**Integrating Learning Management System in B.Ed Programme: Perceptions of Pre-Service Teachers**

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**Introduction**

In the present day world, the knowledge is rapidly evolving in a manner that for one to remain productive, he needs to learn continuously irrespective of her profession. Continuous learning is essential due to frequent technology change. Educators in the 21st century realize that pre-service teachers’ entering the classroom today are much different from those who have come before. Today’s pre-service teachers’ are demanding a change in the classroom because of their ability to gather information faster than any other generation given the resources available today for use in the classroom, such as overhead projector, LCD projector and so on. The hardest job is to integrate all available resources into a defined tool. Learning management system is such a tool to address real life challenges of pre-service teachers’, faculties and management. Learning management systems (LMS) are becoming an interface for handling course registration, managing course contents, assessing pre-service teachers’ through assignments, conducting quizzes and exams, for smooth functioning of institute administration, evaluation and report generation. In general, LMS serves as a means for acquiring the knowledge using the help of technologies e.g. Internet and Interactive based over the traditional ways; thereby enables learning over a wide spectrum with higher efficiency. Teacher Education Institutions in India are dependent on classroom teaching for syllabus coverage. Faculties put in lot of effort to manage, store and reuse the course material for repeating the course in next semester. LMS shall act as a central space for pre-service teachers and teacher educator interaction outside classroom and also cater to challenges faced by pre-service teachers, faculty and management in day to day events of the organization. In the LMS process, teacher educator can upload course contents like lecture notes, e-books, assignment, quizzes and mid-semester while the pre-service teachers on the other hand can access the same using their login details.

Now a day’s education has become more global and pre-service teachers’ are looking for learning with the help of internet like submitting assignments, reading lecture notes, giving online exam etc. E –learning became more popular as pre-service teachers frequently use internet to access social media websites like Face book, Orkut, Google. The computer, libraries and ready access to information have all contributed to the ability to learn outside of the conventional classroom teaching.

Improving Technology has made it possible to provide frameworks which can help to overcome conventional education system. These frameworks are commonly known as learning management systems (LMS). LMS is a server side software system built for providing a framework to enable the above function over internet. E learning is an approach to facilitate and enhance learning through computer and communication technology. Learning management system basically uses three types of networks internet, university network or corporate computer network. LMS is emerging as a potential delivery medium for education and training. This is evident from the increasing number of educational institutions and organizations adopting e- learning. In India, there has been an upsurge in the number of pre-service teachers’ going for management education. But, before management 1153 institutes embark on this e- learning journey, it is important to assess pre-service teacher’s readiness for this medium. A good LMS provides lot of functionalities which can be used to gain in multiple aspects: classroom tracking using web-based learning, management reports to track real time pre-service teachers performance, online collaboration tools, including forums, chat-rooms, and e-mail tutor , flexible structure that allows cross-culture knowledge transfer, user –friendly interface for novice etc

### **Overview of Learning Management Systems (LMSs)**

Over the past 20 years, powerful software for managing complex databases has been combined with digital frameworks for managing curriculum, training materials, and evaluation tools resulting in the development of learning management system (LMS). Learning Management Systems (LMSs) are also called Electronic Learning platforms. LMSs are online, Web-based systems that tie together 21stCentury Education with effective and creative uses of technology. The majority of LMSs are Web based, and thus facilitate anytime, anywhere access to learning content and administration.

The LMS allows anyone to create, track, manage and distribute learning materials of any kind. Nearly a ten billion-dollar industry, LMS products and software allow any educational organization to develop electronic coursework, deliver it with unprecedented reach and flexibility, and manage its continued use over time.

An LMS is a computer program it stands short for Learning Management System. A Learning Management System (LMS) is a software application that is used to plan, deliver, publish and place self-paced online courses in online catalogs. LMS can not only be used for eLearning but also be used in the classroom for flipped learning mode. In the most common form it consists of two separate parts:

- A server component that performs the core functionality (creating, managing and delivering courses, authenticating users, serving data and notifications, etc.)

- A user interface that runs inside your browser as a web (like Gmail or Facebook), that is used by administrators, instructors and pre-service teachers’.

