:

<http://www.elfisk.dk/> and <http://themes.postnuke.com/>

Software Module-43 PagEd**Type:**

Postnuke, eNvo and MDpro module.

Description:

Page/News editor. PageEd is not a fully visual page editor where all content items can be moved around or placed where you wish. For this it's probably better Content Express, another Postnuke module). Included features: Article and news creation with images and layout, menu building, topic organizing, layout templates, image resizing, news time programming and a permission system. Allows the user control over color and size of page titles, subtitles, text and links. Images can be uploaded and placed to the left, right or alternately left end right of text. A maximum image size can be set, and images larger than this size will open in popup windows.

Functions:

PagEd allows the user control over color and size of page titles, subtitles, text and links. Images can be uploaded and placed to the left, right or alternately left end right of text. A maximum image size can be set, and images larger than this size will open in popup windows. Additional settings let you add a Printout icon to your page as well as a date stamp added when a page is saved or updated. As with single pages, all these settings are also globally configurable. Once a global template is set, users can either choose to apply this ready-set template to new pages, or define individual layout. Layout for tens or hundreds of pages adhering to the global template can thus easily be changed simply by altering the global settings. Once pages are created, they are accessible in Page Manager, from where content and layout can be edited, or pages can be deleted.

Technical details:

(Version tested: PagEd 0.91b2 January 27a) Works with eZcomments, Photoshare, Advanced search, pnTresMailer...

Download:

<http://canvas.anubix.net/>(where you can find several interesting modules)<http://www.portalzine.de>

Administration:

Very rich functionalities (|New page | Page manager | Topic manager | Template manager | News manager | Menu manager | Permissions | Backup Manager | Module settings | Control Panel . Advanced system for permissions for the same module. Very good usability for such a complicated module but still not fully tested as we don't find how to show the pages created!!!

Installation:

Postnuke standard but adds also some files in other directories apart from modules/ and need to chmod some directories to 777, but the installation is made nicely so even

if you don't do it correct it reminds you and does the necessary checks. No pnAPI compliant but it works also with eNvo and MDpro portals.

C3MS Brick-23 Glossary

Alternative names:

PN Glossary, Dictionary, Encyclopedia

Functional description:

Produce a thesaurus of words like a glossary or a dictionary. Some tools have linking (or even autolinking) facilities

Functions: Submit, edit, delete, moderate

Pedagogical interest:

Co-construct glossaries like knowledge bases (a scenario can be to ask the students to search for the definitions of several terms)

Activities support:

“EditGlossary” [p. 45]

Software Module-44 Encyclopedia

Type:

PostNuke Module

Technical details:

Worked fine. but not updated since July 2003, see also pnEncyclopedia.

Download:

<http://orodruin.sourceforge.net>

Software Module-45 pnEncyclopedia

Type:

PostNuke Module

Functions:

1) Multilingual content. 2) Autolinking between terms in the definitions and related terms fields. 3) Users (not only Editors/Admin) can provide terms and amends. 4) Suggestion-Approval model (all content by Authors must be confirmed by Editors). 5) Extended statistics about terms/Authors/Editors (temporary off). 6) More vivid notion of terms (new and pop dynamic marks)

Technical details:

Tested at Tecfa (late beta in dec 2003).

Download:

<http://www.politlab.org/download/>

Software Module-46 pn_glossary

Type:

PostNuke Module

Description:

Glossary module for PostNuke with user submissions and admin queuing. Written for PostNuke 0.703, but should also run on 0.721.

Download:

<http://www.digix.de/jan/postnuke.php>

Installation:

Need to add MySQL tables by hand (with phpMyAdmin for example)

Software Module-47 Semantics**Description:**

This is a multi dictionary, a little more sophisticated than “pn_glossary” [p. 74] but less than “pnEncyclopedia” [p. 74] since it allows to create categories in which terms and definitions can be entered but doesn’t allow to create links between related terms

Functions:

Users can provide terms, can be used to create all sorts of dictionaries since terms can be classidied in categories

Download:

<http://www.ivory-tower.net/>

C3MS Brick-24 Annotation**Alternative names:**

Comments

Functional description:

Users can annotate a given text, e.g. a news article, a web link, a photo, a poll question etc. Most portals allow users to annotate many different kinds of entries.

Pedagogical interest:

Annotation is useful in collaborative scenarios, where each student has to comment on other’s work. It is also helpful to train learners to annotate resources they are using and therefore provide extra information useful to all. Teachers can use this mechanism to provide direct feedback (e.g. to articles written by students).

Notes:

See also: “News engine” [p. 67]. The News Engine (articles + the annotation mechanism can also be used as a forum. Younger learners have much less trouble using the threaded mechanism of a news engine than the “boxed” model that most popular Internet Forums have. Empirically tested with our “Terre des Hommes” portal !

