

# Transformation of Kabul based Universities from using Classic Content Management System to Web Content Management System Key issues and challenges

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**Abstract:** *The aim of this research is to find problems and challenges resulted from using Classic Content Management System (CCMS) and replacing it with Web Content Management System (WCMS) in Kabul based universities. The study found answers to the following questions: Do stated universities have necessary facilities such as electricity, ICTs, and the Internet? Are faculty administrators, instructors, and students ready to use WCMS? What problems and challenges have resulted as consequence of using CCMS? Finally, which of these two systems are cost-effective, quick, efficient, and more reliable? The research results indicate that all administrators, instructors and students agree that CCMS is incapable to fulfill their needs; therefore, it has to be replaced with WCMS. However, it is important that all necessary equipment (such as stable electricity, ICTs, fast internet) which WCMS needs has to be provided before converting CCMS to WCMS. In fact, this modern system is faster, efficient, economical, and more reliable than CCMS.*

**Keywords:** *CCMS, WCMS, ICTs, Open Source, Kabul based universities.*

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## I. Introduction

Nowadays WCMS has become an essential part of an institution and it makes a strong impact on the image of it (Shaik, 2005). Information and Communication Technologies (ICTs) are just as essential for modern society as electricity and water networks. Modern everyday life would be absolutely unthinkable without ICTs. It reduces costs, improve processes, boost innovation, and increase productivity. It also makes the public sector leaner, faster and more citizen-friendly. Most universities in the world use WCMS for leading their administrative, teaching, learning, and service delivery purposes. A WCMS is a computer application that allows publishing, editing and modifying content, organizing, deleting as well as maintenance from a central interface. It provides procedures to manage workflow in a collaborative environment (Arnold, 2003).

Although major public and private Kabul based universities have access to the Internet, electricity, computers, printers, and computer professionals, they still use traditional systems for their administrative, financial, teaching and learning, and service delivery affairs. One reason might be that it takes time to leave a system you are used to and switch to a new and somehow strange system. Another reason could be that these institutions have not felt the real importance, efficacy, fastness, and cost effectiveness of WCMS yet.

Taking these points in mind, I conducted research on the importance of using WCMS and how it can provide economical and financial benefits to these institutions.

## II. Objectives of the study

1. To find what problems have resulted from using CCMS in the Kabul based universities.
2. To identify what needs for a WCMS are identified by current administrators, lecturers, and students.
3. To discover what characteristics should be presented in the WCMS.
4. To find the role, benefits, and characteristics of a quality WCMS for an institution in the light of literature.
5. To find which one of these two systems is more economical and cost-effective.

### Scope of the study

This study took place in four public (Kabul University, Kabul Medical University, Kabul Polytechnic University, and Kabul Education University), and three private (Jahan University, Katib University, and Khatam - ul - Nabeyeen University) universities.

### III. Literature Review

Education is changing! Chinese proverb says: Do not confine your children to your own learning, for they were born in another time. Interaction is increasingly electronic. The process of ‘teaching’ and ‘learning’ has changed. WCMS in Today's Education Process attract the students, showcases the institution – retains & provides resources for students and staff (Braender, Kapp&Yeras, 2008).

- Interaction is increasingly electronic.
- The process of ‘teaching’ and ‘learning’ has changed.
- Cost & Usage of IT in Education! Based on a USA study of costs in 1997-98 compared to 2002-03, the average cost of hardware per student dropped by 30%. The cost of Instructional software increased by 50%. The cost of internet services trebled. The cost of professional development stayed roughly the same.
- The educational benefits of learning via the web have been studied at length, as have the more general implications of Information and Communication Technologies (ICT) for the future development of Higher Educational Institutions (HEIs) and the potential decentralization of University resources.

CMS, Ektron (2001) lists the following benefits:

- (1) Anytime, anywhere Web publishing, (2) Faster updating, (3) Audit trail and user authentication, (4) Efficient workflow management.

