Virtual Learning Environment for DLISC, RTMNU, Nagpur: A Prototype Design

By

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Abstract

In this digital era it is important to keep pace with rapid changes that are taking place in the world, especially for developing countries with strong emphasis on knowledge sector. For this, changes ought to be introduced in our education system and specifically in the teaching-learning process. Internet is fast becoming an engine of innovation in education. Digital Learning, digital content, online tutorial, examination and assessment, distance learning etc. are getting more popular day by day. These concepts are throwing challenges to the traditional delivery of instruction and training in the changing age of globalization and e-resources. The Internet or indeed ICT and all its interactive elements are able to have an extremely positive impact to the learning potential of students as well as teachers. This paper is an attempt to provide a conceptual idea to build-up a prototype model for VLE@DLISc,RTMNU in ICT environment by integrating the two software i.e. Moodle and GSDL.

Keywords': Learning Object Repository, Virtual Learning, OpenCourseWare, Elearning

Introduction

E-learning is becoming an integral part of higher education today. It is a force, which has some kind of presence on almost every campus in developed countries. An increasing number of university courses are now available as hybrid courses in Virtual Learning Environment (VLE). VLEs are web-based toolkits that facilitate learning through the provision and integration of online teaching and learning materials and virtual communication tools. The merging of robust learning technology with the Internet offers a new breed of learning experiences, in particular the development of Virtual Learning Environments (VLEs). A VLE is an electronic system that can provide online interactions of

various kinds that can take place between learners and tutors, including online learning" (JISC,2003). A Virtual Learning Environment (VLE) is a software system designed to support teaching and learning in an educational setting.

Similar terms

A VLE is a computer program that facilitates computerized learning or elearning. Such e-learning systems are sometimes also called Learning Management System (LMS), Content Management System (CMS), Learning Content Management System (LCMS), Managed Learning Environment (MLE), Learning Support System (LSS), Online Learning Centre (OLC), OpenCourseWare (OCW), or Learning Platform (LP); it is education via computer-mediated communication (CMC) or Online Education.

A more correct term may be a virtual environment for learning, rather than virtual learning environment. Simply, VLE can be defined as

the Web-enabled multimedia-driven learning system integrated with synchronous and asynchronous communication tools. (JISC Joint Information Systems Committee's)

In, VLE there are three components which consist of

- Administrator subsystem
- e-tutor subsystem
- e-student subsystem

[pic]

Fig.1: VLE components

Facilities in VLE

A VLE should make it possible for a course designer to present to students, through a single, consistent, and intuitive interface, all the components required for a course of education or training. Although logically it is not a requirement, in practice VLEs always make extensive use of computers and the Internet. A VLE should implement all the following elements:

- The syllabus for the course
- Administrative information including the location of sessions, details of prerequisites and co-requisites, credit information, and how to get help
- A notice board for up-to-date course information
- Student registration and tracking facilities
- Basic teaching materials. These may be the complete content of the course, if the VLE is being used in a distance learning context, or copies of visual aids used in lectures or other classes where it is being used to support a campus-based course.
- Additional resources, including reading materials, and links to outside resources

in libraries and on the Internet.

- Self-assessment quizzes which can be scored automatically
- Formal assessment procedures
- Electronic communication support including e-mail, threaded discussions and a chat room, with or without a moderator
- Differential access rights for instructors and students
- Production of documentation and statistics on the course in the format required for institutional administration and quality control
- All these facilities should be capable of being hyperlinked together
- Easy authoring tools for creating the necessary documents including the insertion of hyperlinks though it is acceptable (arguably, preferable) for the VLE to be designed allowing standard word processors or other office software to be used for authoring.
- In addition, the VLE should be capable of supporting numerous courses, so that students and instructors in a given institution (and, indeed, across institutions) experience a consistent interface when moving from one course to another.

