

Web-based Course Development using OSS Course Management Systems

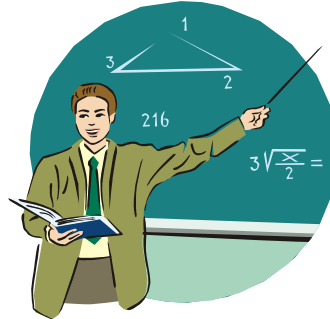


Sahid
Yogyakarta State University



Different DELIVERY Models

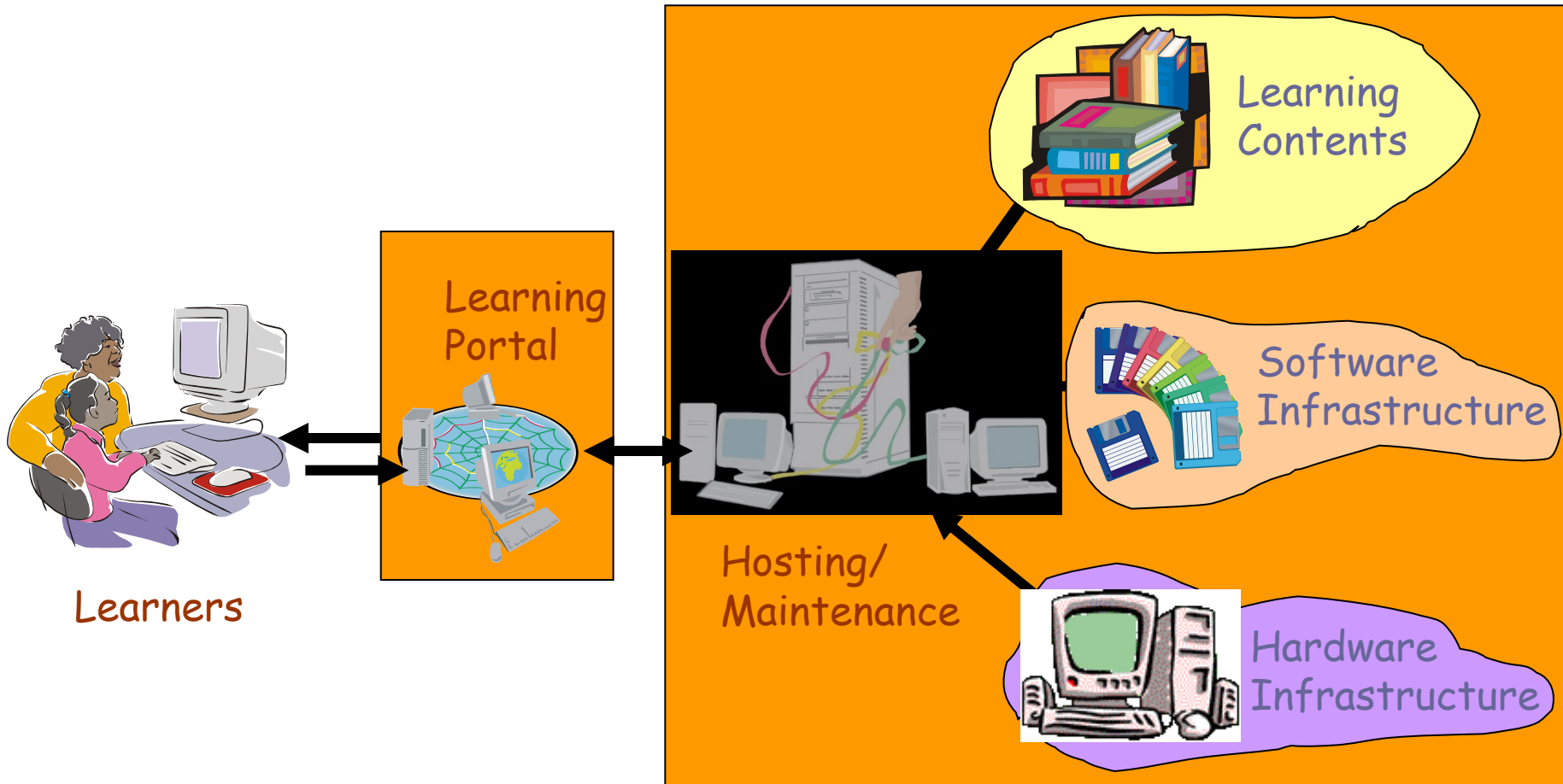
- Class Room
- Distance Learning
 - Synchronous
 - Asynchronous
- E-Learning



Program Component	Classroom	Distance Learning	e-Learning
Pre-Assessment	Instructor	Instructor	Learning System
Content	Instructor	Instructor	Learning System
Instructional Design	Instructor	Instructor	Learning System
Delivery	Instructor	Instructor	Learning System
Evaluation	Instructor	Instructor	Learning System
Administration	Instructor/System	Instructor/System	Learning System