C3MS Brick-25 Internet File Repository**Alternative names:**

Upload/Download, Repository, Knowledge Base

Functional description:

File Repositories allow user to upload/download files. Files are usually accessible though either a portal or a traditional web server. Portals usually have special modules that allow annotations of files (e.g. keywords and short descriptions), search (at least through annotations), and insertion into a menu structure.

Functions : Submit, ask to download, browse uploads (several parameters), moderate

Pedagogical interest:

Students can work with file formats. Document sharing (like upload of essays, summaries, etc.), peer interactions.

Activities support:

“EditMenu” [p. 45]“SubmitStory” [p. 49]“CommentLinks” [p. 43]“CoEdit” [p. 43]“CreatePage” [p. 44]

Software Module-48 UpDownload**Type:**

PostNuke Module

Description:

Download module with extended upload features. If you need a filemanager you'd better user ew_filemanager (much easier for permissions settings)

Functions:

Upload , download

Download:

<http://www-users.rwth-aachen.de/jens.goebbert/>

Software Module-49 ew_filemanager**Type:**

PostNuke Module

Description:

Module designed to manage file and directories inside directory given by site admin. This is FTP-like module. You can create directories, upload, edit and delete files through module interface. If you have co-admins or sub-admins on your site but cannot (don't want) share your FTP account, this module could be solution for you. Especially it can be useful if you use Subjects module on your site. EW FileManager can bring additional functionality to this great module.

Functions:

Users can create subfolders, upload files, modify them (text files only) remove files, ...

Technical details:

Version 1.0 needs a hack to fix permissions (see <http://mods.postnuke.com/modules.php?op=modload&name=News&file=article&sid=2145>) and another modification to be able to download files easily (STEPHTODO : document this hack on tecfased)

Download:

<http://home.postnuke.ru/>

Software Module-50 Steel KB**Type:**

PostNuke Module

Description:

Steel KB is a sort of light-weight CMS. Users can upload files and insert them into previously defined Categories. Each file can be annotated with a subject line and a description

Functions:

Fields: keywords, summary, article, author, last modified by, last modified date, article id, categories; Global user and group permissions using PostNuke groups; Article specific permissions; Multiple categories per article; Unlimited sub-categories; Arti-

cle approval (based on author); Searchable by all fields; Limit search to specific category; Browse by category, date, summary, author, or number of views; Tracks number of times an article is viewed; Attach files to an article; Print article function-File upload/download with a permission system.

Technical details:

Module v 3.0 seems to be PostNuke 72x API compliant. Tested and judged operational at some point, but currently not used at Tecfa because the tested version had a bug: Failed to load module SteelKB3.0 (at function: "main")

Download:

<http://www.chucksteel.com/> (Author's web site, see the downloads section)

Administration:

Users and Categories are managed through the modules administrator tool.

Installation:

Installation is easy . Copy contents of SteelKB folder to your PostNuke modules folder. Initialize the module. Activate the module. Change permissions of the modules/SteelKB/attachments directory to "write all" or better give it to the user id of your web server.

C3MS Brick-26 Forms

Alternative names:

HotForms Module

Functional description:

Administrators can define HTML forms that users then can edit.

Functions : Answer, Submit, edit, delete

Pedagogical interest:

Make simple CMS tools, e.g. forms that students have to fill in after field trips.

Notes:

Software Module-51 HotForms Module

Type:

PhPNuke Module (NOT PostNuke !!)

Functions:

You define your HTML form by creating Form and Field records stored in the database, the builder takes care of creating the php-nuke pages to display the form, and submit the info by e-mail

Technical details:

Not tested at Tecfa

Download:

<http://sourceforge.net/projects/tabascohotforms/>

Software Module-52 FormExpress

Type:

PostNuke Module

Description:

This module allows the an administrator to create user input forms with complex layouts via the admin web interface No coding required! Current backend is to send email, but will support multiple backends when pnException is available - i.e. will serve as a front end to any type of data capture requirement - Surveys, Inquiry Forms. There is currently no documentation, but the product is stable and a sample form is included to demonstrate the capabilities.

Functions:

The Fetax module, which is a mail template backend. Since FormExpress handles creation and editing of online formulars and may use "plug-and-play" backends to transfer the submitted data some where out on the net, Fetax has been invented as such a backend in order to use FormExpress to send templated mails, where the form data is inserted where ever the template contains a `{XXX}` reference.

Technical details:

You create forms and the results are sent by mail.

Download:

<http://www.stutchbury.com/>

Software Module-53 PostContact**Type:**

PostNuke Module

Description:

A ContactInformation/Forms module, that lets you create different forms for different users and departments inside your company. Then it is possible to contact the persons in the list by clicking on a button next to their name and filling a form. An email will then be sent to this person.

Download:

<http://www.postnuke-sweden.com/>

Installation:

Downloading only works with Internet Explorer

C3MS Brick-27 Wiki**Alternative names:**

(Simple) collaborative hypertexts, CoWebs

Functional description:

Collaborative hypertext editing.

