

**Advanced E-learning Management System(A-ELMS)**

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**Abstract**—Over recent years, the rapid development of mobile devices has made possible the support of educational applications in distance education to the extent that the term m-learning (mobile learning). The m-learning is a concept which comes under e-learning. E-learning is the concept in which electronic device is used as a learning tool. Mobile is a electronic device and is used as learning tool or device. So we have implemented the concept of m-learning which comes under e-learning. The main focuses to implement the application is to maintain interaction between students and teachers regarding study material or solving any difficulties. The motive of this application is to reduce physical handling of study material. This application supports app notification for user convenience. The respective professor can share the study material in text, image, video, audio and PDF format which students can easily access. User gets preloaded videos as tutorial and also they can upload the video.

**Keywords**—E-learning; M-learning; Distance education.

**I. INTRODUCTION**

E-learning means electronic educational technology and m-learning means mobile learning. M-learning is defined as “learning across multiple context through social and contents informations, using personal electronic device”. Mobile device is used as electronic gadget through which students and professors can interact with each other from remote places. In this application we have introduced preloaded videos as tutorials for students. App notification facility is provided to every user using this application. The new feature is proposed in this application which is reminder. The security of this application is based on authentication process which is OTP (one time password).

**II. LITERATURE SURVEY****A. ELMS**

- The E-learning management system is mainly used for distance learning and as a discussion forum. There are many ELMS in market but there are 6 popular ELMS which are ATutor , Claroline , Ilias , Moodle , Sakai, Dokeos.

**B. Background**

- **ATutor** :It was introduced in late 2002. It came in response to two studies conducted by the developer in the years prior that looked at the accessibility of online learning systems to people with disabilities. Results of the studies showed none of the popular Learning Management Systems at the time even provided minimal conformance with accessibility guidelines.
- **Claroline** : Since 2000, Claroline development teams have been focusing on the code stability and the development of features in line with the user's needs. The main concern of the developers is not to build up a large number of new features, but to concentrate upon a few elaborated tools concerning the pedagogical approach and the interface offered to the users.
- **Dokeos** : A developer and publisher of elearning solutions, is first and foremost a service company. Since 1999, we have supported corporations, companies and training organisations, as well as pharmaceutical groups, in developing customised training and assessment solutions.
- **Ilias** : Integriertes Lern-, Informations- und Arbeitskooperations-System [German for "Integrated Learning, Information and Work Cooperation System"] is an open source web-based learning\_management\_system (LMS). ILIAS is one of the first Learning Management Systems that have been used in universities. A prototype has been developed since end of 1997 within the VIRTUS project at University\_of\_Cologne.
- **Moodle** : Moodle was originally developed by Martin\_Dougiamas to help educators to create online courses with a focus on interaction and collaborative construction of content, and it is in continual evolution. The first version of Moodle was released on 20 August 2002. Nowadays the Moodle Project is led and coordinated by Moodle HQ, an Australian company of 30 developers which is financially supported by a network of sixty Moodle Partner service companies worldwide.
- **Sakai** : Their primary goal was to improve teaching, learning and research by providing a compelling alternative to proprietary learning systems, an innovative platform for learning and collaboration that is produced by and for the higher education community.

