Knowledge Sharing in Higher Education-KMEduSoft

Prof. Ms. Ulka Toro (Gulavani)
Asst. Professor, Bharati Vidyapeeth
Institute of Management, Kolhapur.
toroulka@yahoo.in, sg4906@gmail.com,

Dr. Milind J. Joshi.
Systems Analyst,
Computer Center,
Shivaji University,

Abstract— A portal is a personalized collection of information, content and services. Knowledge Management is used to create, share, store and apply knowledge effectively in the organization. The aim of design of portal is to facilitate knowledge sharing among teachers , students and researchers in higher learning institutions. The objective is to improve collaboration and communication among different departments in higher learning institutions .   To ensure success in higher education, there is a need to identify the knowledge that each component contributes to the system and to develop appropriate methodology for knowledge sharing purpose so that available knowledge is used by the stakeholders as per requirement. The proposed KMEduSoft system is dynamic web content knowledge portal designed to share tacit and explicit knowledge among registered users .

Index Terms - knowledge, knowledge sharing, knowledge Management, web portal, higher learning institutions

—————————— ◆ ——————————

1 INTRODUCTION

In 21st century due to globalization and digitalization, higher education institutions(HEIs) are rapidly changing and demanding. HEIs is made up of a number of components like teachers, students and researchers. Teaching and learning are two mutually dependent elements of a learning process [2]. In HEIs knowledge is inherently created by teachers and researchers and is shared among different stakeholders. Knowledge sharing culture contributes to a positive working environment. To successfully share , store and disseminate knowledge among students, teachers and researchers, there is a need of centralized repository system in HEIs. By considering this, web portal KMEduSoft is designed to satisfy the need of students and teachers . The paper discusses about the concept of web portal, design of web portal –KMEduSoft, software specifications and system architecture of KMEduSoft and features of KMEduSoft   [3] [5].

2. CONCEPT OF WEB PORTAL :

Web portal is a single , integrated, ubiquitous and useful point of access to information, applications and people(IBM, Global Education Industry, 2000). It is a gateway to network accessible resources and facilitates dynamic exchange of knowledge, data and information. Web Portal provide easy accessibility to both tacit and explicit knowledge and communities of practice and   facilitate knowledge transfer through the inclusion of multiple communication channels like message boards and directories [2] . Web portal provide the facility to share, exchange and reuse knowledge and hence support Knowledge Management process. It provides quick access to different academic events and activities. It also facilitate communication and sharing of knowledge with virtual community [6]. Web portal technology allows educational institutions to assimilate all information and services used by their communities and present these in a seamless, self-service web environment that tenders an exclusive experience to every user [5]. Web portals help to provide immediate access to the data in order to make short-term decisions and can increase the distribution of information and utilization of critical knowledge for institutional decision making. It also helps to store and retrieve documents as per requirement and provides synchronous as well as asynchronous modes of teaching and learning activities [1] [4].

3. SOFTWARE SPECIFICATIONS AND SYSTEM ARCHITECTURE OF KMEDUSOFT

The aim of design of KMEdusoft is to integrate Knowledge Management practices and elearning together to develop an effective knowledge sharing platform to exchange knowledge electronically among students and teachers. The model KMEduSoft is developed by determining the existing gap and identification of strategic needs of higher education institutions for knowledge creation and sharing purpose. It also aims to improve effective teaching-learning process between teachers and students and to develop collaborative learning system. In Professional colleges, there is lack of qualified and trained teachers for technical subjects, hence the system provides effective knowledge storage and knowledge sharing environment among students and teachers. The tacit knowledge which embeds in expert teachers mind is stored in the system and it is shared among other teachers and students as per the requirement. Also explicit knowledge which resides in books, journals, conference papers, audio tapes , multimedia clips is made available to develop KMEduSoft for better knowledge sharing purpose [3] . It provides the facility to share information and personal services like emails, chat rooms, messaging services related to academics and administrative activities in the college. It allow different departments or entities to give personalized information regarding grades, classes, research details and other events.

For the design of KMEdusoft we select XAMP as web server which is a free open-source that consists of Apache and easy to install . Application is designed with PHP 5.0. which is a 'Personal Home Page Pre-processor' used to communicate with and manipulate the database. RDBMS used is MySQL which is very fast, reliable and easy to use and its connectivity, speed and security make it highly suitable for access-

ing database. Templates are used as web based publishing features to create web content. HTML 5 is used to create hypertext documents and to format and display textual information.

Three-Tier architecture concept is used while designing KMEdusoft. Communication is considered as the most important element for collaborative learning procedures.

i) View Layer : It is the web portal design with which user interacts. It consist of teachers, student, administrative staff and administrator.

ii) Middle Layer : It lies between database MySQL and view layer with PHP functionalities.

iii) Database Layer : It consist of RDBMS MySQL.

