E-Learning Portal Using Social Networking Features

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Abstract—Education is currently conducted in highly controlled way. E-learning has emerged as an answer to provide freedom for learners in the way that face-to-face learning cannot deliver. It has rapidly evolved from a thing of the future to a practical approach towards education and will continue to be an extremely useful classroom teaching tool as well as self-study platform. With the rise of virtual reality technology and augment reality solutions, experimental subjects, skill-based learning and military training will come to depend more heavily on e-learning solutions. Various education technology providers are also hinting towards the rise of mobile learning solutions (also known as m-learning) as the advanced stage of education technology in future. Students can access educational assistance with services such as online tutoring, online programming help and coursework guidance. In providing e-learning, it is desirable to build an environment that is suitable to the student's learning style. The result of multiple regression analyses, excluding the changes in learning preferences that may occur during the course, shows that a student's learning adaptability can be estimated to some extent based on his/her learning preference measured before the course starts. Despite many advantages of e-learning, it does not provide the best learning experience due to many shortages, limitations, and challenges. The best learning experience might be available by combining in-class and online learning. One more feature that e-learning lacks is peers interaction. Peers interaction has been facilitated through social networks. Utilizing social networks in   e-Learning can change the way students perceive learning

Keywords-education, e-learning, social networking features.

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I. INTRODUCTION

Social E-Learning Platform is a way to deliver online courses that promotes learners contributing back to the course environment. There is a significant increase in the use of social learning platforms in conjunction with the emergent pedagogy of the 'flipped classroom'. Social learning platforms have a long history in education although they have been often referred to by many different names. Their immediate predecessors were the Managed Learning Environments which morphed into Virtual Learning Environments, later known as learning platforms before becoming Personal Learning Networks. The latest incarnation of these platforms are web-based interfaces that mirror the classroom by providing online access to innovative collaboration tools in addition to traditional teaching tools such as tests, revision material and links to external web-based material. Following the trend of other popular social networking platforms such as Facebook they in turn have evolved into online social environments where students and teachers can communicate and engage in online dialogue in a safe and secure environment. A combination of both online and in-class instruction allows the various learning activities to be conducted via more effective medium. Many activities traditionally done in classroom, such as listening to a lecture or taking a test, can be effectively conducted online. Even an instructor-led discussion may be better if it occurs both in-class and online, allowing shy students to make their points in the more anonymous online setting. In addition, the recent spontaneous and viral implementation of flipped classroom pedagogies and epistemologies has started to infiltrate the mainstream in Indian schools. As such, the traditional models of learning platform implementation are weakening at the same time and are possibly no longer sustainable in a country where the focus is rapidly moving away from centralised education policy towards a greater focus on teacher-led, innovative classroom practice. 2 Modern learning practice means students master content while producing, synthesising and evaluating information from a wide variety of subjects and sources within understanding of diverse cultures. Students must exhibit the The solution is clear - we need to adopt a 3T pronged approach of connecting teachers, tablets and technology to shape a future-ready generation

II. LITERATURE SURVEY

This paper examines the use of social learning platforms in conjunction with the emergent pedagogy of the 'flipped classroom' [1]. In particular the attributes of the social learning platform "Edmodo" is considered alongside the changes in the way in which online learning environments are being implemented. [2]Conducting effective eLearning in the age of e (in The purpose of this paper is to present a proposed Social Learning Management System that integrates social activities in e-Learning. For several years, the importance of Cloud computing influences in many areas including E-Learning. [3]Education is seen as important for every individual and country's growth. Basics objective is to design an Application Model to support eLearning Services. The current e-learning systems lack the appropriate infrastructures and efficacy integrated Application Model. [4]A cloud technology gives platform to run our e-learning applications on services basis to any end users using the internet from cloud infrastructure. It will provide optimum affordable price

package to educational organisations in particular for trainer and learners. We need to combine various technologies to achieve this particular objective.Further explains about importance of the E-Learning Design features and analyses the need of cloud computing. Mobile devices have potential to be integrated into the classroom, because they contain unique characteristics such as: portability, social interactivity, context sensitivity, connectivity and individuality. Adoption of LMS by students is still on the low rate, mostly because of poor usability of existing eLearning systems. [5]Usability issue is rising to the higher level on mobile platform, due to device limitations and also because of context of use. Our hypothesis was that it is wrong to take a mobile device as a surrogate for desktop or laptop PC.