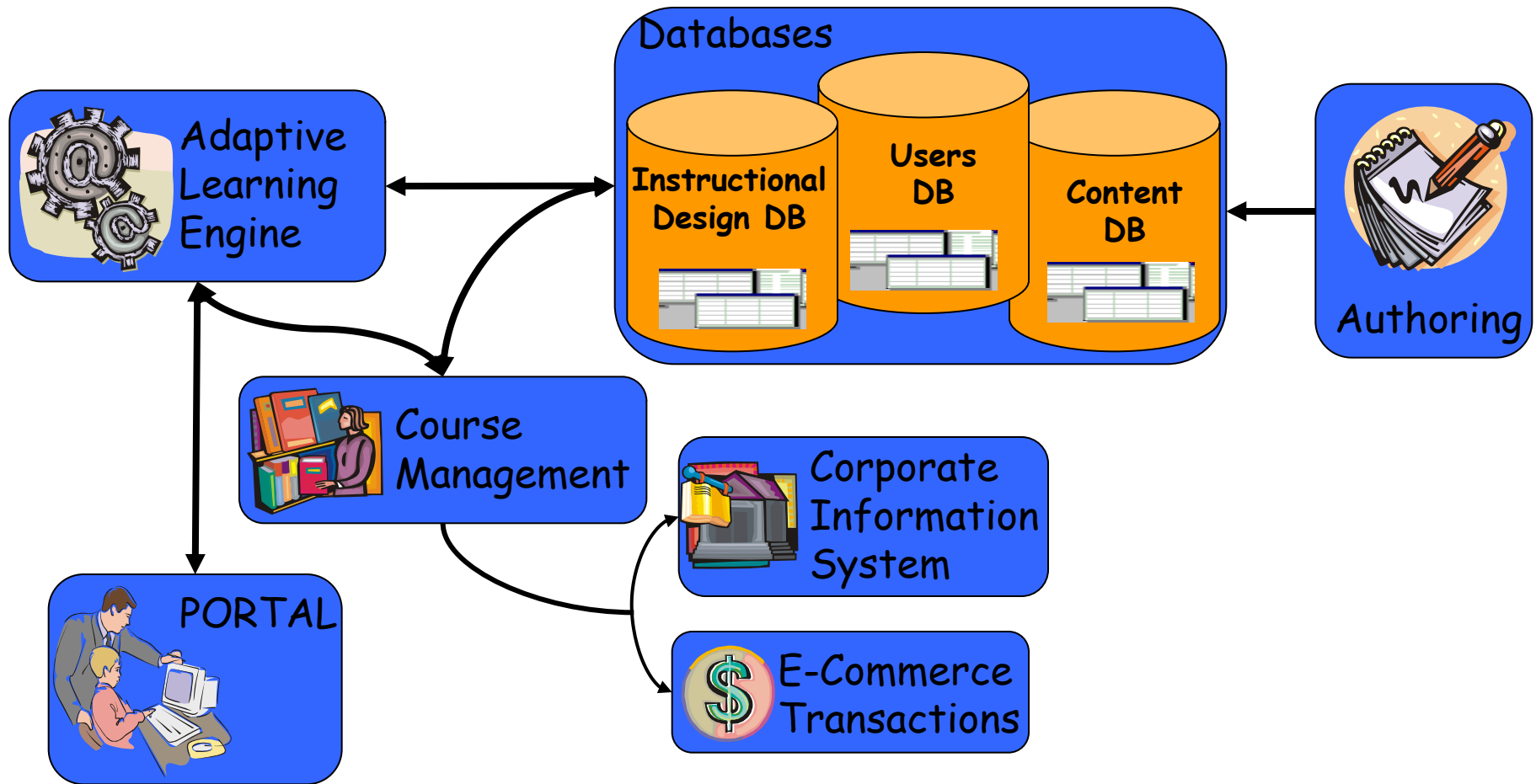


Architecture of E-Learning System



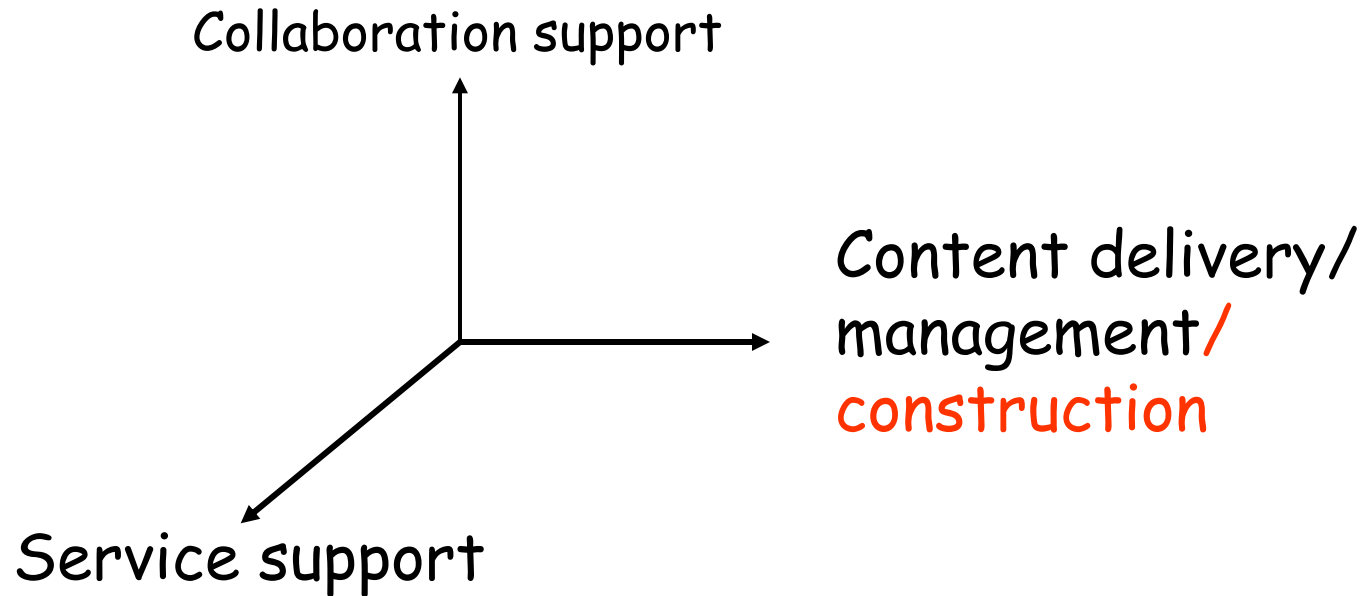


Software Architecture of an E-Learning System





Learning Management System

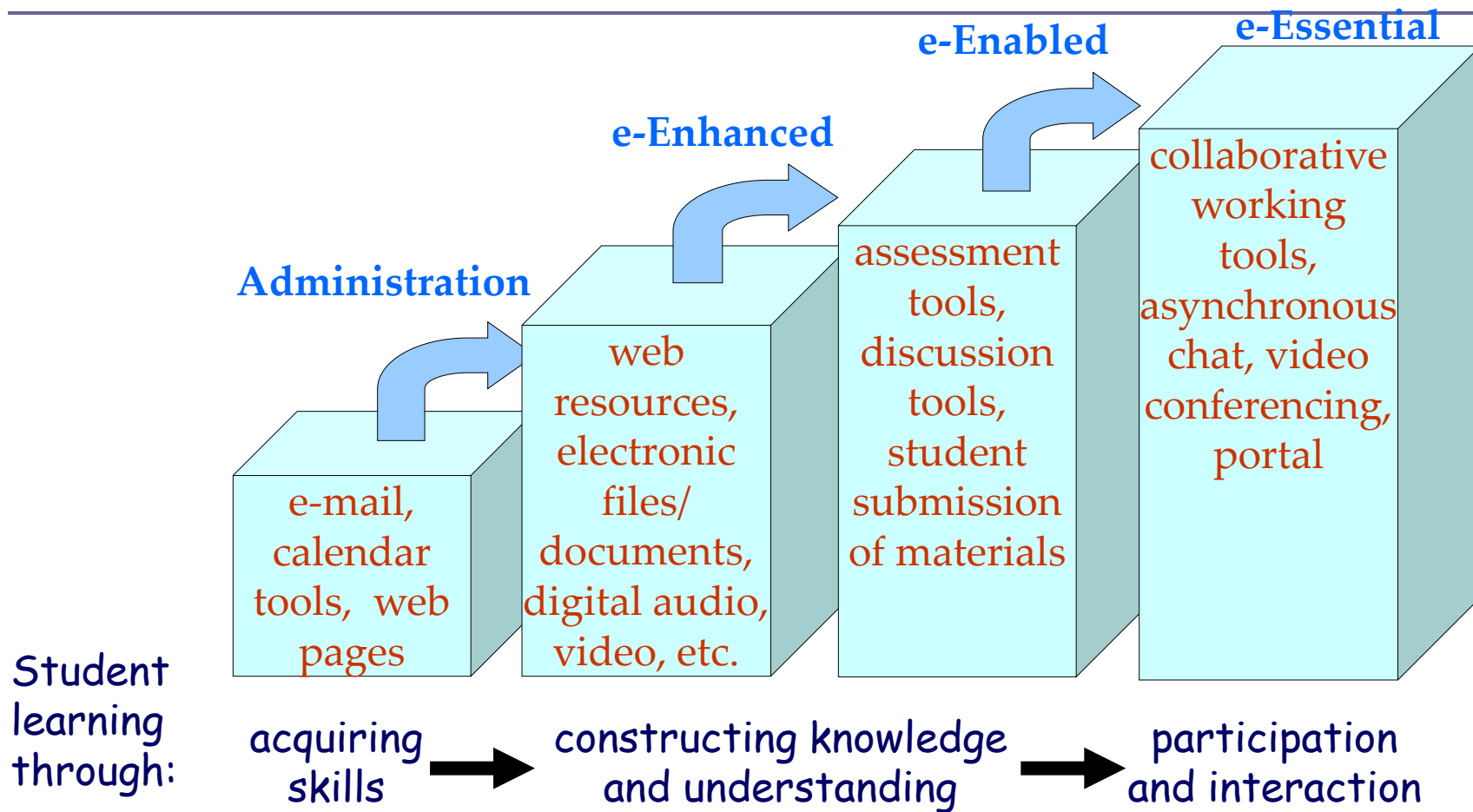


Pedagogical Considerations



E-Learning Framework

(Center for Learning and Teaching, 2003
<http://www.wlv.ac.uk/celt/oltips/3what.html>)





Make or Buy?

	Commercial	Own Development	Open Source
Cost	Medium	High	Low
Flexibility	Medium	High	High
Integration	Problematic	Good	Medium
Support	Good	Costly	Low
Vendor Lock	Yes	No	No



Procedure in Developing Web-based Course

1. Conduct Instructional Analysis
2. Developing & Preparing Learning Object Materials
3. Developing Program Mapping
4. Apply for Web-based Class
5. Log in to the Online Class
6. Configuring the Online Class Tools