Han (2003) cites the following advantages: (1) Improved information accuracy, (2) Increased flexibility, (3) Enhanced system management, and (4) Reduced Maintenance and Cost. CMS offers many other benefits which include: (1) It allows non-technical staff the ability to update web site content without knowing HTML or FTP; (2) It is easy-to-use; (3) Workflow / approval -- can be as complex or as simple as desired, (4) Each unit decides on the workflow that best meets their needs; (5) Individuals who have natural responsibility for content can maintain that content themselves (with approval process if desired), (6) Consistent visual identity (CLF); (7) Content more likely to be kept up-to-date (review reminders); (8) Information is more easily found; (9) It makes site maintenance and (re-)development easier and far less costly; and finally (10) Web professionals are freed to focus on higher-value tasks, i.e. developing interactive functionality, improving site usability (Lance, 2010).

There has been a tremendous growth of web applications in the last decade.

Gold (1995) pointed out that many institution relations depend on the proper creation and maintenance of recorded information. The medium on which the recording of information could be done may be paper, microfilm, audiotapes, videotapes, photographs, slides, or any computer-readable medium, such as computer tapes or disks, compact disks and optical disks.

#### The Participants

The participants included the deans of faculties, chairs of departments, faculty members, and students of the respected universities.

Interview Participants (Kabul based Universities)					
Interview Participants	Number of Participants	Male	Female	Teaching Experience	Administrative Experience
Deans of Faculties	9	8	1	12 – 37	2 – 7
Chairs of Departments	25	22	3	8 – 30	1 – 5
Lecturers	14	9	5	5 - 32	X
	Total = 48	40	8		

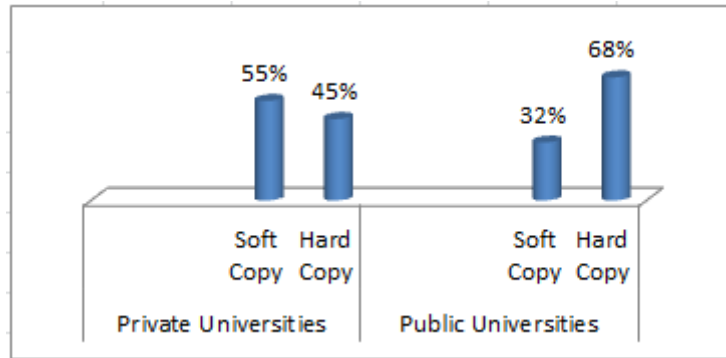
**Table 1: describes some characteristics of interview participants (Kabul based Universities)**

Questionnaire Participants (Kabul based Universities)				
Universities	Number of Participants	Male	Female	Year
Kabul University	200	150	50	Seniors + Juniors
Kabul Medical University	120	82	38	Seniors + Juniors
Kabul Polytechnic University	120	105	15	Seniors + Juniors
Kabul Education University	150	90	60	Seniors + Juniors
Katib University	120	85	35	Seniors + Juniors
Jahan University	100	80	20	Seniors + Juniors
Khatam-ul – Nabeye University	100	70	30	Seniors + Juniors
	Total = 910	662	248	

**Table 2:describes some characteristics of questionnaire participants (Kabul based Universities)**

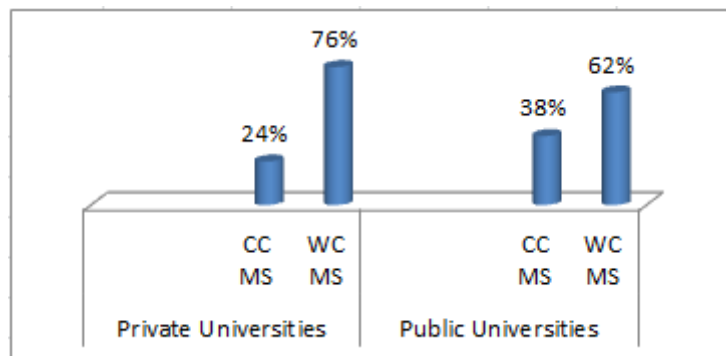
#### IV. Discussion

The first point founded in this research is that the procedure of sharing chapter notes and other learning resources in public and private Kabul based universities are different. Most instructors of private universities share learning resources in soft mode with their students, while the instructors of public universities share hard copy of chapter notes with class representatives to make copies of the notes and distribute on their classmates accordingly. The original copies of chapter notes should be submitted back to the instructors.