Some Open Source Courseware applications are:-

- Atutor (Open Source Web-based Learning Content Management System),
- Claroline (free LMS, Learning Management System),
- Dokeos (e-learning and course management web application),
- ILIAS (Open Source Learning Management System),
- Moodle (Open Source Course Management System), etc.
- MuiDis
- Sloodle (Second Life, Moodle)
- Desire2Learn
- eFront An Open-Source web-based Learning Management System
- JoomlaLMS a LMS based on Joomla platform
- LAMS the Learning Activity Management System
- SharePointLMS a LMS based on MS SharePoint
- TotalLMS
- Dokeos
- ILIAS
- Sakai

Some closed systems are

- Blackboard a family of software
- WebCT (Now a part of Blackboard) software applications designed to enhance teaching and learning
- FirstClass messaging and communications solution
- Desire2Learn Desire2Learn eLearning solutions
- CyberExtension Virtual Managed Learning Environment
- It's Learning Norwegian Closed Source System (written in ASP.NET)
- WebTrain Virtual live classes, enrollment, attendance, attention monitoring.Blackboard,

Home page of VLE @ DLISC,RTMNU: Prototype Design

- o The Department of Library & Information Science, R.T.M. Nagpur University is one of the oldest Department of Library Science in the country. It is the fifth University of India as well as the fifth Library Science School in the Country.
- o This Department of Library and Information Science, Nagpur University was started on 20th August 1956.

Prototype VLE @ DLISc,RTMNU,Nagpur

[pic]

Difference between TLE and VLE

Traditional Learning Environment

- Resources available within a library or information centre unit
- Examinations
- Institute driven time and learning schedule,
- Classrooms
- Registers, tutor, records etc.

Virtual Learning Environment

- Learning materials and resources available within the system
- Online assessment
- User driven time and learning schedule
- Discussion forum, chat room, video conference
- Monitoring and tracking system

Open Source Course Management System: Moodle

The word Moodle was originally an acronym for Modular Object-Oriented Dynamic Learning Environment, which is mostly useful to programmers and education theorists. Moodle is an Open Source Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It has become very popular among educators around the world as a tool for creating online dynamic web sites for students. Moodle is a software package for producing Internetbased courses and web sites. It is a global development project designed to support a social constructionist framework of education. Moodle is provided freely as Open Source software (under the GNU Public License). Basically this means Moodle is copyrighted, but that you have additional freedoms. You are allowed to copy, use and modify Moodle provided that you agree to: provide the source to others; not modify or remove the original license and copyrights, and apply this same license to any derivative work. Read the license for full details and please contact the copyright holder directly if you have any questions. Moodle can be installed on any computer that can run PHP, and can support an SQL type database (for example MySQL). It can be run on Windows and Mac operating systems and many flavors of linux (for example Red Hat or Debian GNU).

Features of Course Management in Moodle

- A teacher has full control over all settings for a course, including restricting other teachers
- Choice of course formats such as by week, by topic or a discussion-focused social format
- Course Themes. A course can have its own theme of colors and layout.
- Flexible array of course activities Forums, Quizzes, Glossaries, Resources, Choices, Surveys, Assignments, Chats, Workshops
- Groups teacher(s) and students can be placed in one or more groups
- Recent changes to the course since the last login can be displayed on the course home page helps give sense of community
- Most text entry areas (resources, forum postings etc) can be edited using an embedded WYSIWYG HTML editor
- All grades for Forums, Quizzes and Assignments can be viewed on one page (and downloaded as a spreadsheet file)
- Full user logging and tracking activity reports for each student are available with graphs and details about each module (last access, number of times read) as well as a detailed "story" of each students involvement including postings etc on one page.
- Mail integration copies of forum posts, teacher feedback etc can be mailed in HTML or plain text.
- Custom scales teachers can define their own scales to be used for grading forums and

assignments

• Courses can be packaged as a single zip file using the Backup function. These can be restored on any Moodle server.