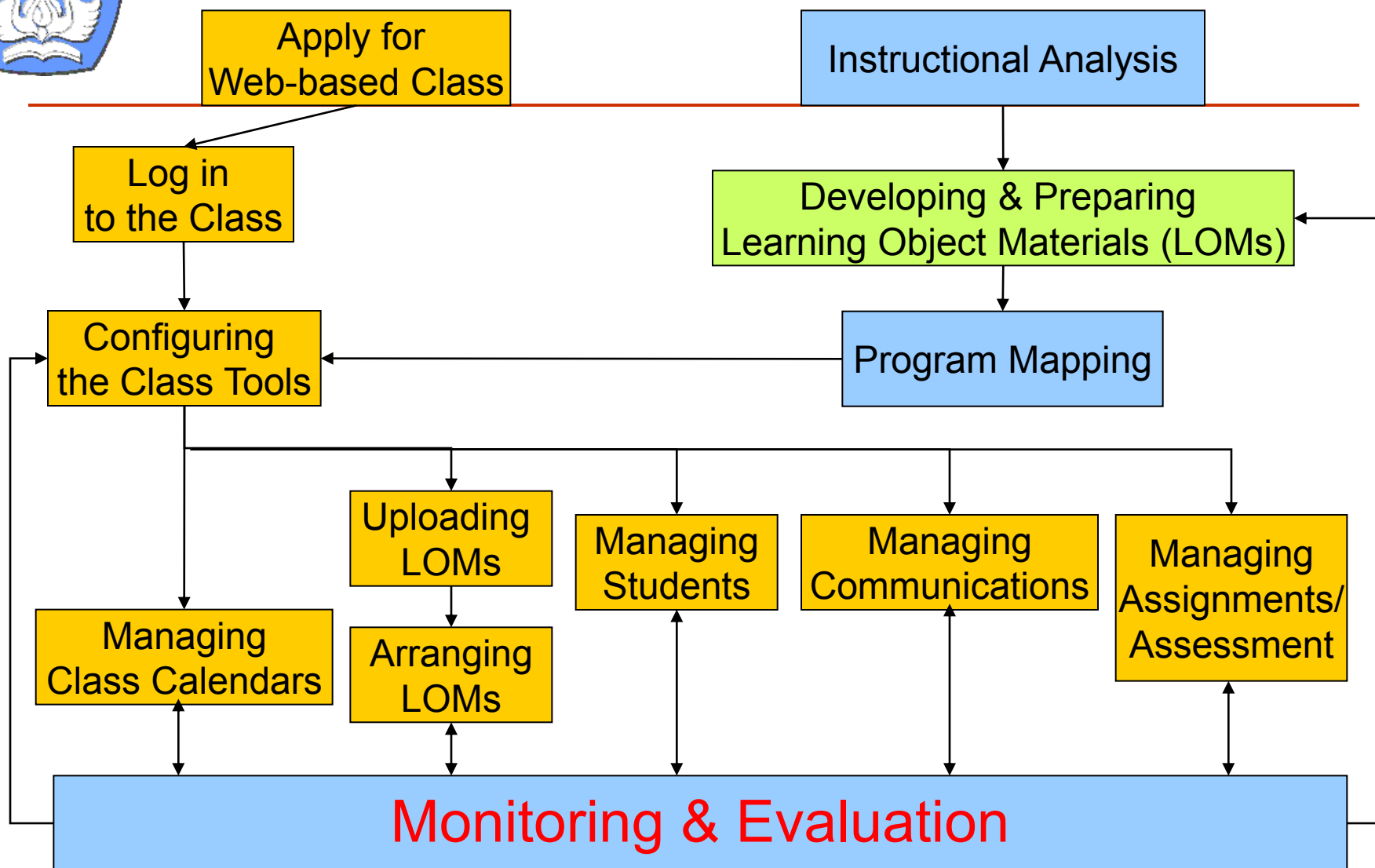


Procedure in Developing Web-based Course (cont.)

7. Preparing/Managing Class Calendars (weekly, monthly, one semester)
8. Uploading LOMs into the system
9. Arranging LOMs using the Course Tools based on Program mapping
10. Managing Students (registering, grouping, tracking, etc.)
11. Managing communications (e-mail, discussion forum, chatting)
12. Managing Assignment (quizzes, exercises, examination)
13. Monitoring & Evaluation



Flowchart of Developing Web-based Course



Source of CMS Information

www.edutools.info



edu tools SM Providing decision-making tools for the **E-D-U** community

Edutools Home | **Course Management Systems** | Student Services

◆ Product Information ◆ Compare Products ◆ Make a Decision

Home > [Course Management Systems](#)

Product Information

[Current Products](#) | [Older Versions](#)

Select a product:

.LRN	eCollege AU+
ANGEL 5.6	Educator
ANGEL 6.0	EduSystem
Anlon 4.1	Eledqe 1.2
ATutor 1.3	Eledqe 3.1
ATutor 1.4	Embanet hosting ANGEL
Avilar WebMentor 4.0	Embanet hosting BlackBoard
Bazaar 7	Embanet hosting FirstClass
BlackBoard 5.5	Embanet hosting IntraLearn
BlackBoard 6	Embanet hosting WebCT
Bodington	ETUDES
BSCW 4.0.6	FirstClass 7.0

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

edu tools SM Providing decision-making tools for the **E-D-U** community. A project of **wcet**

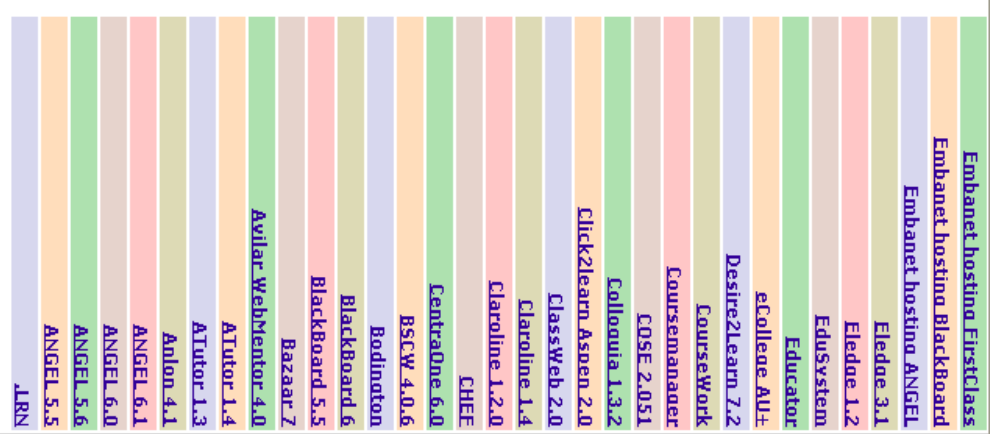
Edutools home | Site map | Contact us | About Edutools | About WCET

COURSE MANAGEMENT SYSTEMS

Product Information | Compare Products | Make a Decision | [HELP](#) | [NEWS](#) | [LINKS](#) | [VENDOR LOGIN](#)

Home > [Course Management Systems](#) >> [Compare Products](#)

Compare All Products by All Features



Learner Tools
> Communication Tools

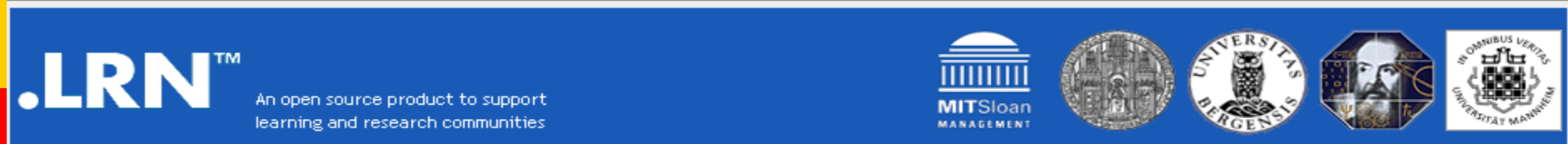


Some Open Source & Free CMS

- .LRN (OSS)
- ATutor 1.4 (OSS)
- Bazaar 7 (OSS)
- Bodington (OSS)
- BSCW 4.0.6 (Free)
- Claroline 1.5 (OSS)
- ClassWeb 2.0 (OSS)
- Colloquia 1.3.2 (Free)
- COSE 2.051 (Free)
- CourseWork (OSS)
- Eledge 3.1 (OSS)
- ETUDES (Free)
- Fle3 (OSS)
- ILIAS (OSS)
- Internet Course Assistant 2.0 (Free)
- Jones e-education V2004 (Free)
- KEWL 1.2 (Free)
- LON-CAPA 1.1 (OSS)
- Manhattan Virtual Classroom 2.3 (OSS)
- MimerDesk 2.0.1 (OSS)
- Moodle 1.1 (OSS)
- WebWork (Free)
- Whiteboard 1.0.2 (OSS)



