

A SURVEY AND COMPARETIVE ANALYSIS OF E-LEARNING PLATFORM (MOODLE AND BLACKBOARD)

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Abstract: This paper presents an evaluation of open source e-learning platforms with the aim of finding the most suitable platform for extending to an adaptive one. The extended platform will be utilized in an operational teaching environment. Therefore, the overall functionality of the platform is as important as the adaptation capabilities, and the evaluation treats both issues in this paper .in this paper we will explain the proper and best learning platform for Users . In this we will compare one of the best learning platforms (Moodle and Blackbox) both are all of them best virtual learning platform. We will compare both virtual system its functionality and using best tool. This paper is focused on the Moodle Architecture and comparative study of Moodle, thus we discusses comparisons it between different virtual learning platform at last conclusion we will describe which learning platform is best for users.

Keywords: E-learning, Blackboard, Moodle, tools, function, methodology.

1. INTRODUCTION

E-learning can be defined as a “the use of new multimedia technologies and the internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration[15]. Learning is based on the special system call the learning management system.

Currently lms adopted by many universities. E-learning provide the best interaction between student and teacher at electronically, this phenomena based on chatting system or another media for virtual platform we have many software platform available Good like Moodle and Blackboard learning system.

This software is in both forms, commercial and open source software (OSS). Moodle is one of the systems that have been increasingly gaining worldwide popularity in e-learning system. This paper is focused on the Moodle Architecture and comparative study of Moodle, thus we discusses comparisons between different virtual learning management systems called Blackboard and presents some authentication plug-in that Moodle supports[2].at last we will suggests Moodle is best virtual learning system because currently it has adopted by many country. Blackboard and Moodle are two Learning Management Systems with a lot in common, but there are some key differences which make each one special in its own way [3].

2. LETERATURE SURVEY BASED ON MOODLE AND BLACKBOARD

The successful Blackboard and moodle learning platform are themselves not enough to create Best Learning platform. Here we will describe some problem inherited with Both learning platform, as find during survey of both learning platform,as done survey of both then we get the result some difficulty arises with blackboard and less difficulty arises with moodle platform,actually moodle support a lots of feature ex. like Assignment submission and discussion form at Blackboard it support feature but less to moodle actually at blackboard find issues like people will often complain about

how Blackboards for the most part always down and inactive. Fifty percent of the time, if there is a weather issue blackboard will shut down (Hack). This makes it very difficult to do your work if the program is not accessible this type of problem happen with blackboard, at moodle find out here reporting is difficult for users.

3. METHODOLOGY AND TOOLS

E-learning is among the most important explosion propelled by the internet transformation. This allows users to fruitfully gather knowledge and education both by synchronous and asynchronous methodologies to effectively face the need to rapidly acquire up to date know-how within productive environments[7].using both methodology of learning management system Here decided that two methods provides the best concept of learning management system.

1. Synchronous Methodology: - A Learning event in which a group of students are engaging in learning at the same time..we can take the example of online learning programs when it started the people able to learn at same time but using the electronic media like Skype webinars and video conferencing here using and teacher can collaborate at same time, a lecture is also example of synchronous learning here teacher delivered the lecture of students and student same time can query by teacher and can get reply back.

2. Asynchronous Methodology: - It is a process of learning management system where student and teacher can interact with each-other at any time using email, electronic mailing list, online discussion board etc. E-learning is the use of Internet technologies to enhance knowledge and performance. E-learning technologies offer learners control over content, learning sequence, pace of learning, time, and often media, allowing them to tailor their experiences to meet their personal learning objectives [8].

Some important tools using E-learning: Here we will describe some important E-learning tools:-

A. Curriculum Tools:-Curriculum tools widely used at college education. Additional tools, such as discussion forums and online quizzes, are integrated to support collaboration and evaluation.

A typical commercial curriculum tool includes three integrated parts: instructional tools, administration tools, and student tools. WebCT and Blackboard are the most popular commercial curriculum tools. A review comparing these two tools suggests that Blackboard's flexible content management and group work support [14].

B. Digital Library tool:-while curriculum tools supports class function digital library tools supports the locating function if any person search anything using browser then this tool supports and provide the correct information to his users.

C. Knowledge Representation Tool:- Knowledge representation tool help learners to visually review, capture, or develop knowledge. Curriculum tools rely primarily on a text-based, syllabus approach to describing course content[10]. The e-Learning evolution proposes a good number of tools assisting the instructional designer during the analysis, design, implementation, and delivery of instruction via the Web[5]. If on one side an automated support should be provided by authoring tools, on the other side these tools should implement suitable e-learning process design methodologies[11][12][13].