### C. Comparison Between ELMS

- **Discussion Forum:**
  1. *ATutor* : ATutor is unique because it provides room for users to develop a network of contacts, set up a network profile, join interest groups, share pictures and discuss.
  2. *Claroline* : It is a community of users and developers that means occasionally to discuss on ways to help students and teachers interact using the claroline LMS.
  3. *Dokeos* : Discussion Forum is available.
  4. *Ilias* : This forum is conducted for Ilias users World wide to enable them exchange information and views on how to better further education through the use of the LMS.
  5. *Moodle* : It has a very active discussion forum. There are four types in the moodle community helping students and teachers exchange ideas through posting comments and organizing workshops.
  6. *Sakai* : It has a development discussion group also known as “Sakai-Dev”.
- **File Exchange:**
  1. *ATutor* : There is a inbox available for users to send and receive private mails from other users. Messages sent are save in sent messages and deleted after some time. Ther is a however, provision for messages to be exported and externally saved.
  2. *Claroline* : No information on file exchange or internal mails was obtained from the claroline websites.
  3. *Dokeos* : It provides tools for managing users, courses, sessions, portals, look and feel, home page content course categories enabling instructions to work effectively.
  4. *Ilias* : It has an internal email system available. On logging in, mails can be sent to individual and participants of learning groups.
  5. *Moodle* : It does an excellent job in providing easy way for teacher to present materials to their students. Files are uploaded and access via moodle.
  6. *Sakai* : Information on file exchange and internal mail available.
- **Real-Time chat**
  1. *ATutor* : It consists of ATutor chat based on XMPP protocol and WAI-ARIA live regions that introduces more efficient data transfer. These consists of one to one chat and multiuser chat among course members.
  2. *Claroline* : No information on real time chat available on the Claroline Website.
  3. *Dokeos* : No information on real time chat.
  4. *Ilias* : It offers a chat system that is an independent java based chat server that has to be installed before use.
  5. *Moodle* : Real time chat is available enabling participants to have a real time synchronous discussion in moodle course.
  6. *Sakai* : it offers tools such a Wikis, chats and blogs to conduct debates and engage fully with one author.

	Forum	Chat	File exchange	Reminder	App Notification
ATutor	Yes	Yes	Yes	No	No
Claroline	Yes	No	Yes	No	No
Dokeos	Yes	Yes	Yes	No	No
Ilias	Yes	Yes	Yes	No	No
Moodle	Yes	Yes	Yes	No	No
Sakai	Yes	Yes	Yes	No	No
Advanced E-lms	Yes	Yes	Yes	Yes	Yes

### III. MOTIVATION

The main focus of our application is to reduce handling of physical notes and increase interaction between students and teachers. We studied popular E-learning management systems to improvise the learning system application. The popular management systems are mainly focusing on discussion forum which needs to be created on every new discussion. In this application we propose a group or discussion room not to be created on every new discussion. We also propose preloaded videos, reminders and notification.

#### IV. PROPOSED METHODOLOGY

We introduce Advanced E-learning management system this system can be used in educational organizations. To implement this system we studied two techniques that is Brainstorming technique and snowballing technique brainstorming technique is a group creativity technique by which efforts are made to find conclusion for specific problem by gathering a list of ideas spontaneously contributed by its members. The term is popularized by Alex Faickncy Osborn in 1953. Group of around 12 participants including both experts and novices, participants are encourage to provide wild and unexpected answer. Ideas, no criticism or discussion. The group simply provide ideas and apply no analytical judgements as the feasibility . The Judgement is reserved for a later date.[11]

- Brainstorming Technique is categoried in sub-techniques:-

1. Nominal group technique.
2. Group passing technique.
3. Team idea mapping method.
4. Directed Brainstorming.
5. Guided Brainstorming.
6. Individualized Brainstorming
7. Question Brainstorming.

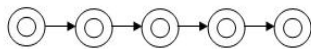
Brainstorming provided free and open environment that encourages everyone to participate.

Snowballing technique, snowball sample begins from a core of known elements and are then increased by members of the original samples. They are so called on the analogy of the increasing size of a snowball when roll down a snow-covered slope. Snowball sampling is non probability technique that is used by researchers to identify potential subjects in studies where subjects are hard to locate.

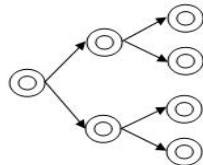
This type of sampling technique works like chain referral.

- Types of Snowballing Techniques:

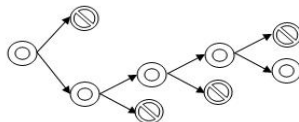
1. Linear Snowballing sampling:



2. Exponential Non-Discriminative Snowball Sampling



3. Exponential Discriminative Snowball Sampling



#### V. CONCLUSION

The development of E-learning management system application that provide the service of distance learning by using mobile phones. The application mainly focuses on interaction between students and professors. The new feature introduced in this paper are preloaded videos(Tutorials), app notification and reminders. We have implemented the advanced e-lms application for user convinence.

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