4. FEATURES OF KMEDUSOFT :

TABLE 1 : KMEDUSOFT FEATURES

Features	Description
Registration	Registration of students, teachers, alumni and administrative staff
Upload Facility	• Teachers can upload lecture notes, quiz questions, assignment details in the format of word , PDF, PPT. • Teachers upload other academic details like course details, class time-table, examination time-table, academic calendar, details of class co-ordinators, event details, hostel details, classroom al-

	location details etc.
	• Teachers can upload publication details, conference attended details, workshop and seminar attended details , book publication details , major and minor research project details etc.
	• Students can upload solved assignments ands solved quiz questions.
Download Facility	• Students can download academic details
	• Students can download assignment questions and quiz details.
	• Students can give feedback about use of KMEduSoft.
	• Teachers can download research publication details and conference proceeding details.
Collaboration details	• Information that relates with industrial training
Help	It contains guideline about use of KMEduSoft

5. RESULT OF KMEDUSOFT

The portal is designed based on the need of teachers , students and researchers to interact and to share knowledge regardless time and place. The portal designed is tested with teachers and students of a management institute and shows a good response to store and share knowledge using ICT . The lecture notes prepared are screened by the appointed subject expert having more than five years experience in the subject. The result also shows that use of KMEduSoft motivates self-learning attitude among students and to improve their academic performance. Immediate update is possible since application runs on the Server side. Also level of confidence of teachers is increased who are involved to develop academic content using ICT for the KMEduSoft. It is hoped that KMEduSoft will continue to grow and in long run it gives positive impact. It shows that to provide better teaching-learning environment, educational institutions must initiate knowledge management practices in their capacity to acquire, utilize and share knowledge by using ICT.

i. Registration Details : Teachers and students should enter login name and password   before using the system.

ii. Teacher - Upload Details : Teachers can upload two types of details like Academic Uploads and Research Uploads. Teachers can upload the academic details like course details, class time-table, examination time-table, class co-ordinator details, class room details , academic calendar, assignments in C Programming and assignments in HTML.

6. CONCLUSION

The system designed KMEduSoft helps the educational institution to share knowledge between teachers , students, researchers and administrative staff. It facilitates knowledge sharing among students and teachers in higher education institutions . It provides necessary information for students to improve their academic performance and excellence. It facilitate navigation, analytical and communication tools for members of higher learning institution to do their work in a collaborative manner. The system designed helps to support and enhance operational, evaluation , research and planning functions within the institu-

tions. The system designed also helps to increase efficiency and productivity of the teachers by eliminating manual knowledge sharing. Application is run completely on the server side ensuring a high level of security and minimal load on the client system and web browser. While using KMEduSoft the important factors are student's technology competency, attitude of teachers and researchers , attitude of administrative staff and security aspect. For the security purpose password and login facility is provided , so that only authorized person can access the system . The portal designed indicates that open source tools are also reliable to develop knowledge based portal.

REFERENCES

[1] Ahmad Fauzi Mohd Ayub & Rohani Ahmad Tarmizi[2010]. "Factors influencing Student's use a Learning Management System Portal :Perspective from Higher Education Students", *International Journal of Education and Information Technologies*, Issue 2, Volume 4.

[2] Ana Julia Viamonte [2010]. "The Computer in the teaching of Mathematics. Proceeding of Advanced Educational Technologies", 6th WSEAS/IASME *International Conference on Educational Technology* (EDUTE'10). Pp 24-29.

[3] Arumugam Rathiinavelu, " Designing of Knowledge management System for Higher Education : Study.

[4] Cecilia A. Mercado , Gerry Paul C. Genove[2006]. "MYSLU: A web Portal Project Promoting ICT and Web Based Collaboration in Higher Education Philipines Experience", *Third International Conference on elearnign for Knowledge –based Society* , Bangkok, Thailand.

[5] Marjan Mansourvar, Norizan Mohd Yasin[2010]. "Web Portal as a Knowledge management System in the Universities", *World Academy of Science, Engineering and Technology.*

[6] Nur Razia Mohd Suradi, Hema Subramaniam, [2011]. " Knowledge Management : An Implementation of K-Portal in Fiit, Unisel", *Journal of Knowledge Management Practice*, Vol.12, No.1, March 2011.

[7] S. Rajlakshmi, R.S.D Wahidabanu ,[2011]."Sharing and Capturing Tacit Knowledge in Higher Education- The Info-Ca-SH", *International Journal of Computer Theory and Engineering*, Vol.3, No.3.