Functions: Edit, browse, create new page, compare versions

Pedagogical interest:

Co-construct documents around a specific theme (i.e., encyclopedia, reportage, etc.)

Activities support:

“BrainStorm” [p. 42]“CoEdit” [p. 43]“CreatePage” [p. 44]“IntroWork” [p. 46]“DistributeTasks” [p. 44]

Notes:

There are dozens of various Wiki Systems.

Software Module-54 Phpwiki PN Module**Type:**

PostNuke Module

Description:

Postnuke adaptation of phpWiki.

Technical details:

Need a small hack to work with apache2. (TODOSTEPH: document this hack)

Download:

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

Software Module-55 Swiki

Type:

Standalone application (including a Web Server)

Description:

An easy to use wiki.

Download:

<http://minnow.cc.gatech.edu/swiki>

C3MS Brick-28 Word Games

Word Games

Alternative names:

Hangman Module, Crossword module

Functional description:

The know word games

Functions : Play, feedback, edit, delete

Pedagogical interest:

Learn orthography, new terms, etc. community building

C3MS Brick-29 Journal

Alternative names:

Blog

Functional description:

Allows to gather information on a private space that can be either invisible to the rest of the community or public.

Pedagogical interest:

Students can take notes and gather information they can retrieve later and transform/improve

Activities support:

Software Module-56 v4bjournal

Type:

PostNuke Module

Description:

v4bJournal is a journalling/blogging module: each registered user has the ability to maintain a journal. All users can browse the available journals and their contents.

Journal entries consist of a Title, Text an image and a mood stamp. It is possible to decide if users/members/noone can see the entries.

Functions:

Add a note, record, organize...

Download:

<http://noc.postnuke.com/projects/v4bjournal/>

Software Module-57 PN journal**Type:**

PostNuke Module

Description:

Site member's automatically have the option to create their own journals and post comments

Download:

<http://www.kuykendall.org/>

Software Module-58 pnMindMeld**Description:**

Knowledge base/blog. Postnuke hack to access a MindMeld knowledge base

Functions:

Need to install MindMeld

Technical details:

MindMeld 1.3

Download:

<http://www.nuy.info/>

C3MS Brick-30 Poetry and sayings**Functional description:**

Possibility to have poems displayed in a certain way or have sayings randomly displayed in a block

Pedagogical interest:

Motivate students

Activities support:**Software Module-59 Poetry****Type:**

PostNuke Module

Description:

Allows poetry submissions by registered users

Functions:

Unregistered users may view poem titles but must sign in to view poems, user real name displayed instead of username if available, users may edit/delete their own poems, admin access required to change other users' poems

Download:

<http://www.ivory-tower.net/>

Software Module-60 Quotes

Type:

Standard PostNuke block

Description:

This module allows to display random quotes in a block. It is also possible to insert images instead

5.5 CSCL and structured discussion

It is possible to develop more sophisticated Computer supported collaborative learning (CSCL) tools within C3MS Portals, although usually CSCL development teams create their environment “from scratch”.

C3MS Brick-31 Argumentation Tools

Functional description:

Argumentation tools allow a teacher to organize a structured discussion

Software Module-61 PN ArgueGraph

Type:

PostNuke Module

Description:

The "ArgueGraph" is a Computer Supported Collaborative Learning (CSCL) tool to support a learning activity intended to make students understand conceptual issues... The key idea is to trigger individual cognitive processes through a structured discussion scenario that makes use of a questionnaire. In a first step the tool - helped by interactive questionnaires - graphically displays "conceptual" positions of group members, held in reference to a discussion subject, theory, ideas etc. As a follow-up, the participants with strongly divergent opinions may be brought together in discussion groups, who's productivity - thanks to the divergent opinions of the participants - will be enhanced. Additionally group discussion may be organized and finally students should write an individual position statement. Such a didactical procedure - in contrary to the mere presentation of knowledge by a teacher - has the advantage that the learners actively acquire the knowledge by them selves through their debates and discussions. You may read (in French) Mourad's diploma work <http://tecfa.unige.ch/proj/seed/catalog/docs/Argue-Graph.pdf> or and article by Jermann & Dillenbourg, "An analysis of learner arguments in a collective learning environment" <http://tecfa.unige.ch/tecfa/publicat/dil-papers-2/Dil.7.3.30.pdf>

Functions:

See above. Note: You need to prepare yourself before using this kind of module, e.g. test it with a small group of people. You only get a payoff from using this kind of complex tool, if you invest.

Technical details:

This module should be API compliant. Note: All participating students have to submit their input before you can move to the “next round”. In some later version, this constraint should be relaxed.

Download:

<http://tecfaseed.unige.ch/door/> (see the downloads section)

C3MS Brick-32 Workshop Tool

Functional description:

A workshop tool should provide support for pre-workshop activities and in some ways make the workshop itself more sufficient. Look at the “wTool” [p. 82]!

