

Learning Management Systems and Content Management System: Definitions and Characteristics

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Abstract: The development of computers and the highly usage of technology all over the world increase the ability of using the e-learning methodology. E-learning becomes an essential part of any classroom. Continuous researches are taken place in the field of E-learning technology, virtual class rooms and virtual learning environment. So it is very important to have such a learning management system application for administration, documentation, and reporting of training programs. This paper summarizes the most important characteristics of Learning Management System (LMS). Moreover, it shows the major differences between LMS and Learning Content Management System (LCMS).

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1. Learning Management System (LMS)

A learning management system (LMS) is a software application for the administration, documentation, tracking, reporting of training programs, classroom, online events, e-learning programs, and training content (Lonn, 2009). A Learning Management System should be able to do several function. Functions may include Centralize and automate administration, Assemble and deliver learning content rapidly and Personalize content and enable knowledge reuse.

Learning Management Systems range from systems for managing training and educational records, to software for distributing courses over the internet (Abdul Rahman et al, 2011). Corporate training use learning management systems to automate record-keeping and employee registration, student self-service for example self-registration, training workflow for example user notification or manager approval (Lonn, 2009).

Some Learning Management Systems are web-based which are used to facilitate the access to learning content and administration. Learning Management Systems are used by different institutions like industries and educational institutions to enhance and support classroom teaching and offering courses to a larger population of learners across a large area.

Other learning management systems providers include performance management systems, which encompass employee appraisals, competency management, skills-gap analysis, succession planning, and assessments.

2. LMS Characteristics

Learning Management System mission is to provide educational, administrative and deployment requirements. LMS may share many characteristics with a virtual learning environment, used by educational institutions. The virtual learning environment which are used by universities and colleges allow instructors to manage their courses and exchange information with students for a course that in most cases will last several weeks and will meet several times during those weeks (Lonn, 2009). In a virtual learning environment setting a course may be much shorter in length, completed in a single instructor-led event or online session.

The characteristics of LMS and virtual learning environment could be represented in different ways. First main characteristic is that it can help in managing users, roles, courses, instructors, facilities, and generate reports (Lonn, 2009). Moreover, it has course calendar, learning path and student messaging and notifications.

Another important feature of LMS is that it can help in assessment and testing handling before and after testing along with display scores or results. It allows for web-based or blended course delivery as well as integration with performance tracking and management systems. Another characteristics include grouping students according to demographic units and assemble and deliver learning content rapidly (Abdul Rahman et al, 2011).

3. Enhancement Features

It is important to let the technology determines how your organization will use its

Learning Management System. Therefore, it is crucial to define the requirements needed before you find the right Learning Management System that meets the requirements of your organization. On the other hand, it is also important to find how the LMS integrates with the applications used at organization (Lonn, 2009).

Organization may need to integrate their LMS with human resources application so that a human resources employee can enter a new hire information into the HR system, or to integrate with the administration tools so that LMS must enable administrators to manage user registrations and profiles, define roles, set curricula, chart certification paths, assign tutors, author courses, manage content, and administer internal budgets, user payments, or to integrate with the registration department that supply the LMS with the sections and students names, or to integrate with any application that can support the LMS.

Also, it is critical to know the technical platform of LMS before applying it inside organization. Most learning management systems are web-based, using a variety of platforms like Microsoft.Net, Java, PHP that are usually use different data bases like Mysql, Sql server. LMSs could be commercial software lenience like blackboard or open source software like moodle (Aydin and Tirkes, 2010).

4. Learning Content Management System (LCMS)

A Learning Content Management System is a related technology to the Learning Management System which is focused on the development, management and publishing of the content that will be delivered via a Learning Management System (Mateljan et al, 2008). A Learning Content Management System is a multi-user environment where developers may create, store, reuse, manage, and deliver digital learning content from a central object repository.