Popularized in higher education and now working its way into the school education system, LMS software provides educational institutions with a digital space for everything from documentation and tracking to the delivery of online teacher education and training. Manage pre-service teachers data with an easy-to-use tool, offering a robust gradebook, real-time information and mobile access.

The LMS has become a powerful tool for it has dramatically impacted today’s classroom as well as it also has an impact on teachers training. An LMS serves as an online portal for classrooms, performing administrative functions for the educators and allowing the pre-service teachers’ to view their assignments, grades and learning materials. Therefore, this particular system can also be used by organizations offering e-learning courses. An LMS allows educational administrator to track course completions, current status or performance. In fact, all employee activities in the LMS can be tracked that could be useful for performance evaluation, competency management and other related functions.

**Users of LMS**

The users of LMS can be categorized into following:

* The learners: They use the system for the educational process. The learners are the basic or the main users of LMS.
* The instructors: The instructors are the teachers and the assistants who use the LMS to supervise, assist and evaluate the learners.
* The administrators: The administrator can take the support of all the users of the system to keep a check on the proper operating status.

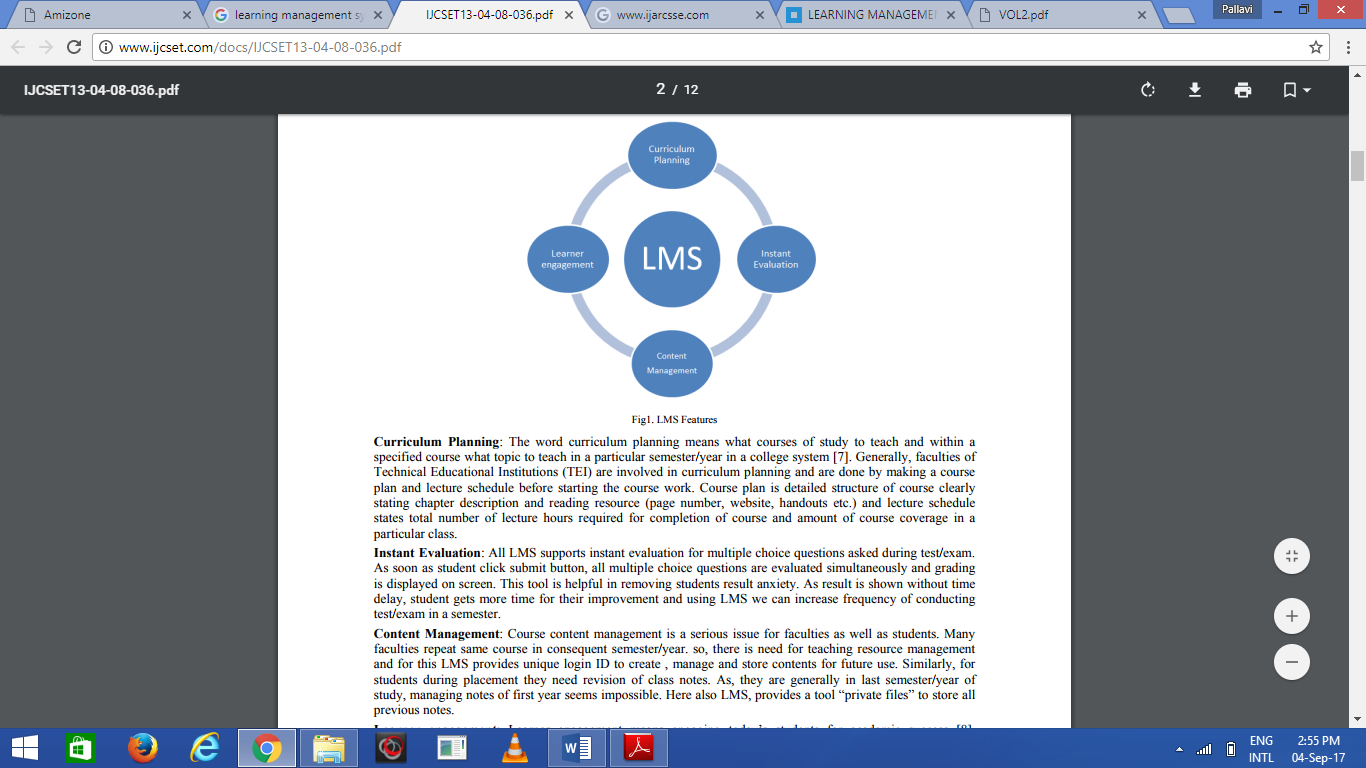
**Features of an LMS**

An LMS can be used in an educational organization for a variety of educational, deployment and administrative purposes. A typical LMS may have a number of features but it is not easy to decide which features are the most important unless you have a good background in various areas like [instructional design](http://edutechwiki.unige.ch/en/Instructional_design), [ergonomics](http://edutechwiki.unige.ch/en/Ergonomics) and systems management.

Typical features are:

* Teaching Materials, i.e. courseware, Activities, Presentations, flipped learning, Blended/Hybrid Learning, 3D Simulation, gamification, Content Library
* Course/class Management: course catalogue, registration, credit information and syllabus, pre-requisites, virtual Classes, attendance status, event management, activity management, time table construction and management, faculty Scheduling
* Self-assessment: quizzes, worksheets.
* Lessons tools: Authoring for contents (structured XML or HTML) and quizzing/testing (e.g. Java Script generators) or alternatively ability to import standard [IMS](http://edutechwiki.unige.ch/en/IMS) or [SCORM](http://edutechwiki.unige.ch/en/SCORM) packages developed with an external tool (e.g. Dreamweaver).
* Asynchronous Communication: email, forums, SMS
* Synchronous Communication: chat, whiteboard, teleconferencing,