III. METHODOLOGY

A detailed study of all the major e-learning portals (NPTEL, Coursera and Moodle) and social media platforms (Facebook, Google and linkedin) was carried out to analyse and compare their features, functionalities, user interface, user experience, user interaction and engagement statistics, similarities and dissimilarities among other factors. We also conducted survey on several teachers where we asked them about our proposed platform, to review it and asking some questions in the survey like their name, the subject(s) they teach, their teaching experience, about creating educational content for the students, sharing those content in their preferred format, asking them about sharing their content digitally, creating interactive study materials online using a free drag and drop application and how do they think that our website beneficial for other teachers and students. This survey was conducted using a Google form which contained the following questions which were answered by the teachers.
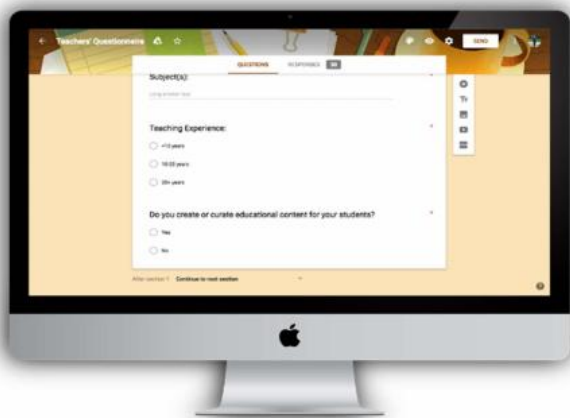

Fig 1 Screenshot of Google Forms for the Teacher Survey

IV. IMPLEMENTATION DETAILS

Software Implementations

HTML 5

HTML5 is the markup language that we use to structure and give meaning to our web content, for example defining paragraphs, headings, and data tables, or embedding images and videos in the page. With the introduction of IE9 even Microsoft is getting on board with most of HTML's newer elements. Chrome, Firefox, Opera and Safari have complied to most HTML5 standards for some time. HTML5 is supposed to be what HTML should have been in the first place. HTML5 is not just the future of web design, it's the present. The first "working draft" of HTML5 came out in January of 2008 and it already has surprisingly broad browser support. In many ways HTML5 is not all that different that 4.01.

PHP5

PHP (PHP: Hypertext Pre-Processor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. PHP is a computer programming language originally designed for producing dynamic web pages. The best things in using PHP are that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. PHP 5 was released 4 years after the introduction of PHP 4 to the Internet scene, aimed to bring a brand new functionality to the PHP language. The PHP team focused on what was missing or not well supported in the older versions. The 5th revision is focused on 3 major areas: Object- Oriented programming, XML and MySQL support. Instead of lots of commands to output HTML, PHP pages contain HTML with embedded code that does something. The PHP code is enclosed in special start and end processing

instructions <?php and ?> that allow you to jump into and out of PHP mode.

CSS 3

CSS3 is distinct from HTML5. Another separate but no less important part of creating web pages is Cascading Style Sheets (CSS), CSS is a style language that describes how HTML markup is presents the content to the user, for example setting background colours and fonts, and laying out our content in multiple columns. CSS3 is the latest version of the CSS specification. CSS3 contains just about everything that's included in CSS2.1. It also adds new features to help developers solve a number of presentation-related problems without resorting to scripting plugins or extra images. New features in CSS3 include support for additional selectors, drop shadows, rounded corners, updated layout features, animation, transparency, and much more.