Moodle Requirement

Moodle is primarily developed in Linux using Apache, MySQL and PHP (also sometimes known as the LAMP platform). It is also regularly tested with Windows XP/2000/2003 (WAMP), Solaris 10 (Sparc and x64), Mac OS X and Netware 6 operating systems. Support for PostgreSQL, Oracle and Microsoft SQL Server. The requirements for Moodle are as follows:

Hardware

- Disk space: 160MB free (min). Require more free space to store your teaching materials.
- Memory: 256MB (min), 1GB (recommended). The general rule of thumb is that Moodle can support 50 *concurrent* users for every 1GB of RAM, but this will vary depending on your specific hardware and software combination.

Software

- Web server software. Most sites use Apache as the web server software. Moodle should work fine under any web server that supports PHP, such as IIS on Windows platforms.
- PHP scripting language. There are currently two versions (or branches) of PHP available: PHP4 and PHP5.

Various Modules in Moodle

Assignment Module

- Assignments can be specified with a due date and a maximum grade.
- Students can upload their assignments (any file format) to the server they are date-stamped.
- Late assignments are allowed, but the amount of lateness is shown clearly to the teacher
- For each particular assignment, the whole class can be assessed (grade and comment) on one page in one form.
- Teacher feedback is appended to the assignment page for each student, and notification is mailed out.
- The teacher can choose to allow resubmission of assignments after grading (for regrading)
- Allowing resubmissions can allow the teacher to progress monitor student projects/assignments as they evolve.

• Advanced assignments can allow multiple files to be uploaded. This could keep together preplanning maps, outlines, research papers and presentations. (Not for beginners)

Chat Module

- Allows smooth, synchronous text interaction
- Includes profile pictures in the chat window
- Supports URLs, smilies, embedded HTML, images etc
- All sessions are logged for later viewing, and these can also be made available to students

Choice Module

- Like a poll. Can either be used to vote on something, or to get feedback from every student (eg research consent)
- Teacher sees intuitive table view of who chose what
- Students can optionally be allowed to see an up-to-date graph of results

Forum Module

- Different types of forums are available, such as teacher-only, course news, open-to-all, and one-thread-per-user.
- All postings have the authors photo attached.
- Discussions can be viewed nested, flat or threaded, oldest or newest first.
- Individual forums can be subscribed to by each person so that copies are forwarded via email, or the teacher can force subscription for all
- The teacher can choose not to allow replies (eg for an announcements-only forum)
- Discussion threads can be easily moved between forums by the teacher
- Attached images are shown inline
- If forum ratings are being used, these can be restricted to a range of dates

Glossary Module

- This is one of the modules that best illustrates the way that Moodle can fundamentally improve upon the experience of a traditional classroom
- When students contribute to a course in a public place like the glossary, their ideas are given weight and attention and often result in a greater pride or ownership of the assignment
- Allows participants to create and maintain a list of definitions, like a dictionary

- Student entries can be previewed by instructors before publishing
- Entries can be searched or browsed using alphabet, category, date, and author
- A glossary of terms can be easily referenced by students
- Almost any module of Moodle can be set to hyperlink automatically to any word or phrase that is stored in or added to the glossary
- Glossary items can be grouped in categories
- Participants can comment on glossary entries
- Entries can be rated using teacher-defined scales
- Glossaries can be easily exported and imported via xml
- Glossaries can be fully searched
- Glossaries can be viewed with different display formats

Lesson Module

- A lesson is a series of pages which can be presented in a linear fashion, like a slide show, or in a non-linear, branching manner, or in a combination of the two.
- Navigation through the lesson can be straight forward or complex, logical or random
- Pages have a content area for questions or explanations, with a HTML set of tools
- Pages can allow students to make choices by their answers to questions or by selecting a button with a description
- Each choice can be associated with jumps that link to other lesson pages and can be scored
- Offers different scoring and grading potentials
- Interfaces with Grade and Glossary modules
- Lessons can build upon each other through conditional dependencies upon one another
- Question pages include Multiple choice, Multi-answer, T/F, numeric, short answer and essay.
- Pages can be created one at a time or imported in variety of formats
- Student attempts, time limits, minimum score and retakes can be set.
- Students may see progress bars, running score, reinforcement to student questions
- Password, start and end times, and other restrictions can be placed on students.