.LRN (OSS): <http://dotlrn.mit.edu>



- About Us
- News
- Features
- Case Studies
- Partners & Users
- White Paper
- Download
- Support
- License
- Events
- Press

Overview

.LRN is the world's most widely adopted enterprise-class open-source software for supporting learning and research. Originally developed at MIT, .LRN today is used by nearly half a million users in more than eighteen countries worldwide. With a powerful underlying development framework that promotes scalable innovation for collaborative education, .LRN is used by higher education institutions, as well as K-12, government, and non-profit organizations. .LRN also provides a total cost of ownership significantly lower than custom or commercial solutions.

[Register](#) and participate in our [online and blended learning discussions](#) or our more [technical forum](#).

The .LRN application suite is backed by a thriving user community and by the .LRN Consortium. Consortium member institutions work together to support each other's deployments and to accelerate and expand the adoption and development of .LRN. To this end, the Consortium ensures software quality by certifying components as .LRN-compliant, coordinates software development plans, and maintains ties with [OpenACS](#), the open source toolkit which forms the basis for .LRN.

News

- [New release manager for .LRN](#)
- [Case Study: UCLA Health Sciences - David Geffen School of Medicine](#)
- [Case Study: Harvard's E-Government Executive Education \(3E\) Project at the John F. Kennedy School of Government](#)
- [New Applications Developments and Releases](#)
- [200,000 Students to Use .LRN at UNED](#)



ATutor 1.4 (OSS): www.atutor.ca

The screenshot shows the ATutor website interface. At the top, there is a navigation bar with links for Welcome, Development, Support Forums, MyATutor, News, Services, and About. A search bar is located on the left. Below the navigation bar, there is a sidebar with a 'Projects' menu containing links like ATutor, Change Log, Road Map, Demo, Downloads, Translation, Themes, Licensing, Links, Learning Content, Documentation, HowTo Course, Requirements, Installation, Configuration, Translating, FAQs, Accessibility, and Developers Doc. The main content area features a 'HowTo 1.4' article preview with a date of 'Jun 29' and a link to 'ATutor 1.5RC3 Released!'. To the right of the article preview, there is a section titled 'What is ATutor?' which describes it as an Open Source Web-based Learning Content Management System (LCMS) designed with accessibility and adaptability in mind. Below this section, there are two logos: 'W3C WAI-AA WCAG 1.0' and 'W3C XHTML 1.0'. At the bottom of the screenshot, there is a link to 'ATutor has also adopted the IMS/SCORM Content Packaging specifications'.



Bazaar 7 (OSS)

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

Address <http://klaatu.pc.athabascau.ca/cgi-bin/b7/main.pl?rid=1> Search

Home Page P... .LRN - Support .L... AT ATutor: Learn... Bazaar: Bazaar Bazaar: Bazaar

BAZAAR The Next Generation Learning Management System Athabasca University Canada's Open University

Home Download About In use Bazaar at Sourceforge FAQ

Hello, Guest. Click [here](#) to log in.

Welcome to Bazaar.

- [About Bazaar](#)
- [Change Log](#)
- [Developer List](#)
- [Examples of Bazaar at Work](#)
- [Tools](#)
- [System Requirements](#)
- [Admin FAQ](#)
- [User FAQ](#)
- [Announcements](#)
- [RSS Importing Samples](#)
- [Guest Book](#)
- [ADLib RSS: Recent Learning Objects](#)
- [Bazaar Demo Site](#)

Courses
A complete list of courses hosted by this system.

Journals
Athabasca supported scholarly journals

Projects
Container for AU supported web page and portal projects

Committees
AU Committees Settings

Bazaar Documentation
Tutorials and help for general, admin, and developer users.



Claroline 1.5 (OSS)

www.claroline.net

The screenshot shows a web browser window with the address <http://www.claroline.net/>. The browser tabs include 'Home Page P...', 'AT Tutor Cours...', 'Claroline.net - ...', and 'Yahoo! Mail - ...'. The main content area is titled 'My Online Campus' and 'My University'. Below this, there are navigation links: 'My course list', 'My agenda', 'Platform Administration', 'Modify my profile', and 'Logout'. The main heading is 'Claroline Crash Course' with the course ID 'COURSE01 - Hugues Peeters'. A sidebar on the left lists various course components: Course description, Agenda, Announcements, Documents and Links, Exercises, Learning Path, Assignments, Forums, Groups, Users, and Chat. A central text area contains a welcome message and a mathematical problem: 'Now let's start the course ! Consider the following equation.' followed by the equation $\lambda_1 = -1:$ and
$$\begin{pmatrix} 2 & 0 & 0 \\ 0 & 1 & 1 \\ 0 & 1 & 1 \end{pmatrix} x = 0, \quad x = (0, 1, -1)^T, \quad \vec{e}_1 = \frac{1}{\sqrt{2}}(0, 1, -1)^T$$
 Below the equation, it says $\lambda_{2/3} = 1:$ and a path: 'Path: book > p > book'. A right-hand menu is open, showing options like 'Course description', 'Agenda', 'Announcements', 'Documents and Links', 'Exercises', 'Learning Path', 'Assignments', 'Forums', 'Groups', 'Users', and 'Chat'. The 'Learning Path' option is highlighted.



ClassWeb 2.0 (OSS)

<http://classweb.ucla.edu>

Address <http://classweb.ucla.edu/>

Home Page P... ClassWeb Open ... Caroline Doc... net CHEF - Produ... Blank collab.sakaipr...