JQuery

jQuery is a fast and concise JavaScript Library created by John Resign in 2006 with a nice motto − Write less, do more. jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. jQuery is a JavaScript toolkit designed to simplify various tasks by writing less code. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

Javascript

JavaScript is a programming language that enables you to create dynamically updating content, control multimedia, animate images, and pretty much everything else. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities. It is the third layer of the layer of standard web technologies. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name LiveScript. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers. JavaScript is a programming language that allows you to implement complex things on web pages like every time a web page does more than just sit there and display static information for you to look at displaying timely content updates, or interactive maps, or animated 2D/3D graphics, or scrolling video jukeboxes, etc.

 MySQL

MySQL is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use. MySQL is an essential part of almost every open source PHP application. MySQL runs on virtually all platforms, including Linux, UNIX, and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web-based applications and online publishing and is an important component of an open source enterprise stack called LAMP. Good examples for PHP/MySQL-based scripts are phpBB, osCommerce and Joomla.

 CDN

A content delivery network is a system of distributed servers that deliver pages and other Web content to a user, based on the geographic locations of the user, the origin of the webpage and the content delivery server. Content delivery networks are the transparent backbone of the Internet in charge of content delivery. Whether we know it or not, every one of us interacts with CDNs on a daily basis; when reading articles on news sites, shopping online, watching YouTube videos or aperusing social media feeds. No matter what you do, or what type of content you consume, chances are that you'll find CDNs behind every character of text, every image pixel and every movie frame that gets delivered to your PC and mobile browser. A CDN's mission is to virtually shorten that physical distance, the goal being to improve site rendering speed and performance. This service is effective in speeding the delivery of content of websites with high traffic and websites that have global reach. The closer the CDN server is to the user geographically, the faster the content will be delivered to the user. CDNs also provide protection from large surges in traffic.

 Web Server (with cPanel)

A Web server is a program that uses HTTP to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients. Web servers are computers that deliver Web pages. Every Web server has an IP address and possibly a domain name. Dedicated computers and appliances may be referred to as Web servers as well. The process is an example of the client/server model. All computers that host Web sites must have Web server programs. Leading Web servers include Apache Microsoft's Internet Information Server and nginx from NGNIX. Other Web servers include Novell's NetWare.

server, Google Web Server and IBM's family of Domino servers. Web servers often come as part of a larger package of Internet- and intranet-related programs for serving email, downloading requests for File Transfer Protocol (FTP) files, and building and publishing Web pages. Any computer can be turned into a Web server by installing server software and connecting the machine to the Internet. There are many Web server software applications, including public domain software and commercial packages.
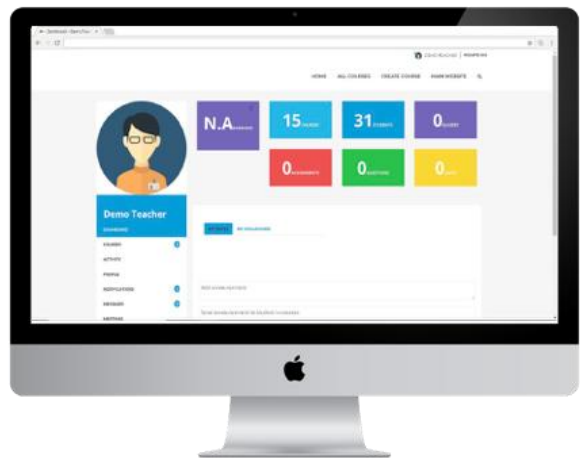
 Web Browser

A web browser is a software application for retrieving, presenting and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource Identifier (URI/URL) that may be a web page, image, video or other piece of content. Hyperlinks present in resources enable users easily to navigate their browsers to related resources. Although browsers are primarily intended to use the World Wide Web, they can also be used to

access information provided by web servers in private networks or files in file systems. A web browser is a software program that allows a user to locate, access, and display web pages. In common usage, a web browser is usually shortened to "browser." Browsers are used primarily for displaying and accessing websites on the Internet, as well as other content created using Hypertext Markup Language (HTML) and Extensible Markup Language (XML), etc.