4. BACKGROUND AND MODEL

The World Wide Web has opened new feature for computer-based teaching and learning in the last 10 years. One of the major stream of Web-based Education systems is the Learning Management Systems (LMS), which supports the all tools of learning management system.

The history of the application of computers to education is filled with generic terms such as computer-based instruction (CBI), computer-assisted instruction (CAI), and computer-assisted learning (CAL), generally describing drill-and-practice programs, more sophisticated tutorials, and more individualized instruction, respectively[2]. LMS has its history in another term, integrated learning systems (ILS) which offers additional functionality beyond instructional content such as management and tracking, more personalized instruction, and integration across the system [15].

Szabo & Flesher defined LMS as the framework that handles all aspects of the learning process. An LMS is the infrastructure that delivers and manages instructional content, identifies and assesses individual and organizational learning or training goals, tracks the progress towards meeting those goals, and collects and presents data for supervising the learning process of an organization as a whole system.

5. BLACKBOARD LEARNING SYSTEM

The Blackboard Learning Management System, or Blackboard Learn, is a virtual learning environment and course management system developed by Blackboard Inc. It is Web-based server software which features course management, customizable open architecture, and scalable design that allows integration with student information systems and authentication protocols. It may be installed on local servers or hosted by Blackboard ASP Solutions. Its main purposes are to add online elements to courses traditionally delivered face-to-face and to develop completely online courses with few or no face-to-face meetings.

Here At fig (i) show the shared Blackboard figure with here Show the relation in customer and different objects:-

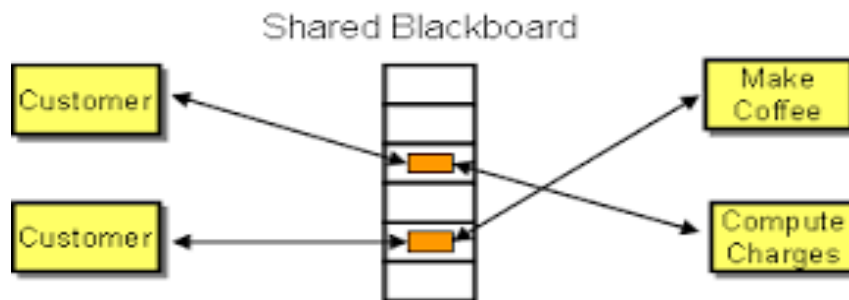


Fig (i)

Functions: - The Blackboard Learning System provides users with a platform for communication and sharing content.

Course content: This feature allows teachers to post articles, assignments, videos etc.

Calendar: Teachers can use this function to post due dates for assignments and tests.

Learning modules: This feature is often used for strictly online classes. It allows professors to post different lessons for students to access.

Assessments: This tab allows teachers to post quizzes and exams and allows students to access them via the internet

Assignments: This features allows assignments to be posted and students to submit assignments online

Grade Book: Teachers and professors may post grades on Blackboard for students to view.

Media Library: Videos and other media may be posted under this function [16].

Product development and competition:- The Blackboard Learning System has undergone several iterations, and new uses have arisen as some educational institutions move from augmentation of traditional classroom learning to supporting full online and virtual campus education. From the late 2000s, the product has also faced competition from free and/or open source competitors such as Edvelop or Moodle.[17][18].

6. WEBCT AND BLACKBOARD

WebCT was originally developed at the University of British Columbia by a faculty member computer science, Murray W. Goldberg. In 1997 Goldberg created a company, WebCT Educational Technologies Corporation, a spinoff company of UBC. Since foundation of WebCT, use of online learning management software by higher education institutions and other organizations has increased rapidly [20][21]. WebCT (Course Tools) or Blackboard Learning System, now owned by Blackboard, is an online proprietary virtual learning environment system that is licensed to colleges and other institutions and used in many campuses for e-learning[19].

Criticisms: - WebCT's user interface has been criticized as needlessly complex and unintuitive. The "Vista" version of the product represented an attempt to derive balance between flexibility and ease of use, however it has also been the target of ease-of-use criticisms. Some WebCT criticisms which were apparent include problems using it in multiple tabs or browser windows, heavy reliance on Java for its user experience [22].

