

**COMPARATIVE ASSESSMENT OF  
SELECTED ONLINE LEARNING PLATFORM \*)**  
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**ABSTRACT**

*Online learning is becoming important tool to allow the flexibility and quality requested by such a kind of learning process. In the recent past, a great number of online learning platforms have been introduced on the market showing different characteristics and services.*

*Before we can consider how we might use online learning in our organization and which investments in technology we will need to consider, we first need to know what online learning is, and what kind of platform that we have to select.*

*A series of features should be taken into account when one evaluates e-learning platforms, starting from the function and usability of the overall learning system in the context of the human, social and cultural organization within which it is to be used. It is important to understand how they are integrated to facilitate learning and training and what principles are applied to guide the way the system is used.*

*This paper proposes a comparative assessment of selected online learning platforms.*

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## **A. INTRODUCTION**

World Wide Web has provided higher education institutions an effective medium to distribute course materials over the Internet. There is no single standard that describes how courses should be created and distributed over the Web. There has been a proliferation of Web course development tools that can be used to create course materials and have these accessed by students from remote sites.

Before we can consider how we might use online learning in our organization and which investments in technology we will need to consider, we first need to know what online learning is. Then, we will need an overview of the key issues to consider when planning an online learning program.

The purpose of this paper is to describe the characteristics of course development tools that provided best fit based on existing infrastructure, faculty experience, needs, and additional criteria.

## **B. THE STATUS OF ONLINE LEARNING**

A growing number of organizations are now delivering training and education over the Internet, including colleges and university, corporations, and even secondary schools. There are an estimated ten million courses now online, and more than 800 Online Learning companies, 700 of them are US companies.

Online Learning companies have at least one of the following categories:

- *Providers of content*  
Companies that develop content and sell to all who choose to enroll; and those that custom design content for the specific needs of an organization.
- *Providers of learning platforms*  
Companies provide a range of hard- and software technologies that facilitate the development and delivery of online courses, ranging from content creation to learner registration and course record keeping.
- *Learning hubs*  
Portal companies offer learners or organizations consolidated access to learning and training resources from multiple sources.
- *A complete package*  
Companies are attempting to do all of the above.

## **C. BENEFITS OF ONLINE LEARNING**

Online learning offers many benefits to students that traditional classroom instruction does not offer.

- Online learning does not require physical attendance. You can take an online course from your home.
- Most online courses can be taken at anytime, from early in the morning until late at night. They are well suited for people who like to learn at their own convenience.
- Some online learning courses bring together students from across the country, or even the world, allowing you to create a network of resources outside of your own immediate area.

#### **D. WEB COURSE DEVELOPMENT TOOLS**

Developing courses using integrated features of Web Course Development Tools offers a single authentication scheme, directory structure, consistent interface, and simple way to publish and update content. The new generation of Web course development tools provides features that let instructors adapt components according to learning outcomes of the course. Use of such tools can promote collaborative learning, enhance critical thinking skills and give every student an equal opportunity to participate in classroom discussions.

Course material is developed by using a familiar graphical Web interface. Web course development tools can be considered as a workbench for putting together text, graphics, video, and audio files. This can be done without any knowledge of HTML. Many tools also have 'wizards' that guide the developer in creating course elements. In addition it also offers additional features such as bulletin board, chat, e-mail, calendars, and online assessment. Administration features allow creating (or import) of student accounts, archiving e-mail messages student discussion groups and graded assessment.

In general, there is a three-way interaction: 1) student with content, 2) student with instructor, 3) student with other student(s).

#### **E. ONLINE LEARNING PLATFORM PRODUCTS**

Many online platform products currently available and there does not seem to be any standardization and interoperability between course development systems which would make it possible to exchange materials between courses.

We identified possible tools from review of literature, previous conference presentations, web resources, discussion groups, listserv, and published vendor materials. Only few of them are free softwares.