WordPress WordPress is an online, open source website creation tool written in PHP. But in non- geek speak, it's probably the easiest and most powerful blogging and website content management system in existence today. WordPress is a Content Management System, that allows you to create and publish your content on the web. Although it is mostly used for web publishing, it can be used to manage content on an intranet, or in a single computer. WordPress allows users to have full control over the files, documents, as well as the design and display of the content. You don't have to know a single line of code to publish content using WordPress. The beauty of a good content management system is to allow any user to create and manage their content without any technical know-how.
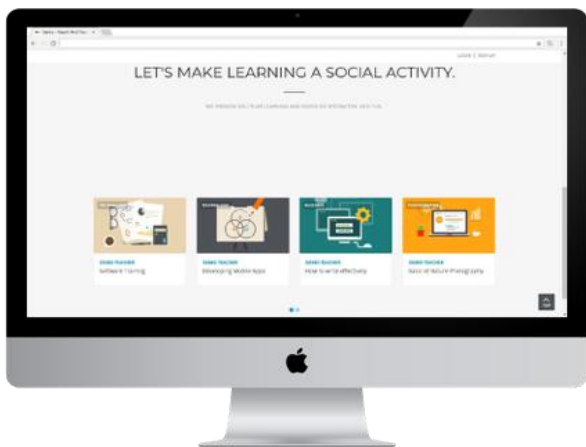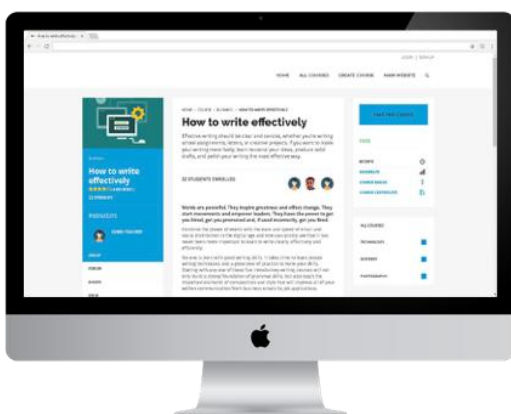
RESULT

Screenshot of Home Page

Screenshot of Course Page

Screenshot of Dashboard Page

Screenshot of Take a Course Page

V.   CONCLUSION

Since the inception of our project E-Learning Portal Using Social Networking Features, we have carried out different phases of the Software Development Lifecycle. We have clearly defined the purpose of the project and also the scope determining the goals and milestones in project lifecycle. The benefits and limitations of the project are well listed in this report.

From the extensive research on various internationally published papers we have analysed their drawbacks and found areas to improve in our own project. The papers have served as a good base for our research and we have developed new ideas for LMS through carefully analysing their aspects. We have referred even publications for supporting knowledge and gained insight from them.

The project plan and methodologies are for the successful completion of the project. The existing system is studied properly and so the proposed system will surely eliminate existing problems. The diagrams in the synopsis are made after intense discussions and are easy to understand. Each diagram serves its purpose and is made in such a way that

there will be no confusions during coding and testing of project. Thus we conclude that the designing was carried out with utmost care and took maximum time.

We have also mentioned the hardware and software requirements which are subject to change if up gradation of the system is advisable. The project report is complete with diagrams like DFDs. Even an implementation plan is added to give a detailed description of the tasks completed so far and what will be done in next stages of the project.

E-learning objectives correspond to traditional learning objectives, as well as to life-long learning objectives related to cognitive, affective and psychomotor domains. The continuous and rapid change of contemporary society and existing technologies leads to life-long education. E- learning is a part of life-long learning that may become more popular in times to come. Online technology is not just to make learning more efficient, but to enhance it by allowing students andprofessors to better prepare for face-to-face or online learning experiences.

We propose system of learning management system (LMS) that incorporates social networks beneath it and makes use of social network analysis in understanding students' behaviour and helps shaping their learning path.

Thus, we conclude that this project report is complete and contains allnecessary documentation for the project E-Learning Portal Using Social Networking Features

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