ClassWeb open source

ClassWeb

UCLA SOCIAL SCIENCES SSC

ClassWeb was designed to let instructors easily create and control class websites. We learned a lot. We made a lot of mistakes. Think of this open source distribution as a "full-disclosure" of how we did what we did. To make use of it, you will have to create your own database and alter our templates to fit your needs. Where it's possible to use only certain modules on their own, we make note of that on the Download page. ClassWeb is freely distributed under the [GNU Public License](#).

About ClassWeb

- [Executive Overview](#)
- [Features](#)
- [Technical Overview](#)
- [License & Copyright Info](#)
- [Contact Info](#)

Download & Instructions

- [Change Log](#)
- Requirements Version: [2.03](#)
- Installation Instructions Version: [2.03](#)
- [Multilingual Readme Wiki](#)
- [Maintenance](#)
- Download ClassWeb Version: [2.03](#)

Latest News

- **06-15-05** Taking down demo for security reasons.
- **02-12-04** Restored functionality of ClassWeb demo site and verified integrity of ClassWeb distribution files.
- **09-26-02** Released ClassWeb 2.03 [here](#), [SourceForge](#), and [Freshmeat](#).
- **09-18-02** Created a public [Wiki site](#) to support the development of new language files for Multilingual ClassWeb 2.03.

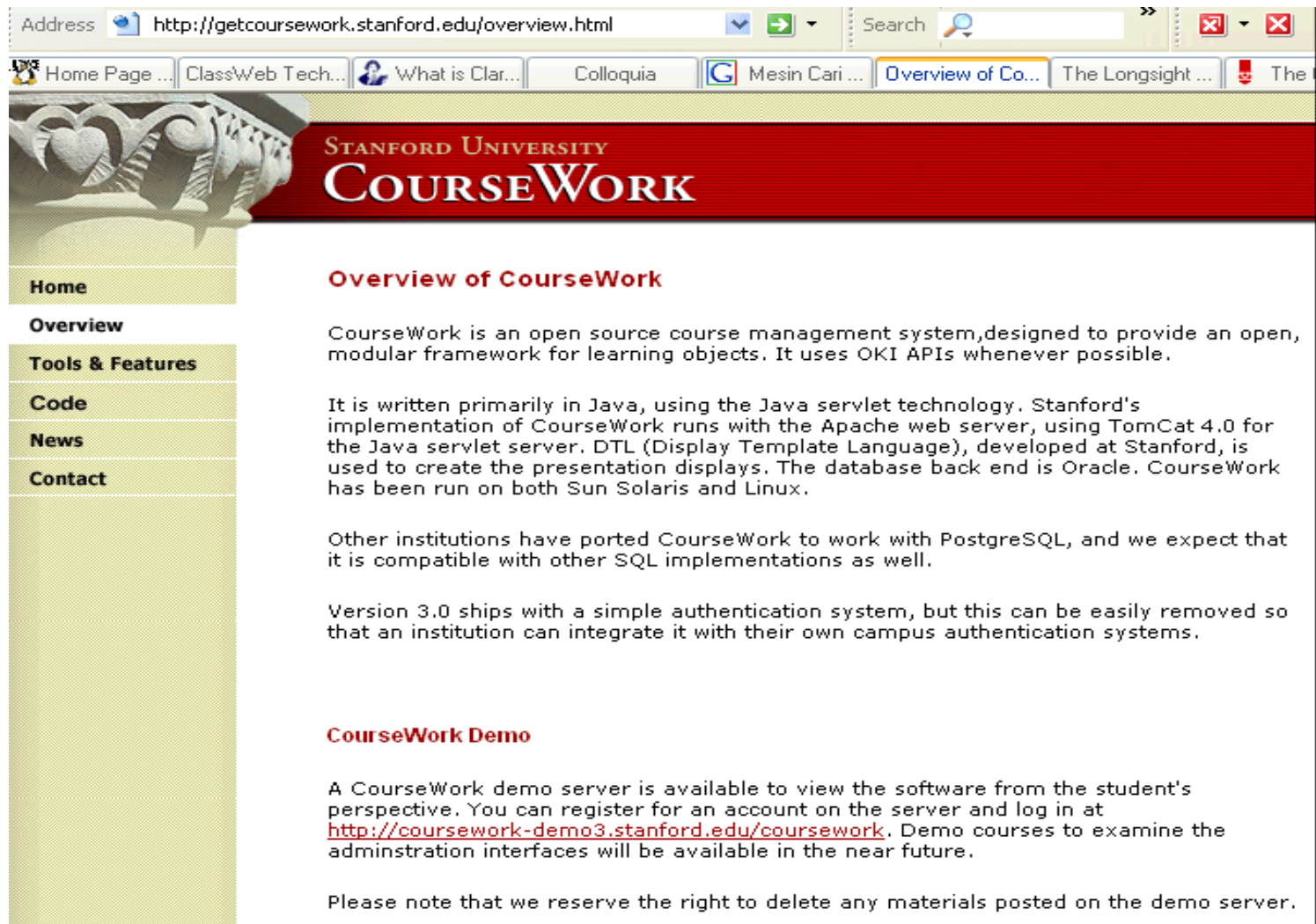
ClassWeb in Use at UCLA

- [UCLA Social Sciences Classes](#)
- [Examples of ClassWeb Use](#)



CourseWork (OSS)

<http://getcoursework.stanford.edu>



The screenshot shows a web browser window displaying the CourseWork website. The address bar shows the URL <http://getcoursework.stanford.edu/overview.html>. The browser tabs include 'Home Page...', 'ClassWeb Tech...', 'What is Clar...', 'Colloquia', 'Mesin Cari...', 'Overview of Co...', 'The Longsight ...', and 'The'. The website header features the Stanford University logo and the text 'STANFORD UNIVERSITY COURSEWORK'. A left sidebar contains a navigation menu with links for 'Home', 'Overview', 'Tools & Features', 'Code', 'News', and 'Contact'. The main content area is titled 'Overview of CourseWork' and contains the following text:

Overview of CourseWork

CourseWork is an open source course management system, designed to provide an open, modular framework for learning objects. It uses OKI APIs whenever possible.