Activities support:

“SubmitComment” [p. 48] “Moderate” [p. 47], “SubmitQuestion” [p. 49]

Software Module-62 wTool

Type:

PostNuke Module (Tecfa Made)

Description:

wTool is a workshop organization and management module. The organization of a workshop can be considered as a learning event. We at TECFA ground its orchestration on socio-constructivist principles and we designed wTool as a Computer Supported Collaborative Work (CSCW) tool. Its three-step organizational framework is inspired by Laurillard's (1995) Conversational Framework which requires four steps (discursive, adaptive, interactive, reflexive) to turn learning into a shared information issue. The three sections (your answers, answers by question and answers by author) of the Workshop Tool allow the participants first to enter position statements to be reviewed, then comment and re-articulate them and eventually have a synthesis with a printer friendly output.

Functions:

Teacher: Defines workshop questions. Students can answer question by question. Teacher can validate contributions by rating each question and assigning a threshold. Accepted contribution can be sorted in various ways. Annotation is possible.

Download:

<http://tecfaseed.unige.ch/door/> (see the downloads section)

5.6 Project / Course Management

In this section you will find many different sorts of tools, some can play a function in project and community management, other tools are teacher tools, still others allow the organization of larger projects and courses. Managing overall student activities can also be done by looking at overall productions, e.g. with the help of a module like “pnProdAct” [p. 57].

C3MS Brick-33 Calendar/Planner

Alternative names:

PostCalendar, Calendar, Events, Flash calendar, Ephemerides Admin

Functional description:

Calendars can have many functionalities, .e.g event calendar and event of the day, some calendars offer group facilities.

Functions : Submit, browse, edit, delete, moderate

Pedagogical interest:

Organize projects, announce events (i.e., follow expeditions, field trips, etc.), reminder for activities (by using it as a shared agenda)

Activities support:

“EditCalendar” [p. 45]

Notes:

Calendars often installed but then not used, so don't hurry before you are sure that you really need it.

Software Module-63 Post Calendar

Type:

PostNuke Module

Description:

Post Calendar is a sophisticated Calendar Module including an events calendar (e.g. possibility to show an awareness box with the events of the day). Some people prefer a simpler solution (e.g. just events).

Functions:

Post event . Choose event visibility

Technical details:

Warning.... need to change some files if used with pntrender (<http://post-nuke.net/displayarticle370.html>)

Download:

This module was originally available at <http://postcalendar.tv/> and is now integrated in core PostNuke development, available at:<http://noc.postnuke.com/projects/postcalendar/>

C3MS Brick-34 Helpdesk

Functional description:

Help users and groups meeting technical problems. Can also be used for other issues

Pedagogical interest:

Inform, give a feedback, solve problems. The module could be repurposed to be used for feedback in teaching and learning situations

Community Support:

Members of an online community feel supported, especially if they meet technical problems

Notes:

See also “Feedback” [p. 62] New Helpdesk version released (0.4.1)

Software Module-64 dq_helpdesk

Description:

Allow users/anonymous visitors to submit helpdesk or trouble tickets. Upon submission, e-mail notification can be sent to the assigned tech/site admin/help desk group - All configurable through the module administration page. Only in english for the moment

Download:

<http://www.dimensionquest.net/>

Administration:

The administration panel is quite complex and includes a lot of parametres. It is possible to add different types of "tickets" and modify the existing ones

Installation:

The folder including all the files has to be named dq_helpdesk and be sent in the "modules" folder. Then everything is to be done through the administration pannel

C3MS Brick-35 Project-based learning tool

Functional description:

Pedagogical interest:

Notes:

See also: "Pedagogical Scenario Organization" [p. 85]

Software Module-65 ePBL

Type:

PostNuke Module (Tecfa made)

Description:

For higher education. Project-Based Learning is lately a very popular pedagogical approach, but there are several "pitfalls" and careful scaffolding is needed to achieve it's interesting results. So, the goal of this module is: (1) Scaffold students during their projects by "forcing" them to fill in their project specification (through an xml grammar), (2) Helping students write their final article, (3) Help teachers monitor easily several projects in parallel and give them feedback on time (very important to regulate students in PBL)

Functions:

(1) Teachers can propose projects, accept students to make groups, can give feedback and finally evaluate projects, and monitor all projects through an advanced cockpit. (2) Students can also propose projects, join workgroups, upload/download various versions of the project products to share among their workgroup (by default at least their project specification and the final article that describes their project). See the ePBL page for more details

Technical details:

Pn 72x API compliant. This module works fine, but needs some investment from the teacher ! Before installing it, look at example courses, e.g. STAF-18 at <http://tecfa-seed.unige.ch/staf18iris>

Download:

<http://tecfaseed.unige.ch/door/> (downloads section)

Administration:

See the ePBL page at <http://tecfa.unige.ch/perso/vivian/>

Installation:

See the ePBL page at <http://tecfa.unige.ch/perso/vivian/>

Software Module-66 pnProjekt**Type:**

PostNuke Module

Description:

Postnuke integration of PHPProjekt. Project management module.

