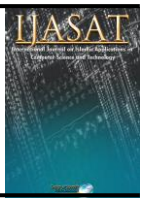

Design Concepts of a Dedicated LCMS for Quran and its Sciences

Mohamed Menacer, Amar Arbaoui

Taibah University, NOOR Research Centre
College Computer Science & Engineering
Madinah, Saudi Arabia
eazmm@hotmail.com, aarbaoui@gmail.com

ABSTRACT

This paper present design and development concepts of a dedicated Learning Content Management System (LCMS) for courses, trainings, and other learning activities of Quran and its Sciences. There are several non-conventional Learning methods that are specific to Quran related sciences, learning activities such as Tafidh (Recitation of Quran), Halaqa (Quran study circle), Tajweed (Reading Quran). All the latter learning activities and methods make the development of a dedicated LCMS a must for learning Quran and its sciences. The research project is at its preliminary stage for the development of a prototype LCMS model for Learning Quran and its Sciences. Overall concepts of the LCMS infrastructure is presented in this paper with the different phases involved.

***Keywords*— Learning Content Management System, Learning Management System, eLearning, Quran, Quran Sciences, Online Learning, LMS, LCMS.**

1. Introduction

E-Learning has grown rapidly in importance for institutions and has been largely facilitated through the Learning Management Systems (LCMS). Meanwhile many individuals and institutions are creating their own personal learning environments by combining the various Web 2.0 services they find most useful. An LCMS is defined as a collection of integrated tools and systems enabling the management of online learning, providing a delivery mechanism, user tracking, assessment and access to resources [http://www.jiscinfonet.ac.uk/InfoKits/effective-use-of-VLEs (last visited 24/11/2011)]. These teaching and learning supporting tools are specifically designed to enhance student's learning experience. LCMSs are the most popular method of e-learning nowadays (http://whatis.techtarget.com/definition/0,,sid9_gci866691,00.html (last visited 24/11/2011)). An LCMS, is a software application that automates the administration, tracking, and reporting of training events (Andrews & Haythornthwaite , 2007).

After conducting a brief search on this subject, many projects and applications of dedicate distance learning or elearning systems, used for learning/teaching Quran and its sciences, have been found. This was mainly in: USA, Malaysia, Saudi Arabia, Turkey and Pakistan. However, there are no sufficient studies or publications about such experiences or the

systems being used. The ones that have been found are believed to be usually customized versions of existing and conventional open source LMS/LCMS such as Moodle, Atutor, or Dokeos.

The aim of this paper is to explore and adapt the use of LCMS in the area of learning Quran and its Sciences to provide further understanding and a better learning environment. Due to the large variety of Quran contents and the lack of a uniform standard and learning environment, this paper describes design concepts to integrate Quran and its Sciences related tools and contents into a dedicated LCMS based on new learning technologies and standards. The emphasis, however, will be to improve and standardize the presentation of learning materials related to Quran. Furthermore the identification of the requirements for an effective delivery and study of Quran content through the LCMS are identified. The dedicated Learning environment will allow educators and academics alike in the field of Quran and Quran Sciences to use, create and deliver related learning contents easily and more efficiently.

2. Conventional LCMS Tools

LCMS systems have been designed and developed for formal academic courses in higher education, with minor adjustments and customization for schools and other academic institutions (Ellis, Ryann K , 2009) . The main components of a standard LCMS are illustrated in Fig. 1 and summarized as follows:

1. Enrollment
2. Reporting
3. Assessment and Tracking
4. Resource Management
5. Collaboration Tools
6. Delivery of online Learning

Integrating all these components will allow effective delivery of online training modules.