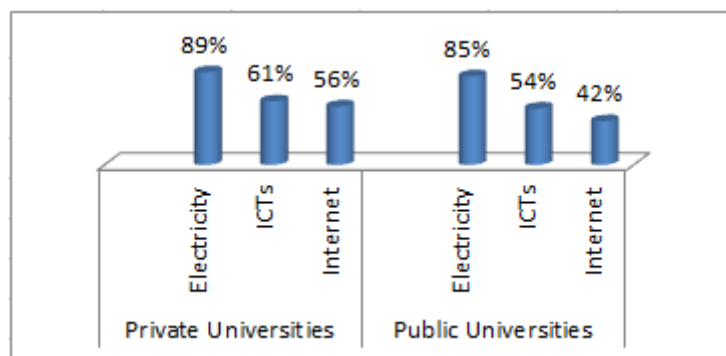
**Graph 1: Procedure of sharing chapter notes and other learning resources**

The second point founded in this research is that all directors, lecturers, and students of Kabul based universities agreed that CCMS does not fulfill their needs and has to be transferred to WCMS. However, all necessary facilities such as stable electricity, computers, ICTs, and fast internet need to be provided prior to the transformation of system.



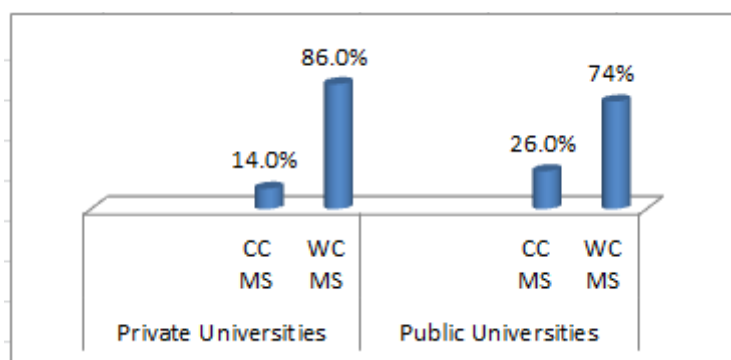
**Graph 2: Can classic content management system fulfill needs of students?**

The third point found in this research is that the amount of facilities existed in each university is vary. For example, all universities have access to electricity but with respect to Internet challenges are still existed. Some universities have access to the Internet but it has very low speed which takes minutes and sometime even hours to open a webpage. On the other hand, some universities have access to the Internet but their Internet is not stable; it works for one hour, the next hour it is gone. There are universities which have access to decent internet and this is the reason they have WCMS and use it for leading their administrative and educational affairs.



**Graph 3: The level of existed facilities in universities**

The last point founded in this research is that all administrators, lecturers, and students are eager to use WCMS. This system is fast, efficient, and reliable. This is the reason that their eagerness grows each day and paving the way to transform CCMS to WCMS.



**Graph4: Level of students' eagerness for using WCMS**

### List of Management Systems

#### Open Source

- Moodle
- aTutor
- Canvas
- Chamilo
- LAMS
- Totara LMS

#### SAAS/CLOUD

- DoceboLMS
- Google Classroom
- Latitude Learning

#### Proprietary

- Blackboard Learning System
- Desire2Learn
- eCollege
- GlobalScholar
- HotChalk
- Informetca
- JoomlaLMS
- Latitude Learning LLC
- Schoology
- Teachable

#### Historical

- ANGEL Learning
- Click2Learn
- CourseInfo LLC
- GeoLearning
- Learn.com
- Litmos
- Peoplesoft
- SuccessFactors
- SumTotal(acquired by Skillsoft in 2014)
- Taleo (acquired by Oracle in 2012)
- WebCT (acquired by Blackboard in 2005)

### Teaching with Moodle in Higher Education

With the help of technology, education has massively changed, from a closed model, and teacher-centered classroom to a model more open and student-centered (Cook, 2001).

