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OVERVIEW OF DISTANCE LEARNING SYSTEMS AND LEARNING MANAGEMENT

O'rinov Nodirbek Toxirjonovich, Xolmirzayeva Gulchexra Tulanovna

Teacher, Department of Information Technology, Andijan State University

A R T I C L E I N F O.	Abstract			
<i>Keywords:</i> distance I'm studying, literaturereview, educationalstudy, I'm studyingto manage-cop systems, Moodle	In recent years, the rapid development of technology and the Internet has led to many changes. in education. One from in most important changes in education is an in in the form from distance I'm studying. Distance learning, which is used to define education in which educators and students are physically divided, is an No but new concept; But, emerging technology as well as in net allow Web site distance I'm studying as well as Consequently increase this popularity. Because but result from these developments, many universities have began to use Web site distance I'm studying systems to give flexible education this is an independent from time as well as a place. IN this chapter, we consideration all popular, wide used, as well as known I'm studying control systems and include a detailed comparison of some of these systems so that institutions can select in right system for them distance education activities.			
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1. Introduction

Distance education, now also referred to as distance learning or e-learning, have existed for centuries. Although, as Keegan says, "ideas related to educational are somewhat similar" [1], finding a single definition of distance is not so easy. education. By according to to north [2], but a little definitions even Look to determine This in terms from but One technology, according to to long distance education [3], other display distance education simply because but recent development from in grade in but remote location [4]. But, such definition - are restrictive and do not take into account the real needs of users of distance education. Mugridge [five] provides but better definition, description distance education because "but the form from education - in which there is usually a separation between teacher and student and thus in which other means - printed and written word, telephone, computer conference or teleconference. conference , for example - is used to bridge physical break.

Many educational institutions have created solutions for their growing educational needs across in development from distance education programs. Distance education allows education - paths must be determined by educators and students who are separated by physical distance, using technology (for example, audio, video, data, as well as written text). This is an but the form from education featuring students, faculty, and learning materials from different regions together across communication

technology [6]. Using video, audio, active I'm studying, simulator - tion, as well as electronic achievements appeals to but diversity from students with several I'm studying styles.

This chapter present but consideration from distance I'm studying literature; in goals, Benefits, dis-Benefits, as well as types from distance I'm studying; as well as but detailed comparison from Web site distance I'm studying instruments in education.

2. Overview of distance learning

Research in the field of distance education is the subject of long and numerous discussions [7–10]. Distance education needs but reliable means from communication between students as well as lecturers. Consequently, in history from distance education starts in in dot where but reliable communication method is an founded. Most historians place distance education in the eighteenth century, when lecturers began to sentence what kind we called correspondence courses. One from in first Examples from distance education was noticed in 1728 when "an advertisement in the Boston Gazette titled "Caleb Phillips", the teacher of the new short arm method, was looking for lessons from the students to to be sent weekly [eleven]. But technological distance education began after in introduction from a little devices, which the are using both vision as well as sound, in in schools in in early 1900s.

Microwave technology was developed in the late 1960s and early 1970s. So the network technology costs have been reduced and universities have begun using microwave networks to receive Benefit of FCC-approved Fixed Instructional Television Service (ITFS) communications commissions [12].

Today, distance education programs have a wide range of approaches [13]. For example, independent training courses through computer networks, computer training, communication between students as well as instructors across electronic Mail, grade session, key - ter groups, undergraduate as well as high school graduation degrees across cable networks, as well as video courses with texts as well as another pledge materials are these approaches [13].

Thus, the history of distance education shows constant development. in a historical look at distance education, the flow of new ideas and technologies. observable. Historical development from distance education shows this unconventional education tends to blend with traditional education while responding to changing learning theories and development technology [13].

1. The purposes of distance learning

That basic goal from distance education is an to surpass barriers from a place as well as time. students May live in isolated, sparsely populated as well as country, rustic areas as well as have No access to education.

Another students May have ready access to but private school or college but this college power No sentence in well from study required to this student. Distance I'm studying allows education to achieve those WHO are No able physically visit courses at universities [fourteen].

One of the most important goals of distance education is to provide an opportunity instruction, often on a one-to-one basis, for students who are not physically present at class [15]. In addition, it ensures equal educational opportunities by providing access to qualitative education for those WHO otherwise it would be have was denied.