Online learning platforms have been introduced on the market, some of them are:

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| 1. <a href="#"><u>WebCT 3.8 Campus Edition</u></a> | 2. <a href="#"><u>WebCT 4.1 Campus Edition</u></a>        |
| 3. <a href="#"><u>BlackBoard 6</u></a>             | 4. <a href="#"><u>Angel 6.0</u></a>                       |
| 5. <a href="#"><u>Moodle 1.1</u></a>               | 6. <a href="#"><u>Claroline 1.4</u></a>                   |
| 7. <a href="#"><u>WebCT Vista 2.1</u></a>          | 8. <a href="#"><u>Manhattan Virtual Classroom 2.1</u></a> |
| 9. <a href="#"><u>eCollege AU+</u></a>             | 10. <a href="#"><u>Desire2Learn 7.2</u></a>               |
| 11. <a href="#"><u>EduSystem</u></a>               | 12. <a href="#"><u>KnowEdge eLearning Suite</u></a>       |
| 13. <a href="#"><u>Anlon 4.1</u></a>               | 14. <a href="#"><u>Educator</u></a>                       |
| 15. <a href="#"><u>LON-CAPA 1.1</u></a>            | 16. <a href="#"><u>Avilar WebMentor 4.0</u></a>           |

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| 17. <a href="#"><u>Eledge 3.1</u></a>               | 18. <a href="#"><u>MimerDesk 2.0.1</u></a>               |
| 19. <a href="#"><u>ATutor 1.4</u></a>               | 20. <a href="#"><u>Bodington</u></a>                     |
| 22. <a href="#"><u>Learnwise</u></a>                | 23. <a href="#"><u>TeleTop</u></a>                       |
| 24. <a href="#"><u>TopClass</u></a>                 | 25. <a href="#"><u>ETUDES</u></a>                        |
| 26. <a href="#"><u>Bazaar 7</u></a>                 | 27. <a href="#"><u>BSCW 4.0.6</u></a>                    |
| 28. <a href="#"><u>Teknical Virtual Campus</u></a>  | 29. <a href="#"><u>Unicon Academus</u></a>               |
| 30. <a href="#"><u>The Learning Manager 3.2</u></a> | 32. <a href="#"><u>Fle3</u></a>                          |
| 33. <a href="#"><u>FirstClass 7.0</u></a>           | 34. <a href="#"><u>CHEF</u></a>                          |
| 35. <a href="#"><u>CentraOne 6.0</u></a>            | 36. <a href="#"><u>Virtual-U 2.5</u></a>                 |
| 37. <a href="#"><u>Groove Workspace 2.5</u></a>     | 38. <a href="#"><u>ClassWeb 2.0</u></a>                  |
| 39. <a href="#"><u>CourseWork</u></a>               | 40. <a href="#"><u>HTMLeZ</u></a>                        |
| 41. <a href="#"><u>IntraLearn SME 3.1.2</u></a>     | 42. <a href="#"><u>Internet Course Assistant 2.0</u></a> |
| 43. <a href="#"><u>Colloquia 1.3.2</u></a>          | 44. <a href="#"><u>Click2learn Aspen 2.0</u></a>         |
| 45. <a href="#"><u>Coursemanager</u></a>            | 46. <a href="#"><u>Janison Toolbox 5.81</u></a>          |
| 47. <a href="#"><u>Whiteboard 1.0.2</u></a>         | 48. <a href="#"><u>COSE 2.051</u></a>                    |

EDUCOM has identified three main obstacles for providing effective online materials and learning environment, these are:

1. Lack of support for the collaborative and dynamic nature of learning.
2. Lack of standards for locating and operating interactive platform-independent materials.
3. Lack of incentives and structure for developing and sharing content.

Web course developments tools attempt to address the first two items mentioned above by providing a collaborative environment and standard interface for developing and distributing course content.

The following products emerged as possibilities:

**1. Blackboard 6**

Company:	Blackboard
Product Website:	<a href="http://www.blackboard.com/">http://www.blackboard.com/</a>
This Review Updated:	June 22, 2003
Licensed Platform	

Blackboard's product has replaced both TopClass and WebCT on many higher education campuses in the last few years due to its early aggressive pricing strategy and relative ease of use.

Blackboard appears to now, have the edge in user base at North American higher education academic institutions. However, corporate training departments tend not to adopt it, possibly due to a lack of robust assessment (skill gap analysis, in particular), lack of compatibility, and low-level course progress systems.

## 2. WebCT 4.1

Company:	WebCT
Product Website:	<a href="http://www.webct.com/">http://www.webct.com/</a>
This Review Updated:	June 22, 2003
Licensed Platform	

WebCT began in 1995, as a project of Murray Goldberg, a professor at Computer Science, UBC, Canada. In 1999, WebCT was purchased by a Boston-based Educational Technologies firm (known as Universal Learning Technologies). WebCT was used by more than 5 million students at more than 2500 Institutions in 81 countries around the world.