* Pre-service teachers tools: Home page, self-tests, bookmarks, progress tracking,
* Pre-service teachers Management Tools: progress tracking, on-line grading, Performance Assessment
* Learner feedback: [course evaluation](http://edutechwiki.unige.ch/en/Course_evaluation) surveys, test evaluation surveys etc.
* Evaluation Tool: question Bank, question paper generator

Learning Management System (LMS) works as central repositories to address all type of educational needs. The major areas addressed by LMS deployment are Curriculum Planning, Instant Evaluation, Learner Engagement and Content Management. LMS Features are shown in the figure below:



**Curriculum Planning:** The word curriculum planning means what courses of study to teach and within a specified course what topic to teach in a particular semester/year in a college system . Generally, faculties of Technical Educational Institutions (TEI) are involved in curriculum planning and are done by making a course plan and lecture schedule before starting the course work. Course plan is detailed structure of course clearly stating chapter description and reading resource (page number, website, handouts etc.) and lecture schedule states total number of lecture hours required for completion of course and amount of course coverage in a particular class.

**Instant Evaluation:** All LMS supports instant evaluation for multiple choice questions asked during test/exam. As soon as pre-service teachers click submit button, all multiple choice questions are evaluated simultaneously and grading is displayed on screen. This tool is helpful in removing pre-service teachers’ result anxiety. As result is shown without time delay, pre-service teachers gets more time for their improvement and using LMS we can increase frequency of conducting test/exam in a semester.

**Content Management:** Course content management is a serious issue for faculties as well as pre-service teachers’. Many faculties repeat same course in consequent semester/year. So, there is need for teaching resource management and for this LMS provides unique login ID to create, manage and store contents for future use. Similarly, for pre-service teachers’ during placement they need revision of class notes. As, they are generally in last semester/year of study, managing notes of first year seems impossible. Here also LMS, provides a tool “private files” to store all previous notes.

**Learner engagement:** Learner engagement means engaging today’s pre-service teachers’ for academic success. Pre-service teachers’ learn more in a group as they imitate behavior of other pre-service teachers’ from different cultural backgrounds. This also helps in building strong pre-service teachers relationship like getting to know each other, building strong teams, effective communication, and so on. LMS support several tools for collaborative learning like chats, messages, forum, wiki, etc. where pre-service teachers’ learn easily topics which they found difficult in offline mode of learning.