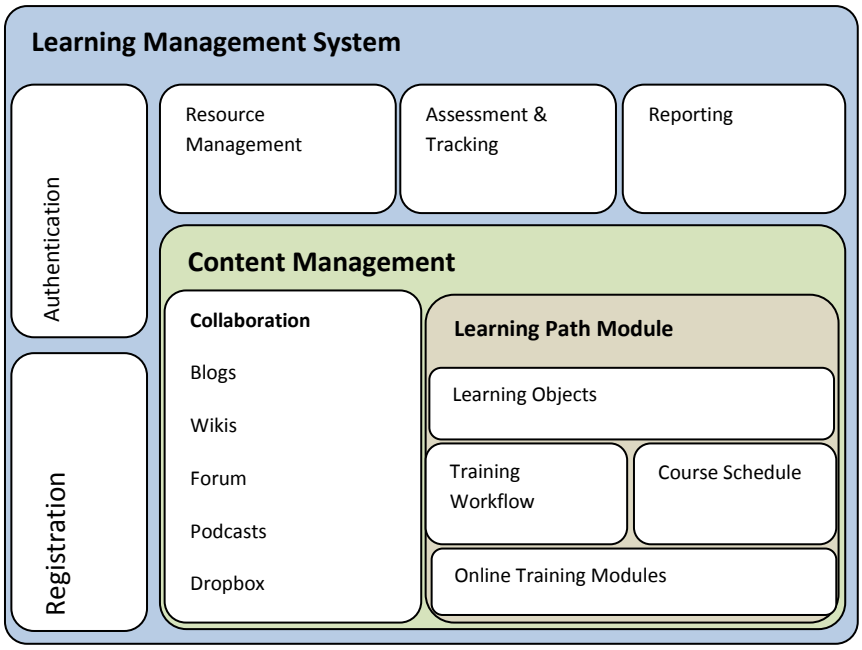

Fig. 1: Conventional LCMS Architecture

3. Learning Quran Structure

There are different learning methods on how to learn Quran and its sciences. These range from formal academic methods in terms of courses and trainings, to dedicated learning methods to acquire specific knowledge of Quran such: Tahfidh (Recitation of Quran), Tajweed (Reading Quran). In addition, Quran Sciences can be delivered through Halaqa (Quran and Islamic study circle). For online access, the latter methods requires dedicated access to Quran and Quran Sciences contents. All Quran learning methods require eQuran tool, as standard, in a form of an interactive Digital Quran. Furthermore, other considerations are taken into account such as dedicated environment for female sessions only, and synchronous and asynchronous (online/offline) learning for each type of learning Quran methods. Table 1 briefly summarizes the different methods for learning Quran with the additional dedicated LCMS tools that needs to be developed, such as: dedicated collaboration, eQuran, and Quran Sciences tools.

Table 1: Additional dedicated tools needed for learning Quran methods

Learning Methods	***Conventional LMS Tools***	***Quran LMS Tools***
Tafidh (Recitation of Quran)	• Dedicated Collaboration Tools	• eQuran Tools
Tajweed (Reading Quran)	• Dedicated Collaboration Tools	• eQuran Tools
Halaqa (Quran and Islamic study circle)	• Dedicated Collaboration Tools	• eQuran Tools • Quran Science Tools

4. Dedicated Quran Lms Design Concepts

Although conventional LMS environment can be used for learning Quran, however it is not the most adequate and convenient environment with the necessary facilities to learn Quran, and its Sciences, with the different learning styles and methods. Thus the need to design and develop a dedicated system, with dedicated tools, where all types of Muslims and non-Muslims can learn Quran the way it should be.