It is written primarily in Java, using the Java servlet technology. Stanford's implementation of CourseWork runs with the Apache web server, using TomCat 4.0 for the Java servlet server. DTL (Display Template Language), developed at Stanford, is used to create the presentation displays. The database back end is Oracle. CourseWork has been run on both Sun Solaris and Linux.

Other institutions have ported CourseWork to work with PostgreSQL, and we expect that it is compatible with other SQL implementations as well.

Version 3.0 ships with a simple authentication system, but this can be easily removed so that an institution can integrate it with their own campus authentication systems.

CourseWork Demo

A CourseWork demo server is available to view the software from the student's perspective. You can register for an account on the server and log in at <http://coursework-demo3.stanford.edu/coursework>. Demo courses to examine the administration interfaces will be available in the near future.

Please note that we reserve the right to delete any materials posted on the demo server.




Eledge 3.1 (OSS)

<http://eledge.sourceforge.net>

Address <http://eledge.sourceforge.net/>

Home Page P... Eledge Home Page About ETUDES Colloquia Mesin Cari Go... NEESgrid :: C... Stanford Coursew... The COSE Vir...



Eledge Open Learning Management System

Welcome to the Eledge home page.
Our mission is to give educators the electronic edge in management of online educational and instructional web sites.

[University of Utah](#)

Eledge Home

- [Home](#)
- [Student Demo](#)
- [Instructor Demo](#)
- [Empty Demo](#)
- [SourceForge](#)
- [Chuck Wight](#)
- [Disclaimer](#)

Open Source Software

This software is distributed as a free download under the terms of the GNU General Public License. It comes with NO WARRANTY whatsoever, not even the implied warranty of merchantability or fitness for a particular purpose.
This method of distribution was chosen to

- ensure that the software will always be freely available
- to allow users to customize the software to meet their individual needs
- to encourage collaborative development and support of the best possible software product

Course Management Software

This software is designed to provide the framework for creating a web site for online instruction, including student registration, authentication, content creation, quizzes, exams, homework graders, report uploads, instructor gradebook, class calendar, and online help. Eledge does not provide knowledge content; we only provide a convenient, flexible way for instructors to make their course materials accessible to students over the Internet.

Open Source Supporting Software

Eledge consists of a collection of Java servlets that utilize a MySQL database back end to store information and course content. The Java programming language, MySQL database and Eledge itself are all open



Fle3 (OSS): <http://fle3.uiah.fi/>

Address <http://hibert.uiah.fi:9673/FLE3/courses/1297/announcements/>

Home Page P... SourceForge... Ilias ILIAS open so... Mesin Cari Go... Sakai Project Lau... Our environment ... Blank

Fle3 1.5 Our environment
Log into Fle3. >

- > Home
- > Demo
- > Screen shots
- > Download
- > Help & Docs
- > Authors
- > Users
- > Mailing List
- > Get Involve
- > Papers
- > Related Sites


[Fle3 on Sava](#)

13 May 2005

Something new here - a test.

[Announcement]

This is just a test. And here is a link to [FLOSSE Posse](#) the group blog writing about free and open source software in education. And here is a picture from somewhere. Another test.



Posted by **Teemu Leinonen** at [14:58](#)

24 April 2005

New demo courses started

[Announcement]

The new version of the Fle3 has been released. This is it - Fle3 1.5. If you want to test this you can use username/password - admin/demo/demo. The demo user is just a basic user (not a staff member).

JULY 2005

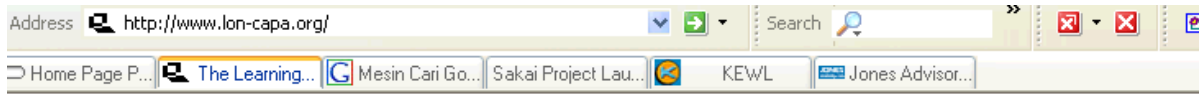
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

ABOUT

For more than a century, people have relied on fossil fuels such as oil, coal and gas for their energy needs. Now, worldwide, people and the environment are experiencing the consequences. Global warming, caused by burning fossil fuels, is the worst environmental problem we face today. People are changing the climate that made life on earth possible and the results are disastrous - extreme weather events, such as droughts and floods, disruption of water supplies, melting Polar regions, rising sea levels, loss of coral reefs and much more. In this course we will explore how our environment and nature is affected by air pollution and how we could help the



LON-CAPA 1.1 (OSS)



The Learning Online Network with CAPA

[Home](#)

LON-CAPA

Open Source Freeware Distributed Learning Content Management and Assessment System

Sharing and using online learning and assessment materials across institutions and disciplines. Today.

What is LON-CAPA?	Community
<ul style="list-style-type: none">FeaturesPresentationsAwards and RecognitionsReviewsDemos	<ul style="list-style-type: none">Conferences/Workshops/EventsVisiting our GroupUser InstitutionsCluster MapPartner OrganizationsShared Content RepositoryMailing ListsSponsorship InformationLON-CAPA Academic Consortium Document (pdf)



Manhattan Virtual Classroom 2.3 (OSS)

Address http://manhattan.sourceforge.net/

Customize Links Free Hotmail Windows Windows Media

RoboForm Search Logins (passcards) Administrator Save Generate

Home Page P... The Manhattan Vi... Dicole - Dicole Co... Mesin Cari Go... Math 150 with... Documents - ... moodle: Login...

Manhattan virtual classroom

Open Source Course Management System

Search

MAIN MENU

- [Home](#)
- [What is it?](#)
- [News](#)
- [Mailing List](#)
- [Download it now!](#)

LATEST RELEASE

The latest version is 2.4 released 13 May 2004

[Download it now!](#)
[Read the README's other releases](#)

DOCUMENTATION

Reference Manuals:


- [for Teachers](#)
- [for Students](#)
- [for Admins](#)

[PowerPoint Presentations](#)

[ReadMe's](#)

Welcome to Manhattan!


