

# Application learning content management systems, virtual classroom and m-learning in enterprises

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**Abstract - Several organizations are looking for a way how to manage the overall job performance of their employees, regardless of where the "working age" they are. Learning and competence development, along with management skills is noticeable development, therefore, that organizations want to maximize the capacity of its staff, and with them the skills that the new business conditions become necessary. In the process management capabilities and potentials occupy a key role in content management systems learning (LMS). One capability that users LMS never had this kind should be developed. In this way, the organization gained greater success using his own internal resources.**

## I. INTRODUCTION

Learning Management System (LMS) is a key application in the model of e-Learning. Includes a set of features designed for the "delivery", monitoring, reporting and administration of learning content, student progress, and interaction of students and mentors and students together. Serious e-Learning system cannot be imagined without the complex software. LMS can be used in a very simple system, and the highly complex enterprise-wide distributed environments, such as public administration, large companies and the like.

LMS is software for managing learning events organized, including online, virtual classroom. LMS can simplify global certification efforts, enable entities to align initiatives with strategic objectives and the means for enterprise-level management skills [6].

The focus of LMS is to manage employees, track their progress and performance in all types of training. Learning and competence development, along with management skills is a noticeable development in addition to education there is a niche, therefore, that organizations want to maximize the capacity of its staff, and with them the skills that the new business conditions become necessary. One capability that users LMS never had this kind should be developed. In this way, the organization gained greater success using his own inner resources [1].

Learning Management System (LMS) is software that allows you to fully administer the global learning process of employees of enterprises. Some research has found that 60% of current LMS, with monitoring of the

achievements of its users, and 38% giving timely feedback and have a plan to boost performance [5].

LMS for registration of employees, enables the courses in the catalog of courses, description of data on employment, and enables reporting on completed. In addition, LMS is typically designed to be operated courses that deliver different publishers and providers of services. LMS is usually not included in its configuration authoring tools for creating educational content. LMS system manufacturers typically offer additional tools to create content that is flexible for employees or teams. Reuse a wide course (one course can be delivered to multiple employees, the monitoring of achievements).

## II. ADVANCED TECHNOLOGY APPLICATIONS IN EDUCATION AND EMPLOYMENT

Learning Content Management System is a system for creating, storing, preparation and delivery of e-Learning content in the form of learning objects. Search new LCMS and compared to the LMS (least according to SCORM-in) is a Automated Authoring Application and applications for automated authoring process. This application automates authoring (content creation process) introducing authors with templates and storyboarding capabilities that include the principles of instructional design. Using these templates, authors can develop a whole course on the basis of the existing buildings in the repository, creating new facilities or a combination of both principles. In this way, considerably accelerating normally quite time consuming content development.

Content management system learning (LCMS) enables management of creating, storing, using and re-using content for learning within a firm or organization. Content learning is structured in the form of particles of knowledge - learning objects or learning objects [4].

Structure LCMS system may be viewed as an upgrade structure LMS systems, which add a content management system (CMS - Content Management System) and reusable learning objects (RLO - Reusable Learning Objects). The term originated from the CMS on-line publishing industry, where such systems enable the

creation and administration of various content (articles, reports, pictures, banners and the like).



Figure 1. Management in Custom Portal

The CMS system article is entirely made up of a number of particles of knowledge, called content component, whose level is guaranteed, and reuse. One and the same component may be involved in numerous articles and it can be read by many readers. If you bring it in connection with the work, then we talk about re-usable learning objects, which can figure content in different domain knowledge and can be delivered to different students.

CMS is a software for effective creation, development and content management web site in internet, intranet and extranet use variants. It is designed for large numbers of business users to efficiently and managing web content as a way of presenting the entire business firms and business activities on the Internet.

Characteristics of CMS in a business environment [7]:

- Better information and communication between business functions and staff - CMS is used as an Internet information portal for employees in the company. Applied in this way provides a comprehensive and timely information of employees and the ability to transfer information to the clients of the company.
- Each employee can participate in creating and updating the site - CMS allows the inclusion of "ordinary users' computers to develop and update the site with no previous training to work with specialized tools. In particular it is important that marketing personnel and other sectors of the company without hiring professionals such as web designers and developers the content, create and modify hand, real and connects the menus and links etc.. In addition to users, LINK CMS is available to help system (Help).
- (Only) quality control - CMS allows the user at any time to have an insight into the condition of the structural and functional checks of all the connections. In this way, the user shall establish the correctness of its procedures and controls the quality of entered element. CMS allows the creation of

material for later publication on the network with the previous review of the author, and responsible person.

- Integration with databases and Office applications - basically a CMS is reliable and financially viable MySQL database that provides great benefits for the entry, use and organization of stored materials. Content created in some of the Office applications in a simple way of being integrated into the content of the website which is operated by CMS.