**Benefits of LMS to the educational organization**

Like many information technology innovations from the past few decades, LMS software is able to add a level of efficiency to educational organizations

* Any place and anytime and quick access, moreover the access does not involve any financial cost.
* Easily adapting and reusing materials over time.
* It helps the faculty to improve on the course content and course transaction.
* More choices for creators of curriculum, such as method of delivery, design of materials, and techniques for evaluation.
* Creating economies of scale that make it less costly for organizations to develop and maintain content for which they used to rely on third parties.
* Improvements in professional development and evaluation, allowing educational organization’s to get more value from human resources while empowering individuals with additional tools for self-improvement.
* LMS helps in time-saving and is efficient, since it has a single, centralized tracking system.
* It provides a wide range of standard and custom summaries and detailed reports, so that the learner may view his average test scores, final test scores, single user report, company log-In record, summary of overall tests taken, etc.
* This helps facilitating the ways and means of getting enrollment approval, individual and batch registration, verifying prerequisites, etc.
* It also increases the ability of the educational organization to accept more pre-service teacherss, providing accurate, quick, and more information about the educational process which can lead to an enhanced decision making, providing better way for transferring the knowledge to the pre-service teachers, providing a higher rate of cooperation and exchange programs between the institutions of the higher education.
* LMS develops a community of learners which acts like a knowledge map for pre-service teachers.
* LMS promotes educational related communication between the class teacher and the pre-service teachers’ faster diffusion and modification of information, quicker internal communication and information from the organization to the parent.
* LMS also helps in documents management and resource management and storage.
* There is more chance for the development of collaborative work between teachers with the use of LMS.

**Need and Significance of the study**

The purpose of all new technologies is to provide easier and smarter ways of accomplishing the same work. LMSs are no exception to this. Their main aim is always to use their existing knowledge along with the presence of new technology to make their work easier. **Jamal H. & Shanaah A. (2011)** in their study entitled,’ The Role of Learning Management Systems in Educational Environments: An Exploratory Case Study’ investigated the role of LMS in the learning and teaching processes from pre-service teachers and teachers perspectives. The study results indicated that pre-service teachers and teachers were content with the usage of Blackboard in organizing courses materials. Although, most teachers didn’t encourage interactive and discussion activities on Blackboard, pre-service teachers expressed the need for such activities to help them in constructing and building new meanings. **James. S (2010)** in her study ‘Lecturers’ experiences and perceptions of using learning management systems’ conducted interviews of sixteen lecturers to determine their experience and perceptions of the use of the LMS. The findings have been categorised into three main groups, namely the use of the LMS, perceptions of the LMS and skills and support. The result provided information that can be used in furthering the use of LMSs that will depend upon lecturers’ experiences and perceptions and the extent to which they are equipped to deliver courses online. **Islam A. K. M. N. (2014)** conducted a study,[Understanding e-learning system users’ post-adoption usage behavior and its outcomes. A study with a learning management system](http://info.tse.fi/julkaisut/vk/Ae5_2012.pdf)’ on 75 educators and 249 students who have been using Moodle for teaching and study purpose in the University of Turku in order to investigate the drivers of their usage behavior and possible impact on students’ academic performance. The study found that LMS assisted students in their study, which lead to better academic performance. However, it was found that both educators and students often underutilize the system features, i.e. ineffective use of system features. Hence, although the system had many possibilities that can be used to augment traditional face-to-face teaching in order to achieve better academic performance, the underutilization often hindered to reap the possible benefits. **Malabanan C.M.V. (2014)** did a study on Investigating Academics’ Voluntary usage of a Learning Management System ‘.The study was conducted on 33 academician the findings indicated that the level of personal satisfaction motivates academics to voluntarily use the LMS. It was also found that the usage of LMS by academician was affected by the condition about accessibility, connectivity, and compensation schemes.

The major goal of this research was to investigate student teachers experiences and perceptions of using LMSs. There is a body of literature on the various features of LMSs and how they impact on student learning. There is less published research on how student teachers perceive the LMS that they use and how their perceptions affect their use of LMS.

The findings of this report may provide useful data for those who are in the management level to decide on the type of LMS to be employed. The Ministry of Education may also find these findings helpful as they provide a window to examine student teachers perceptions regarding the LMSs that are suitable for them. These findings may thus help the government to set policies and fund tertiary institutes appropriately. Lastly, the findings can be published in a journal or conference proceedings for the benefit of the wider e-learning community.