7. MOODLE

Moodle is a free and open-source software learning management system written in PHP and distributed under the GNU General Public License.[3][4] Developed on pedagogical principles[23][24][25][26].Moodle was originally developed by Martin Dougiamas to help educators to create online courses with a focus on interaction and collaborative construction of content, and it is in continual evolution. The first version of Moodle was released on 20 August 2002. Nowadays the Moodle Project is led and coordinated by Moodle HQ, an Australian company of 30 developers which is financially supported by a network of sixty Moodle Partner service companies worldwide. Moodle's development has also been assisted by the work of open-source programmers [4][A][B].

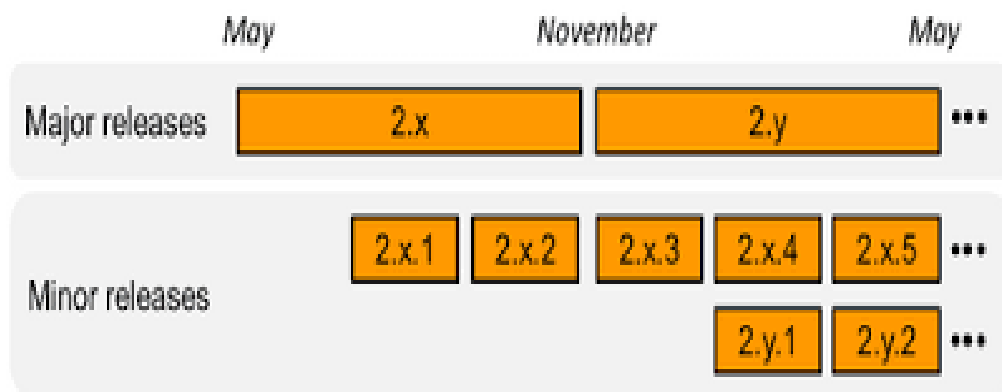


Fig (ii)

Blackboard vs. Moodle Architecture:- A blackboard-system application consists of three major components:-

Blackboard Architecture:-

The software specialist modules:-it is the module which called the knowledge source point of blackboard. A software connected to this knowledge points which contain the specific function i.e needed for applications.

New Blackboard Architecture

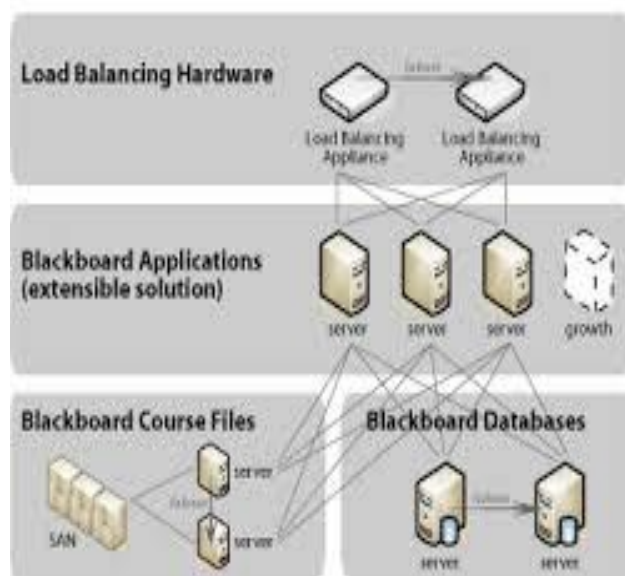
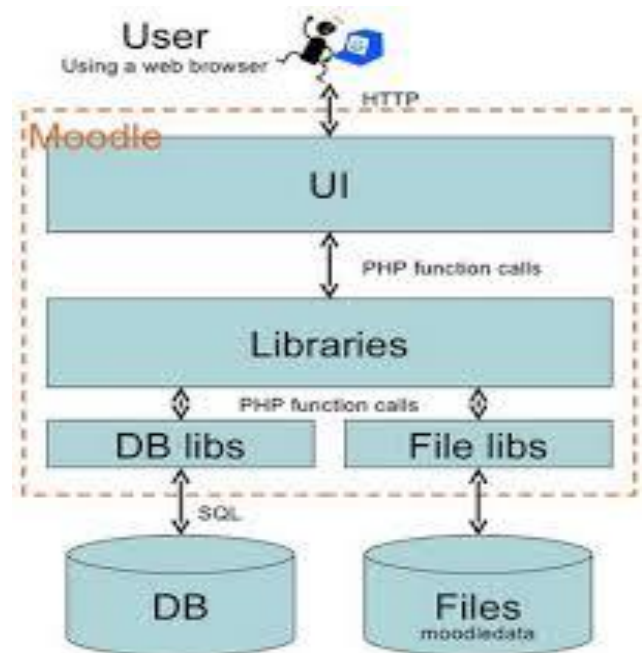


FIGURE 1: Blackboard Architecture



Moodle Architecture:-

FIGURE 2: Moodle Follows Fairly Classic Three-Layer Architecture

Moodle as a modular system:- Like many successful open source systems, Moodle is structured as an application core, surrounded by numerous plug-in to provide specific functionality. Moodle is designed to be highly extensible and customizable without modifying the core libraries, as doing so would create problems when upgrading Moodle to a newer version. So when customizing or extending your own Moodle install, always do so through the plug-in architecture.