2.2 The advantages and disadvantages of distance learning

The purpose of distance learning is to ensure close communication between students and lecturers. This Why there are also limitations because Okay because Benefits from distance education.

That basic advantage from distance I'm studying is an this in students can study wherever, Anytime, as well as whatever he she wants. So, This can to be said this flexibility is an in most important advantage from distance I'm studying. That different Benefits from distance I'm studying are because follows:



That students have in convenience from well materials Existence delivered to his her Houses or office.

- \checkmark students May gain useful, transmitted skills, such because planning as well as study.
- \checkmark students can do them Feedback easily.
- \checkmark There is an No wasting from time in transport.
- ✓ Access students without face to face I'm studying opportunities.
- ✓ Distance I'm studying provides just in time I'm studying.
- ✓ Distance I'm studying is an connected with technology more how face to face I'm studying.
- ✓ Distance education can achieve but Shire audience.
- ✓ Distance I'm studying can promote more student instructor interaction.
- ✓ Distance I'm studying can equalize access to education.
- ✓ Distance I'm studying does Information as well as lecture Notes open to every.
- ✓ Distance I'm studying minimizes in expenses from stationery.
- ✓ Distance I'm studying increases in efficiency from education across in use from Items such because sound as well as image.

Though distance I'm studying It has numerous Benefits, This It has a little limitations this are listed because follows:

- > There is an but flaw from eye contact between in students as well as in lecturers.
- > This can to be random Internet provider downtime.
- > Student must to be more active in education environment.

That Price from development well materials is an too much many, as well as This is an required more time to prepare well materials.

- \checkmark There is an unconsciousness in in use from educational technology.
- ✓ Distance I'm studying is an No suitable for undisciplined students or inflexible instructors.
- \checkmark Laboratory as well as experimental courses can not to be given remotely.
- ✓ students WHO have little technological knowledge can not track in courses.
- \checkmark students as well as instructors necessary to take technical training as well as support.
- ✓ A little from in students can not access in necessary facilities, such because computers, Internet, etc.

2.3 Types of distance learning

In general, distance education is an collected under two basic headings:

1. Synchronous

2. Asynchronous

Synchronous learning requires all students to participate in class at the same time. That method from Delivery is an usually interactive as well as includes Internet chat session, teleconference, telecourses and web conferences [16]. Synchronous distance education is less flexible than asynchronous distance education because synchronous distance education requires all enrolled students and teacher must be online at a certain time. Asynchronous instructions does not require the simultaneous participation of all students in the class, therefore it is more flexible. Asynchronous learning gives learners the freedom to interact with material and instructions. during the time when is an comfortable for them [16].



Distance education via the Internet has become the subject of special attention for at least three reasons. according to to in Institute Above Education Politics (IHEP) [17]:

First, Internet is an fast becomes in prevailing technology in distance education, because from this increase telecommunications throughput opportunities. Second, in the Internet distance education, especially asynchronous learning mode, allows teaching and learning processes to take place "in Any time as well as Any a place." Security from in interactive I'm studying activities anytime, anywhere has become the most important characteristic of this technology. Thirdly, distance education via the Internet is in many ways fundamentally different from traditional classroom learning.

In the Internet distance education must have in next Peculiarities [eighteen]:

- > That identification as well as control from users
- Training from online well content
- Control courses
- > Monitoring as well as analysis student behavior
- ➢ Grade from students' achievement status
- > That creation as well as control from interactive communication media

2.4 Training Control systems

Computers and computer networks are rapidly becoming the medium of choice for long distance communications. tool and they are developing as a major resource in distance education. Many distance learning computer tools; and the names of the main tools and their websites. addresses are listed in Table one [19].

In this chapter, we have reviewed the most popular, widely used, and well-known teaching methods. control systems (LMS) as well as included detailed comparison from these systems. Consequently, we include ATutor, Blackboard, Claroline, Desire2Learn (D2L), Docebo, Dokeos, eFront, Moodle, OLAT and Sakai systems in this chapter. Among others, Blackboard and Moodle are two of the best known web-based learning management systems widely used in universities. poems as well as above education [19].

2.4.1. Tutor

ATutor is a free and open source course management system that has a simple and intuitive interface. forward structure. This is an but Web site I'm studying content control system (JHMS) under in GNU General Public License (GPL). This It was ready such this This can to be easily used in Any type computer system and all operating systems. ATutor is used in many universities, institutions, research centers, as well as educational institutions.