Quiz Module

- Teachers can define a database of questions for re-use in different quizzes
- Questions can be stored in categories for easy access, and these categories can be "published" to make them accessible from any course on the site.
- Quizzes are automatically graded, and can be re-graded if questions are modified
- Quizzes can have a limited time window outside of which they are not available
- At the teacher's option, quizzes can be attempted multiple times, and can show feedback and/or correct answers
- Quiz questions and quiz answers can be shuffled (randomised) to reduce cheating
- Questions allow HTML and images
- Questions can be imported from external text files
- Quizzes can be attempted multiple times, if desired
- Attempts can be cumulative, if desired, and finished over several sessions
- Multiple-choice questions supporting single or multiple answers
- Short Answer questions (words or phrases)
- True-False questions
- Matching questions
- Random questions
- Numerical questions (with allowable ranges)
- Embedded-answer questions (cloze style) with answers within passages of text
- Embedded descriptive text and graphics

Resource Module

- Supports display of any electronic content, Word, PowerPoint, Flash, Video, Sounds etc. that are stored locally, or remotely
- Files can be uploaded and managed (zipped, unzipped, renamed, moved, etc..) on the server
- Folders can be created and managed on the server and linked to
- Internal web pages (html formatted) can be created with WYSIWYG editor and linked to
- Internal text pages (no formatting) can be created and linked to

- External content on the web can be linked to or seamlessly included within the course interface.
- External web applications can be linked to with data passed to them
- Linked MP3 audio files will display with elegant flash player

Survey Module

- Built-in surveys (COLLES, ATTLS) have been proven as instruments for analyzing online classes
- Online survey reports always available, including many graphs. Data is downloadable as an Excel spreadsheet or CSV text file.
- Survey interface prevents partly-finished surveys.
- Feedback is provided to the student of their results compared to the class averages

Wiki Module

- Wiki is a web page that anyone can add to or edit
- It enables documents to be authored collectively and supports collaborative learning
- Old versions are not deleted and may be restored if required

Workshop Module

- Allows peer assessments of documents, and the teacher can manage and grade the assessment.
- Supports a wide range of possible grading scales
- Teacher can provide sample documents for students to practice grading
- Very flexible with many options.

Combining Moodle and GSDL

- Moodle is modular in construction and can readily be extended by creating plugins for specific new functionality.
- Moodle's infrastructure supports many types of plugin. activities, resource types, question types, data field types (for the database activity), graphical themes, authentication methods, enrollment methods, content Filters, quiz-making function,
- Discussion Forums, Hide Until (allows the instructor to hide all contributions from the other students for a specified length of time, after which they become available to all),
- Lesson Module, Journal Module (place for each student to keep a learning diary),
- Assignment Module (allows students to submit a file for assessment and feedback from the instructor),

- Attendance Module (permits automatic attendance-taking for students),
- Questionnaire Module (currently under development, will provide an excellent tool for eliciting student opinions for further discussion either online or in class),
- File Submissions (allows both students and teacher to access files over the Internet).

GreenStone Digital Library Software (GSDL)

Greenstone Digital Library Software (GSDL) for Building, maintaining and distributing digital library collections. It is a Open-source and GNU licensed which is developed by NZDL Project at the University of Waikato, Distribution/promotion by: UNESCO - Human Info NGO, Belgium. It is installed in Multi-platform - Unix/Windows/Mac OS-X – support, Multi-lingual support, Multi-format- HTML, Word, PDF, PS, plain text, e-mail, etc. It support Multimedia. It is easy to install – Local, Web(PWS, IIS,Apache). It can be downloaded from http://greenstone.org.