Technical details:

Not tested at TECFA

Download:

<http://www.nuy.info/>

C3MS Brick-36 Pedagogical Scenario Description**Functional description:**

Such tools are teacher tools, either to prepare learning units, or to exchange teaching recipes.

Notes:

Todo: Insert the PN syllabus tool (and find it)

Software Module-67 edu-recipes**Type:**

PostNuke Module (repurposing by Tecfa)

Description:

Edu-recipes is a repurposing of postnuke recipes module allowing to submit cooking recipes. This module allows to submit teaching and learning scenarios and include them in categories. It is also possible to create categories and include images

Download:

<http://tecfaseed.unige.ch/door/> (downloads section)

C3MS Brick-37 Pedagogical Scenario Organization**Functional description:**

Such a tool should allow the organization of pedagogical scenarios. In the case of C3MS systems, it should also act as an integrator

Pedagogical interest:

Organization of larger pedagogical scenarios, e.g. an intensive training week, a distance teaching course, a project-based blended course.

Notes:

See also: "Project-based learning tool" [p. 84]

Software Module-68 pScenario

Type:

PostNuke Module (Tecfa made)

Description:

pScenario is a tool that allows teachers to define complete and rich scenarios for various pedagogical formats (face-to-face, at distance or mixed). It is up to teacher to clearly identify needed tools and to combine pScenario with other PostNuke tools (e.g. Wiki, Links Manager, News Engine or special educational tools into a teaching portal. pScenario also could be used to administer a typical American graduate course that features readings, short exercises and a term paper. The user community will decide about the future of PESC and maybe even contribute to its evolution. This module was inspired by the Moodle pedagogical platform.

Functions:

Teacher: (1) Set scenarios, define scenario with a title, instructor, description. (2) Set activities: Add, remove, edit, and order activities and sub-activities within scenarios. Students: (1) View (normal and printer-friendly) of scenarios and their activities and their sub-activities. (2) View and add feedback for each activity

Technical details:

pScenario is PN 723x API compliant. Beta in Dec. 2003.

Download:

<http://tecfaseed.unige.ch/door/> (downloads section)

Administration:

[to be done]

Installation:

Standard API Compliant. From administration do: modules'->'pscenario'->Initialize->Activate. Then add the module inside a menu block: Title: Pedagogical Scenario (or whatever you chose), URL: {pscenario}

C3MS Brick-38 Task Management

Alternative names:

Dynamic Planning Module, To-Do List, Task Manager, Project Manager

Functional description:

Project organization (planning) and specification, task distribution.

Functions: Add or attribute tasks, make groups, give feedback, time planning.

Pedagogical interest:

Project-Based Learning, collaboration management, teaching of project management

Activities support:

“DistributeTasks” [p. 44]“PlanProject” [p. 47]

Notes:

More sophisticated professional task management tools can also be used.

Software Module-69 Steel Task Manager Module

Type:

PostNuke Module

Description:

Task Manager Module supports individual and group tasks. NOTE: administrators (e.g. teachers) can not assign tasks to individuals and groups. They have to do it themselves.

Functions:

Create tasks for individuals and groups. Close Tasks. Designate certain postnuke groups as taskable. Assign tasks to taskable postnuke groups. Update task notes. Show completed tasks. Sort tasks by task or created date. Mark Percentage Complete for each task. Limited value for education, since tasks can not be assigned from “outside” the owners of a task.

Technical details:

Task Manager 1.0 seems to be API compliant, V1.0 tested, but not used at TECFA

Download:

http://www.chucksteel.com/index.php?page=pn_modules

Administration:

User rights are administered from the PostNuke Admin menu.

Installation:

Installation is easy and standard

Software Module-70 Correspondants

Description:

This module allows teachers to display a description of their classes and pedagogical objectives and to find correspondants for a specific project.

Functions:

Find, describe,

Download:

<http://tecfaseed.unige.ch>

5.7 Quizzes and Surveys

Quizzes and Surveys can be used to test knowledge (self-testing or examination). But they are also nice discussion preparation tools.

C3MS Brick-39 Quiz

Quiz, questionnaire

Alternative names:

Quizzing, Examination, Test

Functional description:

Allows to enter questions with various answer formats to create a quiz.

Functions: submit, edit, configure

Pedagogical interest:

Allows teachers to check if students have well understood what was taught and to students to test their state of knowledge. Quizzes can also be used to prepare discussion, to wake up interest for a topic etc.

Software Module-71 vQuiz

Type:

PostNuke Module (Tecfa made)

Description:

vquiz is a simple quiz engine. Easy to use and to administer.