ATutor has been implemented in a personalized homepage (PHP: Hypertext Preprocessor) and this includes facilities for faculty and students. Students can change the learning environment based on existing templates, send messages and collaborate on courses. On the other hand, instructors can manage courses, store files, and create workgroups. At the same time in ATutor, people with disability we thoughtful, So Tutor It was agreed to use easily.

ATutor has a blog, forum, photo gallery, glossary, sitemap, chat, directory, quizzes and surveys, and the MyTracker Tool, which tracks user activity. navigation templates. It supports shared content Object Reference Model (SCORM) and Instruction Management System (IMS) standards packages. It is available in over 20 languages. Some videoconferencing software such as Adobe Connect Plugins, BigBlueButton and OpenMeetings can be integrated into ATutor. Figure one shows net page for tutor _ well.



1. Blackboard

In early 2006, the owners of the Blackboard Learning System and WebCT decided to join forces. and merge the two companies under the existing name of one of them - Blackboard. New the organization continues to support both systems [19]. In addition, the Blackboard Learning System has acquired Angel I'm studying System in May 2009. So in Board I'm studying System is an but Web site

Instruments	Internet addresses
Adobe Unite	http://www.adobe.com/products/adobeconnect.html
AcademicianLMS	http://www.akademiklms.org/
ANGEL	http://www.angellearning.com/community/highered.html
Tutor	http://autor.ca/
Avilar WebMentor	http://www.avilar.com/learningmanagement/lms.html
Board (Web-ST)	http://www.blackboard.com/
Bodington	http://bodington.org/
Claroline	http://www.claroline.net/
KursPark	http://www.coursepark.com/
Desire2Learn	http://www.d2l.com/
Dokeos	http://www.dokeos.com/
LRN point	http://dotlrn.org/
Drupal	http://drupal.org/
eFront	http://www.efront.gr/
Enocta	http://www.enocta.com/enocta/web/pdefault.aspx
electronic research	http://estudy.sourceforge.net/
STUDIES	https://myetudes.org/portal
Fle3	http://fle3.uiah.fi/
ILAS	http://www.ilias.de/
IntraLearn SME	http://www.intralearn.com/
jenison Toolbox	http://www.janison.com.au/
Moodle	http://moodle.org/
OLAT	http://www.olat.org/
perculus	http://www.perculus.com/
RCampus	http://www.rcampus.com/
Sakai	http://www.sakaiproject.org/
Just Digi	http://www.simplydigi.com/products.html
Table 1. That dista	ance I'm studying instruments as well as net addresses.

commercial distance education system devoted to education containing education Resources and a simple hierarchy of users. This allows instructors to post course information and rials also because testimony and assignments.

The flexibility of the Blackboard learning system makes it easy to develop a course curriculum or class schedule, and the continuation of the training courses runs flawlessly. Not Only can in teacher shift page layouts including font types or colors but also select texts and icon links. It also facilitates interaction between users who can have basic discussions, and suggestions other collaboration tools.

The idea behind the Blackboard Learning System is to allow educators to provide course content, especially adjusted to big courses in below levels. That role from en administrator from in system





Figure 1. Tutor Well Internet Page.

is limited to basic operations such as introductory course and teacher registration. That the administrator is not too dependent on him, as many course management tasks such as and registering course content or checking tests and statistics can be done by the teacher. That system includes from many communication as well as discussion Peculiarities possibility active participation from students [twenty]. That possibility from in use from multimedia, en training option, is an willingly used teachers. Figure 2 shows in net page for Board well.

lesk	-	Browner Settings	By Causes	
ê dan	ouncements		You are not currently enrolled in any courses.	
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B Vie	w.Grades	Tent Browner	You are not consult anticipation in any consultations	
1 240 1 Peo	Address Book Excent Information Update Email Expe	adress. Blook ensation formation polate Email SER Micte, SER	iTunes U O O O	
a Und Exp			This link will display all the iTurnes U courses that you can access. Note, in order to wave your iTurnes U courses you must have iTurnes (the application) running on the desidap or laptop computer on which you are waining this. <i>Server</i> (1)	No system announcements have been posted in the last 7 day more
() Mr.	scholar	No. Mos de la calenda de la		

Figure 2. Board Well Internet Page.