It is important that these systems can be applied in a very simple system, and the highly complex enterprise-wide distributed environments, such as public administration, large companies and the like.

### III. BUSINESS LMS

LMS in the future should be the basic business applications in large companies (the so-called Trade LMS) in order to increase worker efficiency, facilitate the decision making and automation of work processes. These LMS's need to manage knowledge and competences and cooperation employees. Cooperation employees is established through virtual conferences, forums, chat rooms, blogs. Business LMS should provide career management, to be of assistance in employment, to manage the WBT and CBT in the companies.

Workplace paid attention to education and training at a time, in fact in the work environment. In the context in which to improve workforce skills and competency for rapid change in the labor market and business, e-learning has proven to be very popular as an effective solution [2]. The main beneficiaries of the ICT sector now meet 60% of its needs in training for teaching e-learning. This form of training has the advantage of organizations that cannot bear the cost and waste of time for training in the classroom. Further efforts are needed to small organizations understand, plan and use e-learning in line with their requirements and needs. E-learning offers special advantages when it comes to information and content of the course to maintain modern, given the rapid changes in business environment and regulations.

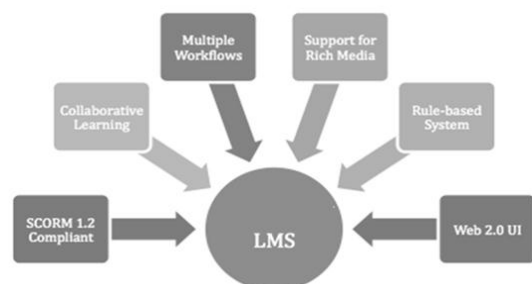


Figure 2. Benefits of LMS

LMS integration with ERP and CRM. ERP (Enterprise Resource Planning) system that enables the integration of engineering, customer service, planning, manufacturing, finance, human resources through a single facility or multiple locations. CRM (Customer

Relationship Management) system that helps manage customer relationship [1].

Grouping (integration) of organizations that use the same LMS, brings many benefits in implementing the education of its participants. This is particularly reflected in lower total cost of training, the time to create competence and provides a consistency of delivery activities encompassed the needs of education. What is the LMS needs to become usable in integrated systems is the necessity of moving on to more advanced levels, in fact LCMS (Learning Content Management System), a system where much attention is given to patterning and evolution of educational content, taking the principles of instructional design. According to the data 60% of current LMS and LCMS has a function.

#### IV. APPLICATION OF VIRTUAL CLASSROOM IN ENTERPRISES

Virtual classrooms make it possible to develop and enrich the entire range of generic skills, users such as:

- group work and team work (so as to define roles in teams, solve critical problems and discuss the team). Virtual classrooms have a separate "rooms" where users can meet and work on solving the tasks set them.
- problem solving and consideration of various solutions for solutions through discussion that takes place in the group. (In the group may consider different ideas for solving the problem and try different strategies to solve),
- communication skills (asking questions and giving answers, the fact that users are required to take a stand in certain situations, to agree or to express their disagreement, to explain his position),
- effective use of new technologies. Users get used to new technologies used in different activities.

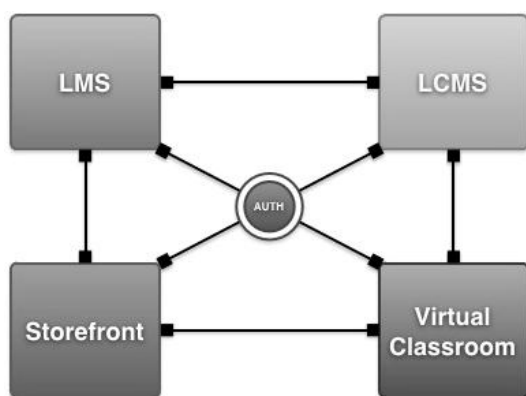


Figure 3. Collaboration in enterprises

Characteristics:

- Usually includes live audio and video communication among employees. Participants use the microphone and headphones (headsets) and

communicate with your voice. There are many free tools that can be used for the virtual classroom. Can integrate the separate input devices (for example keys, through which users can vote, answer questions, etc.).

- They can include joint panel to display text and drawing sketches. Lecturer and participants can work together to search the Web ling and joint visits to sites.
- The employer may exchange files with users. Users can join and transfer images from a Web camera when the network capacity to provide. There is a possibility that the presentation include guests from abroad, which is a very good way to include experts in the field. May include "Break out" rooms, the environments in which small groups can work together.
- Sessions can be archived and remember to be reviewed later. These technologies are increasingly integrated into the LMS systems (for example Blackboard, Moodle or Janisons) or CMS systems.