GSDL now requires

- --Windows (any version), Linux (any version) / Unix
- For Librarian interface (GLI), need Java

Features of GSDL

- **1. Accessible via web browser:** Collections are accessed through a standard web browser (Netscape or Internet *browser* Collections are accessed through a standard web browser (Netscape or Internet Explorer) and combine easy-to-use browsing with power full search facilities.
- 2. Full-text and fielded search: The user can search the full text of the documents, or choose between indexes built from different parts of the documents. For example, some collections have an index of full documents, an index of sections, an index of titles, and an index of authors, each of which can be searched for particular words or phrases. Results can be ranked by relevance or sorted by a metadata element.
- **3. Flexible browsing facilities:** The user can browse lists of authors, lists of titles, lists of dates,
- classification structures, and so on. Different collections may offer different browsing facilities and even within a collection, a broad variety of browsing interfaces are available.
- **4. Creates access structures automatically:** The Greenstone software creates information collections that are very easy to maintain. All searching and browsing structures are built directly from the documents themselves. No links are inserted by hand, but existing links in originals are maintained. This means that if new documents in the same format become available, they can be merged into the collection automatically.
- **5. Makes use of available metadata:** Metadata, which is descriptive information such as author, title, date, keywords, and so on, may be associated with each document, or

with individual sections within documents. Metadata is used as the raw material for browsing indexes. It must be either provided explicitly or derivable automatically from the source documents. The Dublin Core metadata scheme is used for most electronic documents; however, provision is made for other schemes.

- **6. Plugins extend the system's capabilities:** In order to accommodate different kinds of source documents, the software is organized in such a way that "plugins" can be written for new document types. Plugins currently exist for plain text, HTML, Word, PDF, PostScript, E-mail, etc. A collection may have source documents in different forms. In order to build browsing indexes from metadata, an analogous scheme of "classifiers" is used: classifiers create browsing indexes of various kinds based on metadata.
- **7. Designed for multigigabyte collections:** Collections can contain millions of documents, making the Greenstone.
- **8. Documents can be in any language:** Unicode is used throughout the software, allowing any language to be processed in a consistent manner. To date, collections have been built containing French, Spanish, Maori, Chinese, Arabic and English.
- **9. User interface available in multiple languages**: The interface can be presented in multiple languages. Currently, the interface is available in Arabic, Chinese, Dutch, English, French, German, Maori, Portuguese, and Spanish. New languages can be added easily.
- **10. Collections can contain text, pictures, audio, and video:** Greenstone collections can contain text, pictures, audio and video clips. Most non-textual material is either linked in to the textual documents or accompanied by textual descriptions (such as figure captions) to allow full-text searching and browsing.
- **11. Uses advanced compression techniques:** Compression techniques are used to reduce the size of the indexes and text. Reducing the size of the indexes via compression has the added

advantage of increasing the speed of text retrieval.

GreenStone Digital Library Software

It consist of two sections

1. GreenStone Editor for Metadata set

2. GSDL (V2.70) Modules in Librarian Interface Mode

The Greenstone Librarian Interface is a tool for collecting and marking up documents, then building digital library collections. It provides access to the Greenstone Digital Library Software's functionality from a graphical point and click interface. Helps you create new collections, modify or add to existing ones, or delete collections

- **1. Download:** The "Download" view helps you download resources from the internet, catche file and download from local. This section explains the Librarian Interface's mirroring process.
- 2. Collecting Files: Once you have a new collection you need to get some files into it. These may come from your ordinary file space, or from other Greenstone collections. Some may already have attached metadata. This section describes how to import files.
- 3. Enriching: Having gathered several files into the collection, now enrich them with

- additional information called "metadata". This section explains how metadata is created, edited, assigned and retrieved, and how to use external metadata sources
- **4. Designing Collections**: Once your files are marked up with metadata, you next decide how it should appear to users as a Greenstone collection. What kind of information is searchable? What ways are provided to browse through the documents? What languages are supported? Where do the buttons appear on the page? These things can be customized; this section describes how to do it.
- **5. Producing Collection:** Having collected the documents for the collection, annotated them with metadata, and designed how the collection will appear, you can now produce the collection using Greenstone.

