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Distance education systems used in universities of Turkey and Northern Cyprus

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Abstract

Distance Education is a method of education in which learners are physically separate from educators. The distance education systems are used in most universities in Turkey and Northern Cyprus. The most commonly used are Moodle and WebCT. Moodle is an open source learning management system that is the most widely used among Web-Based Distance Education Models. WebCT is an internet-based course management system that is accessed over the Internet.

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1. Introduction

In recent years higher education system have had to face an increasingly competitive environment and use of web-based learning in the last decade. The effect of using the Internet in education has gradually increased and new technologies have improved student's learning. Distance learning has become an important part of the education. Distance education must involve two-way communication between educators and students occur non-contiguously [1]. With the development of technology in education has increased the need of distance education tools [2]. That's why most universities begin to use the web-based distance education systems. While some distance education systems are open-sourced, the others are commercial. For the assessment of the most appropriate distance education systems, a detailed research is needed about the most used distance education systems in universities of Turkey and Northern Cyprus. In this study, the aim is to research and find the most appropriate distance education systems to use in universities of Turkey and Northern Cyprus. Then these systems are compared with each other.

2. Material and Method

In this study all universities in Turkey and Northern Cyprus are researched about distance education systems. Most universities now provide rich computer, network and multimedia capabilities for instruction. The benefits of these distance education systems include the means for creation of motivational environments for learning. Course management systems provide software for the management and delivery of course content and resources to students. These systems have become an essential component of computer-based instructional capability [3].

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The increasing communications capability of computers is being used in universities. There are many computer based distance education systems such as ATutor [4], Moodle [5], WebCT (Blackboard) [6, 7], Claroline [8], Adobe Connect [9], Perculus [10], AkademikLMS [11], Angel [12], Sakai [13] and etc. Among the others, WebCT (Blackboard) and Moodle are the two well-known web-based learning management systems widely used in universities and higher education [14]. Adobe Connect is well-known web conferencing solution in universities recently. That's why, in this section the well-known and widely used web-based distance education systems are explained and then the universities which use these systems are shown in a table.

The Blackboard Learning System has emerged as the dominant course management system. It can be accessed from the internet at anytime and anywhere. Students can retrieve all of their course materials including assignments, lecture notes, and etc. They can submit their assignments as soon as they are complete. Despite its advantages, Blackboard has disadvantages, too. For instance, it is hard to learn. Blackboard options may be restricted to particular operating systems. It is not free software. It is likely that instruction will become less course-centric and more knowledge-centric [3].

WebCT is a Web-based distance education system with many teaching resources and with a simple user hierarchy. It is a course management system that allows instructors to post course information. The system administrator has only some basic and essential tasks like initial course and instructor registration [15]. Consequently, there is not excessive administrator dependence. Course management tasks, like registering students and course contents, checking test and statistics, are done by the instructor, called designer in WebCT. The system allows the instructors to change the page layouts, colors, font types, etc and they can choose texts or icon links. WebCT allows greater flexibility in designing course curriculum and study schedules, which is especially suitable for continuing education courses. With many communication and discussion features, WebCT facilitates active participation among instructors and students, and allows more varieties in designing learning materials and resources such as the use of multimedia. WebCT now owned by Blackboard since 2006. In early 2006, Blackboard and WebCT have merged their companies and the combined company is named Blackboard. It will continue to support Blackboard products and WebCT products.

Moodle [5] is an acronym for Modular Object-Oriented Dynamic Learning Environment. Moodle is a course management system. It is a free and open source software package. It is designed to help educators to create effective online learning courses [16]. Moodle tools focus on content delivery for course information. It has a very large and active community of people who are using the system and developing new features and enhancements. It can compete with the big commercial systems in terms of feature sets and is easy to extend [17]. The advantages which are being open source, educational philosophy, and community make Moodle unique in the course management system space.

Adobe Connect is an enterprise web conferencing solution for online learning and webinars. It is based on Adobe Flash technology, so lecturers can deliver rich interactions that students can join easily [9]. It provides users alike with the capability to easily create and deliver self-paced online courses, conduct highly interactive virtual classes, and efficiently manage training programs [18]. Adobe Connect enables users to create interactive tutorials with Adobe Presenter and Adobe Captivate, which automatically publish the courses using Adobe Flash Professional software. It enables to incorporate existing content from SCORM compliant learning management systems. It enables all learners to interact with content simultaneously [18].