3. Claroline

Claroline is an en open source e-learning as well as electronic work Platform. This can Work on the both Window and Linux server systems. Claroline provides the ability to manage public educational activities online and create effective online courses. There is a large community of users and software developers around the world.

In the Claroline Learning Management System , the user has three roles. These roles are student, teacher , as well as an administrator.

GNU/Linux, BSD, Unix, Windows (9x, ME, NT4, 2000, XP, Vista, and 7), or Mac OS X operat- ing systems, Apache, IIS or Wampler web servers, PHP and MySQL database server should be installed on the web server where Claroline is installed. It is under the GPL.



There are two language options available: website language and course language. Claroline. It is used in over 100 countries and has been translated into 35 languages. However, some languages, such as Turkish, are not fully supported, and some sections still expectation translation.

Claroline has rich interaction tools like chat, forum, and wiki, but no poll. functionality and application of the board. Requires no programming skills to install, manage and use. It supports SCORM standards. Claroline allows you to create user lists. created and custom statistics will be visible. You can create user groups in courses. On fig. 3 shown net page from Claroline.



Figure 3. Claroline Well Internet Page.

2.4.4 Desire2Learn

Desire2Learn, which the is an also known because bright space I'm studying Control System, is an one more educational learning management system. It is based on competency-based education and provides cloud learning lux.

Desire2Learn is a commercial educational system that supports mobile learning and web learning. conference call. It also has some features like exams, discussions, assignments, quizzes, assessments and portfolio-based activities. D2L supports foreign languages and math designations. D2L also includes a learning repository, course creation tools, an e-portfolio module, mobile Delivery, analytics, as well as lecture grab facilities. Figure 4 present net page from Desire2Learn.

2.4.5 Docebo

Dosebo SLA Platform is an but I'm studying control system this is an founded on the SaaS/cloud Platform. With Dosebo , users can organize, track, as well as distribute online courses for formal I'm studying. That instructors can Create users because Okay because groups as well as Create reports about them. This It was offered because open a source but This is an No accessible because open a source for but till. Though Dosebo is an offered for education, now This mainly used in corporate



Figure 4. Desire2Learn Well Internet Page.





Figure 5. Docebo Well Internet Page.

Docebo is licensed under the GPL, so there are no licensing costs. It is compatible with SCORM, Aviation Industry Committee CBT (AICC) and xAPI. It has a component architecture and works with PHP as well as MySQL database.

Dosebo It has interfaces for video conferences. This is an integrated with Adobe Unite, BigBlueButton, Cisco WebEx, Citrix GoToMeeting, OnSync by Digital Samba and TeleSkill Live. Also, This It has integration with Google Programs, wordpress, as well as Vivocha.

Docebo is available in over 30 languages and in over 10 countries. This platform mobile platform, so it includes mobile learning. Docebo features are blogs, of course directories, labels and discussions. Figure five shows web course page from Dosebo .

2.4.6 Dokeos

Dokeos is a well-known open source online course management system. freely available. It is also a learning content management system based on the MySQL database. and written in PHP. Dokeos is based on Drupal, a content management system. system. This is an accessible in standard as well as Professional (PRO) versions.



Figure 6. Dokeos Web course Page.

Dokeos is an used to a greater extent how 60 country, as well as This It has was translated in 34 languages. This Peculiarities but diversity from e-learning templates as well as e-learning well author's



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instruments. That Peculiarities from Dokeos are the documents, ads, tests, agenda, forums, links, tracking instruments, as well as chats [21].

Dokeos supports mobile as well as cloud I'm studying. Also, This supports SKORM, AICC as well as Jar Can API compatible. Portals and ratings can be used on the Dokeos system; on the other hand, has agenda, forums, discussion forums, chat, video conference, open questions and assignments. this fully compatible across all browsers as well as platforms. Internet page from Dokeos is an presented in Figure 6.

2.4.7 eFront

eFront is an but modern I'm studying, which the is an also known because but well control system or I'm studying control systems or virtual I'm studying environment, as well as en educational Platform. eFront is an designed to help create online courses. It has many features such as project management, advanced statistics, file management, report generators, job builders, internal files - aging system, Forum, calendar, chat, survey, etc. This supports SCORM standards.

eFront is an but multilingual Platform. This suggestions two types from language files: a car translated as well as human translation. It supports 48 languages. Although 18 of these languages are machine languages late, 30 languages people translated.