### Why Moodle

The name Moodle is an acronym for Modular Object Oriented term Developmental Learning Environment and is a course management system via the Internet, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites. One of its main advantages is its open source, or has open source allowing any user with programming knowledge to modify and adapt the environment according to their own needs. Moodle can be installed at no cost at many servers. How has code opened there are no maintenance costs need to pay for upgrades. This platform is widely used worldwide by universities, communities, schools, instructors, courses, teachers and even businesses (Dougiamas, 2001).

### General Features of the Moodle Platform

The Moodle platform has three levels of use, with features of differential use and access. So is the concept of trustee or administrator (the manager of the platform), teacher (who may also have other designations, for example, trainer, facilitator, promoter) and the student (learner, participant, among others). These roles and their features are represented in the following table (Taylor, 2003).

Role	Function
Administrator	Manages the whole environment
Teacher	Generate events, courses or subjects according to the thematic areas defined Generate training or events which are designated
Student	Accesses and interacts with a specific event and participates in the subjects they are subscribed

**Table 3: Roles and functions in Moodle Platform**

### A few important options of Moodle

**Chat:** the Chat module allows participants to have a real-time synchronous discussion. Chat contains a number of features for managing and reviewing chat discussions.

**Database:** It allows the lecturer and/or students to build, display and search a bank of record entries about a topic. The format and structure of these entries can include images, files, URLs, numbers and text amongst other things.

**Forums:** They are used for asynchronous online discussion. By subscribing to a forum, participants receive copies of each new post by email.

**Glossary:** It allows participants to create and maintain a list of terms and definitions, as in a dictionary. It can be used to build an annotated list of useful websites or FAQs.

**Questionnaire:** It allows you to create a survey or questionnaire for students to fill out, for instance a course evaluation or a reading response survey.

**Scheduler:** It allows the course instructor to post available meeting times and then has the students sign up for the slot that best suits them. This is useful for required meetings between student and professor, such as advising days, or simply for optional office hours.

**Lesson:** It allows a lecturer to create conditional pathways through material. It consists of a number of pages, each page normally ending with a question and a number of possible answers. It can be a helpful tool for practicing material, studying, and testing.

**Assignments:** It allows students to submit work online, including uploading any file type (Word document, Powerpoint, video clip etc.). Lecturers can grade and give feedback.

**Quiz:** It allows the lecturer to design and set quiz tests, and includes a range of question types and reporting options.

**Workshop:** A Workshop is a peer assessment activity. It allows participants to assess each other's projects, as well as exemplar projects, in a number of ways.

## V. Conclusion

The result of the research concluded as:

1. All directors, instructors, and students agree that CCMS is an out of dated system and cannot fulfill their needs. It has to be replaced with WCMS after all facilities required by WCMS is provided. It is more sufficient, reliable, and economical. It can be accessed at anytime and anywhere.
2. All Kabul based universities have access to electricity, computers and other ICTS, but the existence of slow Internet is still a major issue for most of them.
3. Taking the advantages and facilities of Moodle in mind (as stated in discussion part), I recommend this LMS platform for Kabul based universities to use.

## VI. Suggestions

Following suggestions are listed in the consequence of conducted research. If the Ministry of Higher Education and university authorities consider these suggestions, chances are that problems and challenges administrators, instructors, and students currently face will reduce if not completely solved and pave the way for using WCMS.

1. Each faculty should have an equipped computer lab with high speed of internet so that both instructors and students can upload and download chapter notes, assignments from their WCMS.
2. A large percentage of administrators, instructors, and students do not have enough awareness about WCMS; therefore, it is important that decent trainings have to be held for them.
3. It is important that all universities top order administrators in coordination with MoHE should continuously talk to national and international donors and encourage them to assist universities in providing ICT tools and well equipped computer labs.
4. Finally, I suggest Moodle, an open source platform, for Kabul based universities to customize it based on their needs and use it as WCMS.

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