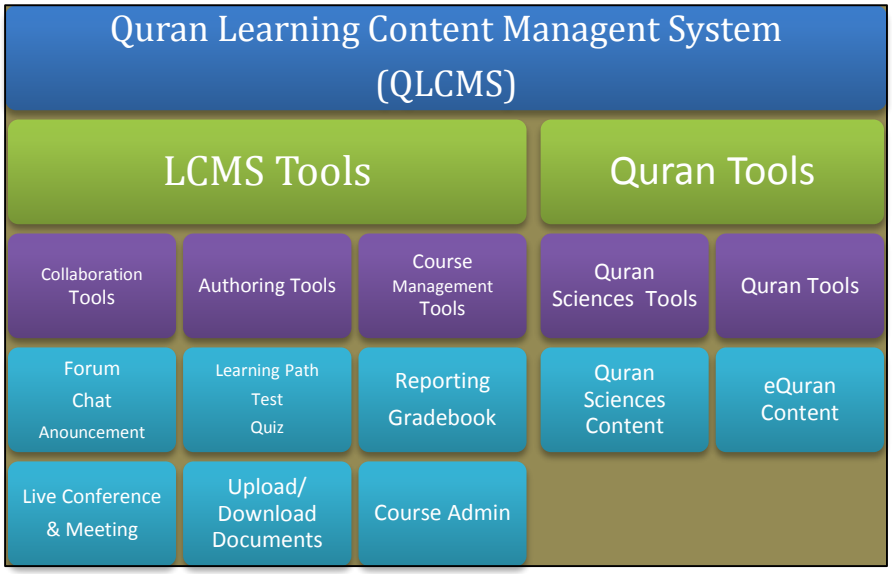

Fig. 2: Quran Learning Content Management Architecture

Fig. 2 illustrates the architecture for the Quran Learning Content Management System (QLCMS). Most of the conventional LCMS tools can be used in addition to dedicated tools for Quran and its Sciences. There are 3 main element tools that are being proposed, namely: an interactive eQuran, Search engines, and Quran science dedicated content.

5. Implementation Phase

The implementation phase is in its initial phase. Dokeos LCMS has been considered as the Conventional and base LCMS. Dokeos is an open source system, it has been chosen because of its user friendly interface, as well as the clear and well structure coding (http://www.dokeos.com (last visited 24/11/2011). All additional tools and modules are being developed in accordance with Dokeos modular development procedures, this is required for best integration, scalability, cohesion and reusability.

Fig. 3 Shows all the Quran dedicated tools that needs to be developed, as three different modules: eQuran, Quran sciences and dedicated collaboration modules. All the Quran learning methods require eQuran module, as standard, in a form of an interactive Digital Quran. The dedicated Collaboration tools are similar tools to conventional LCMS tools in principle, where additional features relevant to Quran learning methods are added. Finally, the Quran sciences management module consists of several tools that represent the essential Islamic references in addition to Quran, which are key to understanding and learning Quran. Initially only two tools are considered for development: Hadith and Tafseer tools.

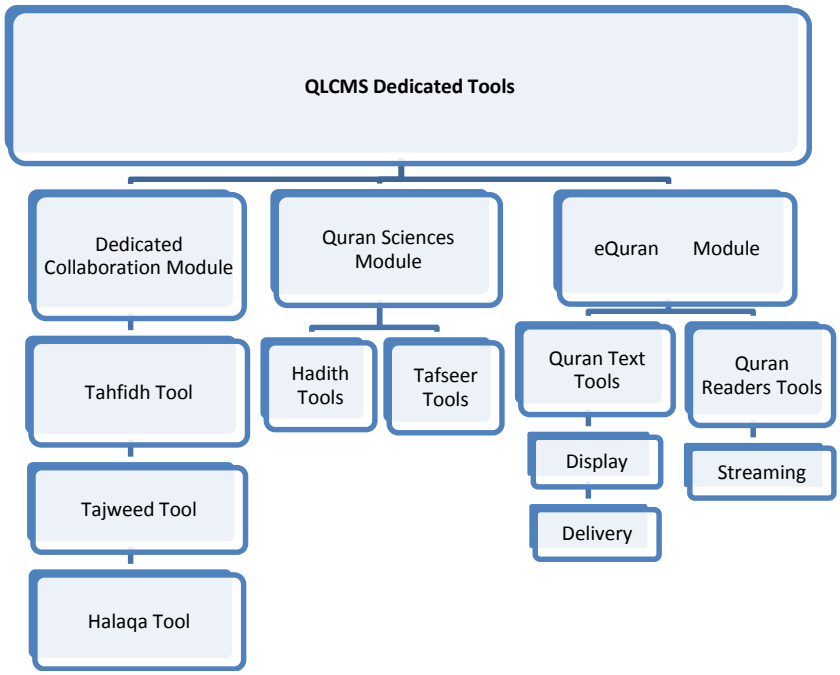

Fig. 3: Quran Dedicated Tools

6. Conclusion

Although the research project is at its preliminary development, overall concepts of the Quran LCMS has been presented with different phases of the design from dedicated modules to essential tools required for proper delivery and learning of Quran. Furthermore, more tools can be considered for development that cover more general Islamic issues such as: Sharia law, finance, and Islamic education.

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