This learning management system is based on PHP and is open source. eFront runs on GNU/Linux, Microsoft window, as well as Any different current system this supports PHP 5.1+ as well as MySQL 5+. This is licensed under the Common Public Attribution License (CPAL). eFront supports Unicode and ldap, as well as uses 3 levels architecture with short throughput connections.

eFront is an content friendly to using presentations as well as videos. This It has several types from test as well as questions. This course management system can collect and analyze surveys. He supports blended learning. Some video conferencing software like Adobe Connect, BigBlueButton, as well as OpenMeetings can to be used with eFront. BUT sample well page is an given in Figure 7.

2.4.8 Moodle

Moodle is an en online well control system this is an wide known as well as free accessible. That word Moodle costs for "Modular An object Oriented Dynamic I'm studying Environment" as well as It was



Figure 7. eFront Well Internet Page.

created by Martin Dugiamas, a computer scientist and lecturer at the university in Perth, Australia [22].

Moodle is a software package that is used to create online courses and their websites. Moodle is used in 234 countries, supporting 139 languages and has 88,204,960 languages. registered users according to to Moodle statistics on the in Moodle Web site in July 2016. There are Currently 10 106 758 registered courses as well as 70 872 active places this have was registered from those country.

Moodle is used by both institutions and individuals. The list of firsts is long, including universities, middle and primary schools, government departments, military and healthcare organizations, as well as



airlines or oil companies. Home schooling, independent educators and special educators are among individual users.

Moodle, an open source PHP-based online learning system, has been in use since 2002. distance learning tool and has various versions supported by Windows, Linux, Unix and Poppy Operating Systems X current systems. That latest version from Moodle is an Moodle 3.1.1, released on the eleven July 2016. Moodle is licensed under the GNU General Public License (GPL). There is a document-_ for use, learning, and online help in Moodle. Moodle has 14 different action types such as like tasks, chat, choice, database, external tool, feedback, forum, glossary, lesson, quiz, SKORM, survey, Wiki and workshop.

A number of programs, namely PHP, which is a scripting language embedded in html codes. that work on the server side; MySQL is a database management system that can run on background and can respond to requests such as a high performance web server; and Apache which is an open source, completely free and high performance web server. Mance , are required before Moodle program is an set up.

Moodle supports mobile learning, which is why it has its own Moodle Mobile app. Moodle Mobile supports currently 15 languages. It has a responsive design for phones and tablets. Users can download as well as Look a little well Resources. BUT well net page from Moodle is an presented in Figure 8.

2.4.9 OLAT

OLAT is reduction from words Online Learning and Training. OLAT is based on Java. open source I'm studying control system this It was developed in 1999. OLAT is an under the Apache 2.0 Open Source License . OLAT has forums, chat, blogs, polls, ratings, and submissions. modules, wikis, quizzes and discussions. Allows you to control efficiency students as well as tutors.

OLAT is multilingual and available in fifteen languages. OLAT runs on Unix, Linux, OpenBSD, FreeBSD, Windows and Mac OS X operating systems. Java SDK, Apache as a web server, Tomcat Servlet Engine as application server and MySQL or PostgreSQL as database. required to install OLAT. This supports SKORM, IC Content Package, as well as OTI standards.



Figure 8. Moodle Well Internet Page.





forme Settings Colendar	Welcom	e to OLAT	Configure page
locknons Incomerks Fersonal fülder Intes Volences of achievemen Other users Volentolio	Hy Comput Crimites Here you will only find your comput outwress. At the moment, only courses of the Ready of Molosphy, Theology, Service and the Ready of Economics will be	Wy notifications There are no notifications.	
	No have no backmarks.	Tedays 3ad 15, 2016 This events for the period specified	Show all
	The groups Store all Store	We evidence of achievement	Show all

Figure 9. OLAT Course Web Page.

10. Sakai

Sakai is an Free education system which is intended for educational institutions. This is an based on Java SLA. This It has was launched because but "Sakai Project" supported to in Mellon Foundation.

Sakai is a free and open source course development platform. It is web based and platform agnostic. dent app with many features like learning support. Can run on CentOS, Debian GNU/Linux, Fedora, Gentoo Linux, Mac OS X Server, Microsoft Windows, Red Hat Enterprise Linux (REL), Sun solaris, SuSe linux, as well as Ubuntu current systems. This can to be loaded from the Internet for free and works interactively with both the MySQL database and the Oracle database. control systems.