Objectives of the Paper

VLE@DLISc,RTMNU, a Prototype web-based modular and interactive learning system, is aims to produce a Virtual Learning Environment (VLE) for Library and Information Science course.

- o To propose a set up of VLE support system with traditional learning for LISc education in the DLISc,RTMNU,Nagpur.
- o To organize the LIS Learning Object of egyankosh in relating with the syllabus of MLISc-Part I & MLISc Part-II of the DLISC,RTM,Nagpur University.
- o To integrate learning object and institutional repository in Moodle with GSDL.
- o To acquaint users to try Moodle for themselves by creating online activities such as assignments, quizzes, forums, choices and to manage course content and use GSDL in creating the Digital Library or Institutional repository.

Methodology

- Moodle software and GSDL will be downloaded and installed (www.moodle.org) (www.greenstone.org)
- Moodle will be used as front end layer and GSDL will be in back end layer as backend repository system
- The front end layer, consists Moodle as application system, Mysql as storage RDBMS system, Business layer deals with managing access restriction, online socialization, knowledge construction /organization, and development.

Why Moodle & GSDL

- Moodle and GSDL both are robust, open source, most popular user based applications.
- Moodle lacks metadata preservation for LOs.
- GSDL is used for long-term preservation and perpetual access of LO metadata.
- GSDL fulfils the lacking of Moodle.
- GSDL preserves and enables easy and open access to all types of digital contents including text, images, moving images, audio files and data sets.
- GSDL is used to meet a variety of digital archiving needs like Institutional Repositories (IRs), Learning Object Repositories (LORs), eTheses, Electronic Records Management (ERM), Digital Preservation, Publishing, and more.

Resource Optimization

Related LOs of MLISc will be downloaded from e-gyankosh (www.egyankosh.ac.in) institutional repository of IGNOU website and that can be linked with VLE@DLISc,RTMNU

Organization of the course material

- The LO will be uploaded in GSDL.
- Each LO handle will be linked with chapter heading according to unit basis in structured DLE on Moodle.
- Two course materials will be uploaded (one MLISc-Part-I [P-1-01] & one MLISc-Part-II [P-2-01]) on topic basis.

Conclusion:

- One of the basic requirements for education in the 21st century will be to prepare students for participation in a knowledge-based economy.
- Teachers in LIS education in India need to be prepared for imparting the new age education, hence teacher education program in India should integrate ICT component in such a way that teachers are enabled to face the new demands in the profession. This is time to think seriously about the new syllabus for Library and Information Science.
- Most of us are habituated for lecture-based and other direct methods of teaching. But simultaneously e- learning is now the global scenario and we should not avoid that. It is very hard to design a new course and new training system but not impossible. Lots of issues and challenges are involved with this task but as soon as we put forward we will overcome all those problems.
- One of the main disadvantages of the virtual learning environment is the lack of face-to-face personal interaction and the student social contact, which traditional educational contexts provide. VLE may not necessarily replace the classroom setting, but enhance it, taking advantage of new content and delivery technologies to enable learning.
- Therefore, by initiating VLE@DLISC,RTMNU, is keeping pace with the changing technology, thereby providing the students the best of educational experience. Hence we will develop this prototype as a support system for traditional learning environment of the DLISc at the RTM,Nagpur University,Nagpur.