Using distance education in universities has become widespread in Turkey and Northern Cyprus recently. Some universities use distance education system for their all departments and faculties, while the others use it for only one department or a few departments which are needed. The universities and their departments using distance education systems in Turkey and Northern Cyprus and their purposes of using distance education are given in Table 1. As shown in Table 1, the most widely used distance education systems are Moodle, WebCT (Blackboard) and Adobe Connect.

Table 1. The Distance Education System in Universities

UNIVERSITY	DEPARTMENT	TOOL	PURPOSE
Anadolu University	All Departments	WebCT (Blackboard), Adobe Connect	To Support Distance Education
Atatürk University	All Departments	Moodle	To Support Formal Education
Bahçeşehir University	International Logistics	Adobe Connect	To Support Formal Education
Başkent University	All Departments	Moodle	To Support Formal Education
Beykent University	3 Departments	Adobe Connect	To Support Distance Education
Bilkent University	All Departments	Moodle	To Support Formal Education
Çankaya University	7 Departments	Moodle	To Support Formal Education
Çukurova University [20]	12 Departments	Moodle	To Support Formal Education
Dokuz Eylül University	Computer Engineering	Moodle	To Support Formal Education
Eastern Mediterranean University	All Departments	Moodle	To Support Formal Education
Ege University	Computer Engineering	Moodle	To Support Formal Education
Eskişehir Osmangazi University	All Departments	Moodle	To Support Formal Education
Fatih University	All Departments	Moodle	To Support Formal Education
Girne American University	All Departments	Moodle	To Support Formal Education
Hacettepe University	All departments	WebCT (Blackboard)	To Support Formal Education
Harran University	11 Departments	Moodle	To Support Formal Education
International Cyprus University	All Departments	Moodle	To Support Formal Education
İstanbul University	All Departments	WebCT (Blackboard)	To Support Formal Education
İstanbul Arel University	2 Departments	Perculus VCP	To Support Distance Education
İstanbul Aydın University	2 Departments	Adobe Connect Pro Meeting	To Support Distance Education
İstanbul Bilgi University	Computer Engineering	Moodle	To Support Formal Education
Kadir Has University	All Departments	WebCT (Blackboard)	To Support Distance Education
Karabük University	9 Departments	Moodle	To Support Distance Education
Kocaeli University	2 Departments	Perculus VCP	To Support Distance Education
Mersin University	2 Departments	Adobe Connect	To Support Distance Education
Metu Northern Cyprus Campus	3 Departments	Moodle	To Support Formal Education
Middle East Technical University	All Departments	Moodle	To Support Formal Education
Near East University	Computer Engineering	Moodle	To Support Formal Education
Pamukkale University	1 Department	Moodle	To Support Formal Education
Sabancı University	All Departments	WebCT (Blackboard)	To Support Distance Education
Sakarya University	All Departments	AkademikLMS	To Support Distance Education
Süleyman Demirel University	4 Departments	Adobe Connect	To Support Distance Education

According to Table 1, Moodle is most used web-based distance education system in Turkey. The reason can be that it is open-source web-based distance education system. WebCT and Adobe Connect are used mostly after Moodle, but WebCT is used in many departments more than Adobe Connect. The reason of using Moodle far from WebCT and Adobe Connect is that WebCT and Adobe Connect are commercial. The purpose of using Moodle in universities of Turkey is mostly to support formal education. It shows that open-source softwares for learning will become increasingly available. Only Karabük University uses Moodle to support distance education. The purpose of using WebCT in universities in Turkey is to support both formal and distance education. While Anadolu, Kadir Has and Sabancı Universities use WebCT to support distance education, Hacettepe and İstanbul Universities use WebCT to support formal education. The purpose of using Adobe Connect in universities of Turkey is mostly to support distance education. Only Bahçeşehir University uses Adobe Connect to support formal education.

According to Table 1, Moodle is the only web-based distance education system is in universities of Northern Cyprus according to Table 1. The purpose of using Moodle is to support formal education in universities of Northern Cyprus.