Sakai has forums, chat rooms, message center, assignments, gradebook, discussions, curriculum, wiki, as well as WebDAV. This is an developed to present time mathematical designation such this This can display Latex equations on the most pages. Sakai is an under in Educational Community License (ECL). This is an available in over 20 languages.

A little video conference software such because Adobe Unite, Kaltura, as well as OpenMeetings can be integrated into Sakai and supports interoperability with IMS Learning Tools (LTI). standards. Figure 10 shows sample net page for course from Sakai.

C. LocalSakalNerre (A Test 101 13 +			
Sakai	Tent 101 123 Sarin			Loond /
Humo d Soliabas A Accountionmento Acciumento Acciumento	Welcome to AR Test 101 Be sure to read the Syllabox. Check the Assign tool weekly on Mondays for new assignment. It	o nments istings.	Recent Announcements Announcements (viewing avournament draw) Assignment R2 Extension (Course Instructor - Nor 16, 2011 (58 am)	o hors the last 10
ficition of the field of the fi			Message Center Notifications	10
Starlets Forers Storers			Recent Chat Messages	0

Figure 10. Sakai Course Internet page.

1. Comparison of learning management systems

IN in below sections, we give comparisons among in most similar I'm studying control systems, as well as in Table 2, all comparisons from all I'm studying control systems are summarized.

2. ATutor, eFront, and Moodle



Tutor is an but PHP statement as well as This It has a little registered installations such because Moodle.

Tutor seems like but reduced version from Moodle with but a little more technical Look how eFront. But in development on the this modules quicker limited [23].

2. Blackboard and Moodle

The Blackboard Learning System (i.e., WebCT) ensures variety in course content and materials. In addition, the Blackboard Learning System assists students in their offline efforts. Curriculum

	Tutor	Board	Claro line	D2L	Dosebo	Dokeos	eFro nt	Moo dle	OLA T	Sakai
Price	Is free	Comme rcial	Is free	Comme rcial	Commer cial	Is free but This also It has comme rcial version	Is free	Is free	Is free	Is free
Open a source	Yes	Not	Yes	Not	Not	Yes	Yes	Yes	Yes	Yes
License	GPL	N/A	GPL	N/A	GPL	GPL	KPA L	GPL	Apac hes 2.0	OKU
Туре	HCMS	SLA	SLA	SLA	SLA	HCMS	SLA	SLA	SLA	SLA
SCOR M	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Langua ge	More how 20	More than 20	35	More than 10	More how 30	34	48	139	More than 15	More than 20
Countr y	N/A	More than 20	More than 50	100	N/A	More how 10	More than 60	More how 50	More how 30	twent y
Writte n in	PHP	N/A	PHP	PHP	PHP	PHP	PHP	PHP	Java	Java
video confere nces integra tion	Yes	Yes	Not	Yes	Yes	Yes	Yes	Yes	Not	Yes
operati ng room system	window , Unix	Microso ft NT								
servers, window , Poppy OS X	Window s, GNU/Li nux, bsd,	Windo ws, Linux and Mac OS	Cross- Platfo rm	Cross- Platfor m	GNU/Lin ux, Windows , cent OPERA	windo w, linux, unix, as well as	Cross platfo rm	Cross platfo rm		



Databa se server	unix, Poppy Operati ng Systems X MySQL	X N/A	MySQ L	MySQL	TING SYSTE MS, Window Server 2003 MySQL	Poppy Operati ng System s X MySQ L	MyS QL 5+	MyS QL	MyS QL, Postg	MyS QL, Oracl
Web server	Apache, Zeus, lighttpd, Abyss, Zazou Mini Web Server, Microso ft IIS, and Jana-Ser ver	N/A	Apach e, IIS, Wamp ler	N/A	Apache, IIS	Apache	Apac he	Apac he	res Apac he	e Apac he Tomc at 7, Apac he Http Serve r
Mobile learnin g support	Yes, but it still works Continu e	Yes	Not	Not (Only for light space)	Yes	Yes	No, but mayb e used with mobi le phon es as well as tablet	Yes	Not	Yes

Table 2. That comparison from all popular I'm studying control systems.

design is supported by the two systems by providing course templates, thanks to which instructors can deliver course materials, define study schedules, and plan class activities.

In terms of communication and discussion, discussion is hosted by both Blackboard and Moodle. forums as well as chat numbers together with exchange Email as well as files.