#### V. M-LEARNING IN ENTERPRISES AND SOCIAL NETWORKING

The future of e-learning, m-learning (mobile learning) - *learning anytime and anywhere*. Thoughts on learning through mobile, wireless internet and so on. The future of education lies in portable devices, primarily mobile phones, iPods, PDAs and laptop computers. In the near future, e-learning systems will be integrated into mobile technologies such as mobile phones, handheld scanners, tablet PCs, Kindle, IPAD and devices that no longer exist. In the long run, e-Learning System (LMS), will be integrated in almost all electronic devices and machines [6].

Social networking (Web 2.0) increase in virtual social interaction on a global scale, is increasingly growing, creating a space in which to share information, knowledge and experience. The newly created space is often the target of testing needs, opinions and ways of organizing as in other sectors, as well as organizing training. Social cooperation is becoming an indispensable way of gathering and management's LMS, where the learning experience, knowledge and a variety of valuable information placed in the lap of social interaction. The newly arrived participants in this form of communication, very quickly learn from their domesticated counterparts, a new generation growing up in this virtual social environment.

What is the big problem is, what is expected of the LMS and what is expected from the only form of social learning, which is present in social networking. In social learning, learning is largely informal character.

The challenge is to design (design) LMS, which significantly by using social interaction through collaborative learning, learning, provides a formal sense. For now, many of the existing LMS is not a satisfactory level of use of Web 2.0 technologies. Some numerical

indicators of the situation with existing LMS products are 42% let index, 20% use blogs, 17% of a wiki page [3].

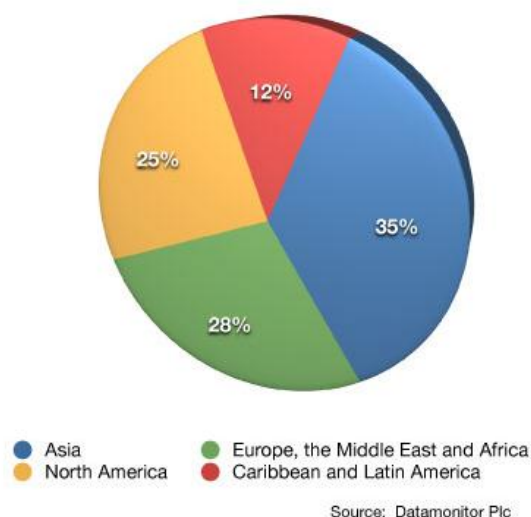


Figure 4. World-Wide Social Networking Users

Strategy for social e-education include:

1. Co-authorship - Users use Web tools to generate and edit together some content.
2. Collaboration in problem solving and collaborative research - Users work together to find solutions to target problems and select strategies to access the following tasks. Social software tools enable users to easily communicate in order to cooperate, be it in textual form or in direct conversation.
3. Tacit knowledge sharing with others - through communication, cooperation in the project, through research and conversations users have the opportunity to share their opinions with others and to participate in adopting common conclusions. Social networks also allow users to express their specific views, to challenge their opinions and others to participate in building a common attitude and reach consensus.
4. Monitoring-employed, professionals, experts and experienced users can involve the social network in occasionally as an instructor who will guide users in the learning process.

All these software will, as more time is devoted to adoption, as well as simplification of administrative and user interfaces, lead to an increase in simultaneous amateurism (level of knowledge management systems and content creation) and widespread use in all areas of education (school education institutions and in enterprises) as in the domain business since learning can easily be replaced with the term "information" or "relationships with clients."

The future will be different for everyone ranging from hairdressing shops for dogs, medical clinics... until of course, an organization that has to do with learning, as

delivered by each individual contribution and use for themselves.

## VI. CONCLUSION

We can conclude that the appearance of more powerful portable communications devices, resulting in the need for future LMS aims to accessibility, independent of the dominant or pre-defined platform for access to educational content and educational activities. The increasing spread of virtual social interaction, gets a significant role in creating applications that are supported by the LMS. In social interaction, consumers are increasingly sharing resources for learning, as well as their ideas and opinions through discussions, presentations, blogs, comments, etc.. tools for this purpose. In this way, learning moves from the corporate model to the global, and therefore the organization LMS need the same adjustment. Accordingly, we conclude that any existing LMS needs to be developed and improved.

Flexibility and adaptability LMS individual and social community, whether real or virtual, individually or through collaborative learning, accompanied by educational standards, is one of the main objectives which aims LMS future. Accessible to large repositories of learning objects, monitoring of standards for the creation of compatible content (for example SCORM), an increase of structural, as opposed to instructional content, forcing non linear ways of learning, follow-up of new IT is the default.

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