Functions:

Administrators get access to the following sort of functions: New quiz (name, no of questions, no of answers, no of trials allowed, questions, answers, feedback per answer, points per answer), Edit quiz, Delete quiz, Hall of fame of quiz (possibility to delete a user), Test quiz, Activate quiz

Technical details:

PN 72x API compliant module

Download:

<http://tecfa.unige.ch/perso/vivian/>

Software Module-72 Exams Module

Type:

PostNuke Module

Description:

Exams / Quizzing Module

Functions:

Definition of different exams with multiple choice questions (including multimedia).
Definition of different levels and categories. Results can be displayed (% of success for each exam by each user). Unfortunately no feedback

Technical details:

Tested at Tecfa. We also made a french translation

Download:

<http://surgery.psu.edu/>

Software Module-73 pnExam

Type:

PostNuke Module

Description:

Quizzing module

Technical details:

Not yet tested at Tecfa

Download:

<http://www.technikz.de/>

C3MS Brick-40 Polls/surveys

Polls/Surveys

Alternative names:

NS-Polls

Functional description:

Voting System Module

Functions: Submit, edit, delete, vote, view statistics, archive

Pedagogical interest:

Rate different kind of things (ex: vote for the best story) or make surveys (for ex: to show a real example in statistics). Of course a real survey tool can also be used by student projects to collect data from a sample of a specific mother population.

Activities support:

“EditVote” [p. 46]“VoteFor” [p. 49]

Notes:

See also “Quiz” [p. 87]

Software Module-74 PostNuke Polls**Type:**

PostNuke Standard Module

Description:

This is a simple polling tool, usually a single question is displayed in a block.

Functions:

Administrators can define various Polls and activate one. A poll is a single question with radio-buttons. Users can fill in the poll once and they can (optionally) add comments.

Administration:

Polls can be defined in Administration/Polls. Each poll can be activated as a block through Administration/Blocks. Add a block of type “Core/Poll” with “New Block” and “Edit”.

Software Module-75 pnESP**Type:**

PostNuke Standard Module, also available as standalone application

Description:

pnESP is a complex survey module

Functions:

Definition and administration of multiple surveys. Different sorts of surveys (e.g. and questions. A permission systems (who can define surveys, you can take it). Data can be exported to a CSV file or results can be seen online. Administration is quite complex for this complex tool. Make sure to carefully read the documentation first !

Technical details:

Use smarty template engine.

Download:

<http://pnesp.sourceforge.net/>

5.8 Misc.

Entries that do not fit other categories

C3MS Brick-41 Example

Examples and Demos are important for many purposes. While there is no such brick as “Example” we still leave it here for the moment

Alternative names:

A list of names or URLs that modules and associated applications and blocks may have

Functional description:

Examples, if possible, should fully expose their functionalities and let the “user” play with them. Alternatively or additionally, an example could be annotated by some detailed explanation.

Pedagogical interest:

Hints for pedagogical usage.

Notes:

This is not a C3MS brick in the usual sense

C3MS Brick-42 MUDs

Alternative names:

MOO, MUD object oriented

Functional description:

A MUD is a text-based virtual environment. The MOO architecture used at Tecfa includes a server (that includes a database mechanism and an integrated scripting language). The database includes all the objects (e.g. rooms, users, programming extensions, interactive objects, etc.) In addition, some databases like enCore MOO include a web client & server system.

Pedagogical interest:

MOOs can be used for various purposes: Children can build “worlds” for some topic. A Moo is a place of virtual presence where users can develop an online identity (e.g. to support learning by apprenticeship, or other informal ways of tutoring). Moos also can be used as replacement for chats, e.g. for distance tutoring sessions.

Software Module-76 Nubel

Description:

Utility module to translate modules in several languages.

Software Module-77 Genealogy

Description:

Module to create genealogies.

Software Module-78 enCore MOO

Type:

MOO database with an integrated Web Client

Description:

enCore is one of the remaining active MOO projects in education. There are two books published useful to educators. Here is the official blurb: “enCore is an online virtual learning environment system built on LambdaMOO. It comes with a built in

server-side client called Xpress. enCore was primarily designed for educational use, but can also be used for other purposes. It is perfect for digital community building, online writing projects, online conferencing, distance education programs, or just about any educational endeavour that aims to incorporate a rich and versatile online presence”.

Download:

<http://lingua.utdallas.edu/>

Installation:

Installation is not too difficult, but need to carefully follow instructions Important: You need to install first a MOO server also and we also recommend to use a simple text-based MOO-client like tkMOO for administratio. Follow the instructions at the enCore site)

C3MS Brick-43 Multimedia

Notes:

Handling of various multimedia formats

Software Module-79 Jinzora

Description:

This is a Web-based media streamer, primarily designed to stream MP3s (but can be used for any media file that can stream from HTTP). It can be integrated into a Post-Nuke site, run as a standalone application, or be integrated into any PHP Website.