**Methodology**

The investigator used survey methodology. In this study, pre-service teachers adopted Amizone LMS as a collaboration and communication tool for carrying out classroom activities in the areas of course orientation, course information documents such as syllabi, schedule, unit outcomes, grading procedure and policies, class announcements, information transmission via lectures, power point slide, multimedia presentations, recording ,online posting, team project, online test, other administrative instructions etc. apart from face-to face regular teaching classes.

**Population and sampling**

All the pre-service teachers studying in two teacher education institutes of a private university of Noida, Uttar Pradesh were the population of the study. A sample of 159 pre-service teachers was selected by employing convenience sampling in non-probability sampling technique, from teacher education institution.

**Tool**

A self-constructed questionnaire was developed and was administered using Google form to the pre-service teachers. The reliability of the tool was 0.791 which reveals that the tool is reliable enough for data collection. The validity of the tool was established using a panel of experts from the field and field testing of the tool was done before administering the tool.

**Analysis and Interpretation**

The data was analyzed using simple statistics i.e. percentage and content analysis.

**Research Questions:**

The research question, to be addressed, is:

**What are pre-service teachers’ perceptions of using Learning Management Systems (LMS)?**

In order to answer the above question the following sub questions have been framed to help in finding suitable answers:

1) What is pre-service teachers’ perceptions of using Learning Management Systems (LMS) for improvement in their learning skills?

2) What is pre-service teachers’ experience of using LMS for academic purpose?

3) What is pre-service teachers’ perceptions of using LMS for course activity?

4) What were the factors which facilitated the use of LMS by pre-service teachers?

5) What were the factors which were determinant in using LMS by pre-service teachers?

**Improvement in Learning Skills**

The answer to the first research question the students were asked a closed ended question “Does the LMS helps in improving the learning skills?” The responses to this question were analyzed using percentage and represented in the Figure1. Figure 1 clearly indicates that majority (54%) pre–service teachers agree that there was improvement in the learning skills after they started using LMS.

**Experience of Using LMS**

The answer to the second research question the students were asked a closed ended question “How is the experience of using LMS?” The responses to this question were analyzed using percentage and represented in the Figure2. The analysis of the data shows that majority of the student teachers’ found the experience of using LMS positive.

**Convenience of Course Activities**

The answer to the third research question the students were asked a closed ended question “Is LMS convenient in doing the course activity?” The responses to this question were analyzed using percentage and represented in the Figure3. As per Figure 3 maximum number of pre-service teachers (56%) felt that course activities are more convenient while using LMS.

**Factors facilitating use of LMS**

The answer to the fourth research question the students were asked an open ended question “What were the factors which motivated you to use LMS?” The content analysis of the responses were done It was found that the facilitating factors for pre-service teachers to use LMS were:

* Ease of accessing the system
* Context-sensitive help
* User-friendly interface
* Visual design
* Interactivity
* Content availability
* Navigation/ Overall ease of use

**Factors determinant in using LMS**

The answer to the fifth research question the students were asked an open ended question “What were the factors which demotivated you to use LMS?” The content analysis of the responses were done It was found that the factors which were determinant for pre-service teachers to use LMS were:

* Internet instability (wireless) in the educational organization.
* insufficient covering of wireless internet connection ;
* slow access,
* limitations in space available for uploading files;
* lack of ready to-use contents and good practices examples;
* difficulties in systems administration and
* Difficulties in managing the platform and courses material access.
* Flaws/instability of servers.
* They were unaware about many features of LMS as many faculty were not using them.
* Although the LMS tutorial was available but the pre-service teachers did not found it to be too useful.
* Most of them felt that a face to face training and readily available technical support is required as they were using a variety of equipment for access to LMS.

**Conclusion**

The findings of the study indicated that pre-service teachers perceived the use of a LMS in an educational setting as purposive and useful in as much as they developed a community approach and shared their work with others. Although some difficulties in downloading and viewing files internet connection speed, personal software problems etc. It is suggested that a technical training should be provided to the pre-service teachers for using LMS for learning as well as teaching purpose so that they become empowered to use this technology in the schools where they are recruited and develop a culture of technology integration for the purpose of teaching and learning.

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