The Blackboard Learning System also provides students with personal folders and internal email. as well as gives them en option from manufacturing them own Notes. Because for representation grade, systems turn on grade as well as evaluation functions.

Course administration is once again supported by both tools, making it easier to upload student data and course data in batches. The Blackboard Learning System also features direct data interfaces. This must





to be marked this there are a certain resemblance between Board as well as Moodle, such as the ability to enroll students in courses, access to discussion forums, or taking quiz and tests.

The Blackboard and Moodle learning systems are about equal in terms of administration. Peculiarities, cooperation, and instruction methods.

Another general Peculiarities are support file download (for example, Word, Power point, audio), Existence SCORM compatible, allowing grade, providing well calendar, as well as monitoring students' participation.

3. Blackboard, eFront, and Sakai

That Board I'm studying System is an superiors to Sakai in terms from administrative Peculiarities as well as course development. But in terms of collaboration and learning methods, both are very similar.

When comparing eFront and Blackboard, it can be seen that eFront is superior to Blackboard board in terms from administrative Peculiarities but They are about equal in terms from well develop-cop and instruction methods.

Sakai is an superiors to eFront in terms from cooperation.

4. D2L (Brightspace) and eFront

eFront outperforms D2L (Brightspace) in terms of administrative features, but in terms of cooperation, well development as well as instruction methods both from them are about equal.

5. D2L, OLAT, and Sakai

D2L (light space) is an superiors to OLAT in terms from administrative Peculiarities as well as well develop - option, but for object of cooperation both from them are about equal.

D2L (light space) is an superiors to Sakai with respect to instruction methods used.

6. Dokeos, Docebo, and eFront

Dosebo is an superiors to eFront with respect to administrative Peculiarities as well as well development. But in terms cooperation methods as well as instruction methods, eFront as well as Dokeos are very similar.

7. Moodle, Dokeos, and OLAT

Dokeos looks better as well as less difficult how Moodle in terms from interface [23].

But Moodle is superior to OLAT in terms of administrative functions, collaboration of course development and training methods.

8. Moodle and Sakai

Unlike Moodle, Sakai is mostly implemented in Java and may cause some issues in older versions. versions from browsers [23].

Moodle outperforms Sakai in terms of administration, collaboration, and course. development.

9. OLAT and Sakai

Sakai, like OLAT, is a Java-based e-learning system developed by the international an alliance of universities, colleges and commercial affiliates; and both have very similar properties ties [24].

10. OLAT as well as in other

While most of the other e-learning applications in this chapter are based on PHP, OLAT (Online Learning and Training) is an founded on the Java as well as is an Apaches License [24].

eFront and Moodle are superior to OLAT in terms of administration and course development.



3. Conclusion

In this chapter, in literature about distance education as well as I'm studying control systems are summarized. This chapter also provides a brief comparison of some of the more significant learning management systems used for education.

Thus, the history of distance education shows constant development. Flow new ideas and technologies exist in the historical perspective of distance education. Also observed that non-traditional education is trying to mix with traditional education, responding change I'm studying theory and technology development [13].

The Internet-based distance learning model can be defined as the transfer of educational content with in use text, images, video, as well as audio files above Internet, online or offline. According to the Institute for Higher Education Policy (IHEP), online distance learning education has acquired a special status for three main reasons. First, the Internet has become the dominant technology in distance education due to the growing telecommunications. throughput of cations. Secondly, distance learning via the Internet allows education as well as I'm studying process to happen "in Any time as well as Any a place." asynchronous interactive I'm studying Wednesday, especially, have become in signature characteristic from this field. Finally, distance education via the Internet is in many respects fundamentally different from how traditional in the class education Consequently attractive for students [17]. That basic is different- The bottom line is that distance learning via the Internet eliminates the physical barrier and time. restrictions for students and lecturers.

Within in framework from this study, in open source I'm studying control systems especially Moodle are wide used especially in universities as well as above education institutions. IN In general, commercial learning management systems, especially Blackboard, outperform open source ones. a source I'm studying control systems in terms from administrative Peculiarities; But, according to to the teaching methods that are used, open source learning management systems especially Moodle outperforms commercial learning management systems. According to existing literature [25], Moodle yet comes outside because in top used system among in open source LMS. This result also supports our observations this are explained in this chapter.

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