It allows us to reproduce on the Web many aspects of teaching and managing a course in the classroom. We can use as many or as few of WebCT's features as we like. All students and teaching activities occurring in WebCT take place within the context of a "course": sharing, password-protected online environment for a single class, section, or instance of the course

## 3. Angel 6.0

Company:	Cyberlearning Labs, Inc.
Product Website:	<a href="http://www.cyberlearninglabs.com">http://www.cyberlearninglabs.com</a>
This Review Updated:	July 16, 2004
Licensed Platform	

A technology venture of The Indiana University Advanced Research and Technology Institute (ARTI), is offering its Angel (A New Global Environment for Learning) software free to educational institutions nationwide. Angel software is free to all K-12 and higher educational institutions in the United States. These institutions can use Angel in whatever capacity works best for them.

The free Angel 2000 offer includes a portal (a Web page feature that links to an institution's existing databases as well as to Web resources), comprehensive course management tools, a calendar and other e-Learning tools. The free license permits the development creation of an unlimited number of courses, users, and user accounts.

## 4. Manhattan Virtual Classroom 2.1

Company:	Manhattan Virtual Classroom
Product Website:	<a href="http://manhattan.sourceforge.net">http://manhattan.sourceforge.net</a>
This Review Updated:	May 13, 2004
Open Source Platform	

Manhattan is similar to BlackBoard in features and ease of use, but it has been released under the Open Source General Public License for free. Anyone can download the complete, fully functional system, along with the source code, with no strings attached, from the website. While some institutions will find the fact that Manhattan is a free course management solution inviting, the fact that it is completely open and non-proprietary is its real benefit to higher education. Any programmer, at any institution, can freely modify Manhattan as long as they make their modifications available to the community.

Steve Narmontas at Educational Technology Center, Western New England College, Springfield, MA is the author of the system, which runs under Linux, but which is already being 'ported' to run under other versions of Unix. Manhattan has been used extensively at Western New England College in Springfield, MA since February of 1997.

### 5. Moodle 1.1

Company:	Moodle.com
Product Website:	<a href="http://moodle.org">http://moodle.org</a>
This Review Updated:	September 11, 2003
Open Source Platform	

Moodle is an Open Source e-learning platform. It has a relatively large userbase. Moodle is a course management system (CMS) - a software package designed to help educators create quality online courses. Such e-learning systems are sometimes also called Learning Management Systems (LMS), Virtual Learning Environments (VLE), education via computer-mediated communication (CMC) or Online Education.

Moodle was the creation of Martin Dougiamas, a PhD student in Computer Science and Education. Martin's later studies examined "The use of Open Source software to support a social constructionist epistemology of teaching and learning within Internet-based communities of reflective inquiry". The development of Moodle has integrated a number of technological tools and pedagogical aspects missing from other commercial e-learning platforms.

As of March 31, 2004, 1098 sites from 81 countries have registered their Moodle installation. It is translated into 37 different languages. The real number of current active Moodle installations is unknown, but there may figure in the thousands. As there are no licence costs and growth limit, an institution can add as many Moodle servers as needed. The most active site has reported over 1,400 courses and about 17,000 students.

### 6. Claroline 1.4

Company:	Claroline Development Community
Product Website:	<a href="http://www.claroline.net/">http://www.claroline.net/</a>
This Review Updated:	November 3, 2003
Open Source Platform	

Claroline is an Open Source software based on PHP/MySQL. It's a collaborative learning environment allowing teachers or education institutions to create and administer courses through the web.

Claroline is translated in 28 languages and world. The software was initially started by the University of Louvain (Belgium), developed by Institute for University Education and Multimedia, and then released under Open Source license (GPL). Since then, a community of developers around the world contributes to its development. It became available as open source in January 2002.

## **F. COMPARISON OF COURSE MANAGEMENT SYSTEM**

See attachment 1 (excel or html file)

## **G. RECOMMENDATION**

Based on vendor demonstration, review of literature, individual contacts, testimonials from existing users and institutions, scalability, integration with current infrastructure, ratings comparison, and our experiences, we recommended:

For professional use (License platform):

1. WebCT, or
2. Blackboard

For pilot project (Open source platform):

1. Moodle, or
2. Claroline

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