The **Manhattan Virtual Classroom** is a password protected, web-based course management system that includes a variety of discussion groups, live chat, areas for the teacher to post the syllabus and other handouts and notices, a module for organizing online assignments, a grades module, a surveys module, and a unique, web-based email system open only to students in the class. Developed at [Western New England College](#), Manhattan is free, and is released under the GNU General Public License.





2005-05-05 Alpha code released

Posted by [snarmont](#) on: Friday 06 May @ 06:50:14 (read: 415 times)


The May 05, 2005 edition of the Manhattan version 3 Alpha code has been posted. It includes code-reviewed versions of ...



[Read More...](#) | 1073 bytes more |  

2005-04-28 Alpha tarball released

PIONEERED AT



AVAILABLE TRANSLATIONS

- English
- Finnish
- German
- Greek
- Spanish
- Portuguese (Brazil)
- Polish

OSS ARTICLES

[About Manhattan](#)

PAST ARTICLES

December 17
[Manhattan 2.1.1 released](#)

October 27
[Manhattan 2.1 released](#)

October 21
[Administrator's and Student's Manuals](#)



Moodle 1.1 (OSS): moodle.org

The screenshot shows the Moodle 1.1 website homepage in a browser window. The address bar shows <http://moodle.org/>. The browser tabs include Home Page P..., SourceForge..., Dicole - Dicole Co..., Mesin Cari Go..., Sakai Project Lau..., KEWL, and Moodle - A Fr... The page features a large orange header with the Moodle logo and a navigation menu. The main content area is divided into several sections: a search box, a main menu, a login form, and course categories. The 'Welcome to Moodle!' section contains a graduation cap icon and text describing Moodle as a free, open source course management system. The 'Moodle Community' section features a group photo of people and text about the user base. The 'Login' section includes fields for username and password, a login button, and links for creating a new account or recovering a password. The 'Course categories' section lists various discussion and feature pages.

Address <http://moodle.org/>

You are not logged in. (Login)
English (en)

moodle

Search

Search this site

Main Menu

- Free Support
- Downloads
- Frequently Asked Questions
- Documentation
- Development
- Donations
- Ratings
- Moodle Buzz
- Moodle Sites
- Moodle News

Latest News

21 Jun, 18:47
Sean Keogh

Welcome to Moodle!

Moodle is a course management system (CMS) - a free, [Open Source](#) software package designed using sound [pedagogical principles](#), to help educators create effective online learning communities. You can download and use it on any computer you have handy (including webhosts), yet it can scale from a single-teacher site to a 40,000-student University. This site itself is created using Moodle, so check out the [Moodle Features](#) demos, the [Demonstration Courses](#) or read the latest [Moodle Buzz](#).



Moodle Community

Moodle has a large and diverse user community with [over 50,000 users](#) registered on this site alone, speaking [60 languages](#) in [115 countries](#). The best place to start is [Using Moodle](#), which is where the main international discussions are held in



Login

Username:

Password:

Login

[Create new account](#)
[Lost password?](#)

Course categories

- Community Discussion (in English)
- Community Discussion (in other languages)
- Moodle Features
- Demonstration Courses

[Search courses...](#)
[All courses...](#)



Whiteboard 1.0.2 (OSS)



Whiteboard Courseware System

Project Home Page

Description

Whiteboard is a fully-featured and -integrated courseware system, targeted toward colleges and universities. It supports multiple departments and courses (including cross-listed courses); simple migration of courses to new semesters; grade storage, checking, and calculation; assignment submission and testing, and submitted assignment retrieval; documents; announcements; and discussion boards. It is written in PHP with a MySQL back-end, and is fully administrable through its web interface.

License

Whiteboard is distributed under version 2 of the [GNU General Public License](#).

Demo

And now, what you really wanted... the [demo](#). When you need to log in, use username "demo" and password "demo". Note that this server is sometimes rather slow during peak browsing times and after new releases, so if you are having trouble using the demo please try again later or [download](#) it and play with it on your own server.

Current Version

The latest version of Whiteboard is v1.0.3, released August 8, 2003. This release fixes a few minor bugs in v1.0.2. All Whiteboard users are encouraged to upgrade. See [readme](#) for details.



Course Management Software Evaluation

- Online Syllabus
- Course materials/student home pages
- Interactivity
- Assignments
- Announcements
- Course Management
- Content
- Testing



Course Management Software Evaluation

Online Syllabus

- Little or no HTML knowledge required
- Password and username security
- Search tool for course material
- Desktop-based file management for uploading file to server
- Addition of file links for course material is easy



Course Management Software Evaluation

Course materials/student home pages

- Student presentation area
- Instructor can assign specific course material to an individual or to a group of students
- Students can create pages for course



Course Management Software Evaluation

Interactivity

- ❑ Electronic mail
- ❑ Bulletin Board/Newsgroup
- ❑ Chat facility
- ❑ Logged chat
- ❑ Additional items like Java are easy to add



Course Management Software Evaluation

Assignments

- Homework assignments
- Upcoming events
- Exams



Course Management Software Evaluation

Announcements

- Date of when announcement is posted
- Alert sound or mass email post to all students



Course Management Software Evaluation

Course Management

- Ability to add and delete students
- Ability to assign user ids & passwords
- Ability to create and edit home pages
- Ability to manage any open discussion groups
- How important is it for you to have the course id and password administered in this package automatically?



Course Management Software Evaluation

Content

- ❑ Automatic glossary tool
- ❑ Automated index tool
- ❑ Searchable help files
- ❑ Uploading capabilities



Course Management Software Evaluation

Testing

- Little or no HTML required
- Multiple choice self-question tutorial questions (automatic marking)
- Essay exams
- Customized feedback to tutorial questions
- Time quizzes (graded with permanent retention marks)
- On-line marking and grades management of timed quizzes
- Generate a random set of questions from a pool Redirect tutorial path depending on answer
- Student can view their grade and compare to a class summary data
- Ability for instructor to email grades to students



Course Management Software Evaluation

Overall Features

- Easy & fun to use
- Intuitive interface and design
- Easy to support



Next is How to Manage Online Course

Using Manhattan Virtual Class