The Moodle database:- The Moodle database comprises many tables (more than 250) because the whole database is an aggregate of the core tables and the tables belonging to each plug-in. Fortunately, this large structure is understandable, because the tables for one particular plug-in typically only link to each other and a few core tables. The Moodle database structure is defined in install.xml files inside the db folder in each plug-in. For example mod/forum/db/install.xml contains the database definition for the forum module. lib/db/install.xml defines the tables used by Moodle core. The install.xml files contain comments that should explain the purpose of each table and column.

Blackboard vs. Moodle Interface Student View:-

The following Figure 3 and 4 show the comparison of the interface in student view for both Blackboard and Moodle



FIGURE: 3 (Blackboard Interface Student View)



FIGURE: 4 (Moodle Interface Student View)

8. A BRIEF COMPARISON BETWEEN MOODLE 2.0 VERSUS BLACKBOARD 9.1

Here basically will compare about moodle 2.0 and Blackboard 9.1 because we have already discussed what they are here will compare its some feature i.e. important for both.

Moodle 2.0:- Moodle 2.0 has been touted as Moodle's "biggest release ever" with tons of upgrades, and its release is scheduled for all users who are using already.

New features revolve around increased usability, these include: easier navigation, improved user profiles, community hub publishing and downloading, a new interface for messaging, and a feature that allows teachers to check student work for plagiarism.

Moodle has become famous because of it use two popular hosting services..

1:-Moodleroom

2:-Remote- Learner

Blackboard 9.1:- Blackboard Learn 9.1 is Blackboard's newest and most innovative upgrade to its Blackboard Learn package. Blackboard Learn 9.1 also incorporates Blackboard Connect (at an additional cost), which alerts students to deadlines, due dates and academic priorities within a course.

See here what are the big differentiators?

We will describes differences between them at the Bases of Features & Functions, Cost, Product/vendor model

1:- Features & Functions

2:- Cost

3:- Product/vendor model

1:- **Features & Functions:-** Both the best Learning management Platform has a lot of different functionality available, either natively, or through add-on types of functionality.

you will really need to drill in and compare and decide for yourselves which features and functions make the difference for your institution. Because it's totally depends on the Requirements of Platform.

2:- **Cost:-**if you want to take the facility for some days then here moodle are totally free here no need to pay any charges for moodle while it is not same for blackboard. If you want to move for premium then, Moodle is really the way to go. Another thing to be aware of is that Blackboard builds substantial annual increases into their pricing model.

3:- **Product/vendor model:-**As we have discussed about moodle and blackboard which differ at feature and cost Because One is open source, and there are many support and service vendors to choose from, while the other is proprietary and there is just the one company to work with. How that impacts your decision is up to you and your institution to determine.

9. DISCUSSION

As a result from this review, we can see the important criteria in choosing Blackboard or Moodle as a learning management system. Our reviews based on the comparison in the term of feature, cost, product. So here after comparison made to the answer of our research question which learning platform is best for student, teacher or any other objects who want to use it so here using case study first is that moodle learning platform is open source platform while Blackboard learning platform is commercial platform so according to Requirement we will use the learning platform.

For the second case study, entitled "A Comparative Study of MOODLE with other e-Learning Systems ", the author has choose Moodle as the optimal e-learning platform based on architecture and technical aspect compared with other e-learning system [27]. There are pros and cons when choosing Blackboard or Moodle as Learning Management System in higher education. It's all depends on how the users use it, what they need most and how he IT department arrange the Learning Management System for more user friendly interface[6].

10. CONCLUSION

Virtual learning environments are the future in the academic field, not only for higher education but also for secondary education where they are being introduced. Now days learning platform adopted by all universities because each learning platform has different feature depends on that which type you want to use .here main objective for improving the learning management system one is efficiency ,another is interaction between the students because this paper is totally based on comparison study of blackboard and moodle learning platform so after compare both learning platform to his function, platform, vendor model we can say finally moodle learning platform is best because due to open source, great community,customizable,widly available its familiar etc ,[5]from blackboard learning platform because moodle need to make totally transform and update present educational system .

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