3. Research and Discussion

The universities which use web-based distance education systems are explained in previous section. According to this section, Moodle, WebCT and Adobe Connect are the three most widely used web-based distance education systems in universities in Turkey and Northern Cyprus. But Adobe Connect is used only a few departments of the

universities which are showed in Table 1. That's why Moodle and WebCT web-based distance education systems are selected and compared as shown in Table 2 [11]. So the effectiveness of Moodle and WebCT distance education systems is evaluated. It is observed that, Moodle is selected for being open-source, while WebCT is selected for facilitating active participation among instructors and students.

Table 2. Comparison of Moodle and WebCT (Blackboard)

Features	Moodle	WebCT (Blackboard)
Browser Support	Any browser supporting HTML 3	Internet Explorer 5.1+, Netscape 6.2.1+, Safari 1.2+, and AOL 7.0.
Operating Server	Unix, Linux, Windows	Linux, Solaris 8 and 9
File Uploading	Single files, zip files, all web file types	Single files, zip files, all web file types
Usability	User Friendly	User Friendly
Languages	Each faculty can change the language of their own course--built-in	Expensive language packs--not using
Costs	No license fee	\$34,000 license + \$15,000 support
Mail	External	Internal or external
Announcement	HTML blocks	Text blocks
Source	Open Source	Not Open Source
Content Sharing	File sharing, SCORM compliant imports, Meta-course allows course copy, tool by tool, imports quiz questions	File sharing, IMS Import--has bugs, but works for content module and quizzes, imports quiz questions. Vista has Learning Object Manager
Tools	Blog, wiki, journal, glossary, workshop	Whiteboard
Scale	You can create your own scale and use it in all graded activities	No similar tool
Assignments	3 types	1 type
Wiki	The Moodle Wiki module	No similar tool
Discussion Forum	3 types	1 type
Whiteboard	No	Yes
Student Reports	Excellent	OK
Server	Windows Server (IIS), Linux	Linux, Microsoft Windows 2000 Server SP3
Database	MySQL, PostgreSQL, Oracle	Oracle
Requirements	PHP 4.1.0 or later, Apache	Perl 5.6.1, Apache

According to Table 2, Moodle and WebCT have both similarities and differences. While in the terms of source, Moodle is open-source, WebCT (Blackboard) is not open-source. In the terms of costs, Moodle is superior to WebCT (Blackboard) because it is free, but the quality of services is not guaranteed because freeware systems have weaknesses in terms of technical support. That's why WebCT (Blackboard) which is a commercial system is superior to Moodle in the terms of quality of services. Moodle has three types of assignment which are offline activity, online text, and upload a single file assignment. On the other hand, WebCT (Blackboard) has only one type of assignment.

Moodle has a Wiki module which enables educators and students to work together on web pages to add and change the content, but WebCT (Blackboard) has no similar tool like Wiki module. WebCT (Blackboard) has a Whiteboard tool where students can share in real time drawings and images, but Moodle has no similar tool like Whiteboard. The mail module of WebCT (Blackboard) can be external or internal, but the mail module of Moodle is external, so users can send messages to offline students.

Moodle has three types of discussion forum, but WebCT (Blackboard) has only one type of discussion forum. Moodle has a Scale tool which enables lecturers to create their own scale, but WebCT (Blackboard) has no similar tool like Scale tool. In terms of databases varieties, Moodle has a wide range of databases than WebCT (Blackboard) because Moodle supports MySQL, PostgreSQL and Oracle; on the other hand, WebCT (Blackboard) supports only Oracle database system. The announcements of Moodle are better than WebCT (Blackboard), because its blocks are html blocks, while the blocks of WebCT (Blackboard) are text blocks. Lastly, in terms of student reports, Moodle is more successful than WebCT (Blackboard).

4. Conclusion

There are several web-based distance education systems and each one is organized and works in a different way. However, the universities must consider its needs before choosing a distance education system. The distance education systems explained in this study are suitable for continuing education courses and make courses more effective for educators and students. Also these web-based distance education systems, Moodle, WebCT and Adobe Connect, reduce the time needed for submitting of the lecture notes.

This study shows that the most well-known and widely used web-based distance education systems are Moodle and WebCT (Blackboard) despite Adobe Connect is a developing system nowadays. If educators want to use a guaranteed system for their courses in terms of services quality, they can use WebCT (Blackboard). But if educators want to use various modules in their courses and if they want a free web-based distance education system, then they can use Moodle. This study shows that the universities will use these systems more and increasingly because of the developing technology in education.

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