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Annexure -Screen snapshots (Sample of B.U.,Burdwan) LO of VLE links with e-gyankosh repository [pic]
LO in e-gyankosh repository
LO metadata in e-gyankosh repository
[pic]
LO downloads from e-gyankosh [pic]
LO downloads from e-gyankosh [pic]
LO is downloaded from e-gyankosh [pic]
Evaluation of e-Students [pic]
Assignment of P1-01 of BLIS [pic]
Assignment answer is uploaded by e-student [pic]
Assignment is downloaded by e-teacher [pic]
E-teacher verifies assignment answer [pic]
E-teacher gives suggestion to a specific e-student [pic]

[pic]	E-student receives	feedback from e-teacher
[pic]	Quiz arrangeme	nt is done by unitwise
[pic]	E-student a	attempts the quiz
	Starting a nev	պ collection in GSDL
	3	
	Exploring th	ne local file space

Importing existing metadata

	1
Filtering the file trees	_
Assigning metadata using Enrich view	

Viewing all metadata for selected

files

Editing the metadata set	
Designing the collection	
Designing the conection	
Specifying which plug-ins to use	

Getting ready to create new collection

Previev	ving the nev	wly built collec	tion

Bio-data

Shalini R. Lihitkar (1978) - She has been in LIS Profession Since 2002, Gold Medalist from Nagpur University. Worked as a Lecturer in DLISc, Shivaji University, Kolhapur from 2002-2003. Presently working as a Lecturer & Head in DLISC, Rastrasant Tukadoji Maharaj Nagpur University, Nagpur. Experience of teaching and guiding for UGC NET/SET, P.O. and other competitive examinations. Published several papers in seminars, conferences and Journals and has more than 55 papers to her credit. She is a life member of professional association viz. DLA, ILA, IATLIS, LISAA, SALIS and VLA. She has completed Information Literacy Project with UNESCO and SALIS as a member. She has submitted her thesis on "Study of Information Systems and Networks in India: with special reference to Maharashtra" under the guidance of Prof. D. Rajalakshmi, Former Head, DLISc, R.T.M. Nagpur University. She is co-investigator of UGC- Major project of DLISc, RTMNU, Nagpur. Joint Secretary of SALIS Nagpur Chapter. She was a Joint Organizing Secretary of Golden Jubilee National Conference on Quality Assessment and Quality **Indicators** of LIS Education, 10-12th Nov, 2006. Columnist in "Mahiti Yug" Quarterly Journal published by Foundation of Dr. P.S.G.Kumar, edited by S.K.Keservani from 2005. Production Committee Member of Mahiti Yug from 2005-2008. Organizing Committee member in XXI IATLIS National Conference organized by Department of Library and Information Science, Nagpur in November 2004. Organizing Committee member of Golden Jubilee National Conference on Quality Assessment and Quality Indicators of LIS Education, 10-12th Nov, 2006. Treasurer of Alumini Association of Department of LISc,RTMNU from 2008. Organizing Secretary for Prof. D. Rajyalakshmi Felicitation function organized by Department of Library and Information Science, RTMNU, Nagpur ,30th June 2009. 22 project reports have been completed under her guidance for MLISc-II year. Convener of Workshop on "Technical Writing" organized by DLISC,RTMNU in collaboration with HRD cell of RTMNU during 3rd-5th Dec. 2009.

Search	Institutional Repository/LOR
	@DLISC,RTMNU
	About VLE
	Department of Library and Information Science Rashtrasant Tukadoji Maharaj
	Nagpur University,Nagpur_ Welcome to VLE @ DLISC,RTMNU,Nagpur

Course Outline

Notice Board

E-mail Tutor & Students

Class List & Student Homepages

Assignment/ Quizzes

Grade-book

Metadata

Synchronous Collaboration Tools

Multimedia Resources Repository

File Upload

Calendar

Search Tools

Book marking

Navigation Model

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- workshop/Training
- . Etheses/Dissertations/CDs
- . Refresher courses
- . Alumni

MLISc-II

MLISc-I

E-teacher: Lihitkar,SR E-teacher: Hirwade,MA E-teacher: Nikose,SN

E-teacher: VisitingFaculty