Technical details:

Current version only works at inside apache docroot. Virtual directories are not supported, support is planned in the future. Streaming of media files using HTTP - generally MP3s,

On-the-fly creation of playlist from any level of the application - including random playlist generation, Very Simple web-based installation - no database or external applications required,

Fully Multi-lingual, Released under GNU General Public License

Download:

<http://www.jinzora.org/>

6 Selection and installation of portalware

DKS

Finding an appropriate portal is very difficult. In the absence of standards for active pedagogics and given the dominance of so called “e-learning platforms”, we suggest to adopt one of the following solutions:

- A technology-savvy teacher interested by modern server-side technology should try to install and to run his very own portal. Possibly on a Linux-based machine that is available for his school, else with a private provider that provides the kind of technical infrastructure that is needed, e.g. a well configured Apache/Php/Mysql server.
- A variant is to have it installed by someone in the organization or some Internet enthusiast that will do it for little money
- Ask around if the school system supports a community portal (for schools) and use this.
- Re-purpose the huge and heavy enterprise portal you may have access to (e.g. Lotus/Domino, IBM Websphere etc.). However, this entails negotiation with some central informatics department.
- Re-purpose the functionalities of an e-learning platform

Currently, we repeat, there is no “off the shelf” platform for the kind of pedagogics we advocate and covers all your needs. E.g. so far, we do not know yet the full potential of C3MS like PostNuke. One major limitation of using C3MS portals seems to be the lack of provision for integration (and in particular data-flow) between applications which are required for more complex Computer Supported Collaborative Learning (CSLS) scenarios. Another limitation concerns management of contents, activities and people over time: How can we efficiently enough “reset” or move some of it so that fresh activities of the same kind can start with an empty slate while keeping past student production available to new students.? Some of these issues can be dealt with by careful planning of module use and naming, as well as differentiated write access permissions. In other words, handling these issues require the same sort of planning that a traditional user-driven educational site does. But certainly, things could be improved and automatized to some degree. We are also aware that C3MS portals are not the answer for more complex CSCL workflow scenarios. However, we think that there is an important need to actively support educational scenarios requiring less complex technology and that can be used for other interesting purposes such as community building. Therefore we claim that PostNuke is currently one of the best choices one can currently make, even if it is not the “final answer”. However, in the next section we shortly present a few alternatives.

6.1 Selection of portals

We have examined a fair number of portals as candidates to support educational scenarios and we focused on four main classes:

- Simple WebLogs
- Wikis and wiki-based portals
- Complex WebLogs, community enhanced CMS systems built with scripting languages, complex news systems etc., i.e. systems that grow into what we call C3MS (Community, Collaboration and Content management Systems)
- Large Portal Systems or Java-based modular portals

We advocate the use of portalware writing in PHP. PHP is TECFA's principal language for writing web applications. It is a powerful and relatively easy to learn scripting language despite its syntactical inheritance from C. In addition, it has become the Open-Source most popular scripting language and there are more portals written in PHP than in any other. Technology-savvy teachers can learn a little bit of PHP programming and are therefore able to make simple modifications in the source code, i.e. change a string used in display. Java, on the other hand, is a difficult environment and requires professional expertise (even for installations) but it is the technology used for more advanced developments, i.e. the Cocoon 2 framework and Portlet servers like Jahia or JetSpeed.

Here are a few recommendations of portals that you can safely experiment with, provided that you master typical linux/open source installation procedures. The list is based on what little we have learned from some testing and early field testing with some. So take these with a grain of salt. In any case, if you plan to use pedagogical modules (C3MS bricks) developed at TECFA, you do need PostNuke

The table below not complete. You can find a much larger list on <http://tecfa.unige.ch/guides/portals/pointers.html>:

Portal Name	Technology	Type	Comment
PostNuke	PhP/MySQL	C3MS	Very popular, many plugins and themes (of very different quality), nice user system and generally quite powerful administration. This is the portal chosen by the TECFA Seed project and for which we documented modules in this catalog
PhpWebLog	PhP/MySQL	WebLog	Extra modules : calendar, shoutbox, etc., no user system, some basic content management. Small and quick.

PhpWebSite	PhP /MySQL	Simple CMS/ WebLog	Good compromise between phpWebLog and PostNuke. Ergonomic interface and good code but not very advanced system for content distribution according to authentication (user permissions)
Xaraya	Php/MySQL	CMS	CMS basé à l'origine sur PostNuke. Bonne qualité, moins de modules que PN.
Drupal	PhP/MySQL	Simple C3MS	Features a collaborative boo, WebLog per user and an integration mechanism. A good example is the Kairos portal. This portal also features several interesting modules you can take from the main site.
GeekLog	PhP /MySQL	Complex WebLog	Like phpWebSite, but features a user system. Clean coding and fast.
Jahia	Java/HSQL	Flexible enterprise portal	Implements a portlets architecture, has a sophisticated role model too. Commercial, but open source and it is made in Geneva
Radio User- lan	Frontier	Commercial WebLog	WebLog for the masses, easy Interface. Note, that there are many other available weblog systems !