Content Management System is a system used to manage the content of a Web site (Mateljan et al, 2008). A CMS consists of two elements: the Content Management Application (CMA) and the Content Delivery Application (CDA). The Content Management Application element allows the content manager or author, who may not know Hypertext Markup Language (HTML), to manage the creation, modification, and removal of content from a Web site without needing the expertise of the web administrator. The content delivery application element uses and compiles that information to update the Web site. The features of a CMS system vary, but most include Web-based publishing, format

management, revision control, and indexing, search, and retrieval.

A CMS system may also provide tools for one-to-one marketing. One-to-one marketing is the ability of a Web site to represent its content and advertising to a user's specific characteristics using information provided by the user or gathered by the site. For example, if you visit a search engine and search for digital camera, the advertising banners will advertise businesses that sell digital cameras instead of businesses that sell garden products.

5. Comparison between LMS and LCMS

LMS and LCMS are complementary but different systems and one does not replace another (Mowat, 2004). LCMS provide tools for authoring and reusing content as well as virtual spaces for student interaction such as discussion forums, live chat rooms and live web-conferences. LMSs are software for planning, delivering, and managing learning events within an organization, including online, virtual classroom, and instructor-led courses. For example, an LMS can simplify global certification efforts, enable entities to align learning initiatives with strategic goals, and provide a means of enterprise-level skills management (Mowat, 2004). The focus of an LMS is to manage students, keeping track of their progress and performance across all types of training activities. It performs administrative tasks, such as reporting to instructors, Human resources and other systems but isn't used to create course content.

6. Examples on LMS and LCMS

Typical examples on Learning Management Systems are blackboard system which is a commercial system and Moodle system which is an open source system (Aydin and Tirkes, 2010). On the other hand, SharePoint System is considered an example of Learning Content Management System.

The Blackboard Learning System is a flexible e-Learning software platform that delivers a complete course management system which allows institutions to integrate external services and applications into the blackboard learning system. Functions related to blackboard are: communication announcements that allows teachers to post announcements to their students to read, on the other hand chat function that allows students those who are online to share information another function is the course content that allows the teacher to manage his/her material any many other functions.

Another example is Moodle learning management system which is an open source system. Moodle is used by a variety of institutions and individuals, including universities, government

departments, high school, airlines and many other institutions.

Moodle is suitable for online classes as well as face to face learning, easy to install on almost any platform that supports PHP, Course listing shows descriptions for every course on the server, including accessibility to guests, Courses can be categorized and searched easily- one Moodle site can support thousands of courses, Most text entry areas such like resources, forum postings etc., and finally the site is managed by an administrator user.

Different institutions started already to switch to open source LMS such as Moodle instead of Blackboard (e.g. The University of Jordan). Mainly because Moodle has a lot of features that users can deal with easily and without paying extra money to have these features. While in Blackboard, if there is a need to add any new feature, then organizations have to pay for these services. Moreover, in Moodle, it is possible to have own support on the system while, on the other hand, it is not possible to do that with blackboard unless calling the supplier of the system.

SharePoint is an example of Learning Content Management System. It is a websites building tools which includes features that support Learning Management System. This makes it easier for people to work together. Using SharePoint, people can set up Web sites to share information with others, manage documents from start to finish, and publish reports to help everyone make better decisions. SharePoint has different capabilities that can benefits developers as well as owners. SharePoint Site provides a single infrastructure for all business Web sites, it shares documents with colleagues, manage projects with partners, and publish information to customers. Moreover, It has a huge communities that can deliver a great collaboration environment, this can make it easy for people to share ideas and work together the way they want. With features like document types, retention polices, and automatic content sorting and then let people

work naturally in Microsoft Office. Finally, it gives everyone access to the information in databases, reports, and business applications, helping people to locate the information they need to make good decisions.

7. Conclusion

For the success of any online learning system, it is important to know what Learning Management System is. Moreover, it is important to define what Learning Content Management System is. This paper defines both concepts and highlights the main characteristics and differences between the two concepts.

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