6.2 Installation of PostNuke and modules

Please also refer to instructions in the PostNuke distribution ! This is just a short outline of the procedure, although if you have some experience in installing server software, there is not much more you need to know

Installation of PostNuke

In order to install PostNuke you need first of all the right server architecture. Some Internet providers (e.g. Infomaniak in Geneva) provide this environment.

- A Apache server with a correctly installed PHP
- A MySQL server (preferably on the same server). You need full permissions for a least one database. Make sure that you know the name of the MySQL database, the name of MySQL user that has full access to it and the corresponding MySQL password.

You do not necessarily need access to the server (via telnet). FTP access is fine, provided that you are allowed to change file permissions or alternatively that your provider offers a web-based file management tool that allows you to change permissions. If you wish to install via FTP you need the following tools:

- A FTP client
- A “unzipping” tool like Winzip

- Download PostNuke from <http://www.postnuke.com>
- Decompress the *.zip or *.tar archive in some directory
- Transfer the whole “html” subdirectory to your Web Server
This may take some time. You can then rename this directory on the server if you wish
- From a web browser, click on the file *install.php* and follow instructions
You will have to enter the following information:
 - Database name is in most cases: localhost
 - Database Password
 - Database Name
 - Database Prefix
This is a very useful feature if you have only access to a single database. Each table will be “prefixed” and there won’t be a conflict with other installed portals.
- Do a NEW INSTALL
Don’t check “create database” if you already got one !
- Click on START and choose your password
- Enjoy

PostNuke Modules installation

Most PostNuke Modules now install fairly easily, i.e. they follow the algorithm outlined below. However, **always** read the installation instruction. Some modules are not fully API compliant and need extra work. Also make sure to fix file permissions for modules that upload/download (this includes standard modules).

- Download and uncompress archive
 - Get the module preferably from it’s author’s site
 - Extract the archive to some place
 - Usually the module extracts to some subdirectory.
- Install and Activate Module
 - Copy your new_module folder to the postnuke modules folder
 - Login to postnuke and select Modules from the administration menu
 - Click on Regenerate
 - Find your New_Module module and click Initialize
 - Find your New_Module module and click Activate
- Insert Module in some Menu
 - Select Blocks from postnuke Administration Menu
 - Find a Menu block and click Edit
 - For URL use {new_module}, substitute of course “new_module” by the module name of your module use whatever you want for the other fields
 - Click commit

6.3 Development of PostNuke Modules

While programming PostNuke modules is in most cases more efficient than writing stand-alone components, it is not easy. To program a good Beta version of typical module developed

at Tecfa like “pnProdAct” [p. 57], “pScenario” [p. 86]“vQuiz” [p. 88]“PN ArgueGraph” [p. 81],“wTool” [p. 82] or “ePBL” [p. 84] takes on average about 2 month (more or less 1 month according to the complexity of the module, PHP programming skills and previous experience with PostNuke

Repurposing a module can take much less, if you don’t need to change its structure. E.g. “edu-recipes” [p. 85] took less than a week for an unexperienced person.

If you subcontract module writing or if you hire someone you should insist that the person respects PostNuke’s programming guidelines and its API (application programmer’s interface). This will make installation much easier for everyone and it will greatly increase the likelihood that your module will run in future versions!

Documentation for writing such modules is not optimal (as with most Open Source projects. However, there are a number of resources which you can find in various Support portals. The starting point is <http://docs.postnuke.com/> but many other places may have interesting information, e.g. at Tecfa we provided a few slides for PN 7.2x that we used for teaching: <http://tecfa.unige.ch/guides/tie/html/portal-prog-pn-en/portal-prog-pn-en.html>

7 The executive summary

UNDER CONSTRUCTION (ignore right now !) - Daniel Schneider

This chapter provides a summary of tasks and PostNuke tools that can help. The idea is help both experts and beginners to wade more quickly through this catalog. Very provisional ! I will change the categoris once I know which kind of information I will have ...

(1) Managing a course

Various Management tasks you may encounter:

Multifunctional planning modules

“pScenario” [p. 86]

This is a tool that allows to describe teaching/learning units, define tasks (and subtasks) and associated tools & ressources that participants will use. If you just need this functionality, consider moodle.org instead.

Announcements and feedback

“PostNuke News Engine” [p. 67]

A news engine is like a blog. It’s simple, yet powerful. Create a topic for each type of message, e.g. “Task (homework)”, “Feedback”, “Friendly tips”, etc. As soon as a user enters the portal he will see the latest message. He also can browse messages by topic or search them.

(2) Gathering and organizing resources

This is for both teachers and students

What’s going on in the world ?

“PostNuke RSS blocks” [p. 53]

RSS feeds from various interesting site are an interesting addition to your teaching portal. And best of it: You don’t need to do any manual updates. Search for “XML” buttons in portals you like and insert RSS blocks.

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Web Sites (to be integrated elsewhere / or killed)

<http://www.fnl.ch/>

Forum New Learning

<http://discas.ca/>

Site pédagogique canadien