Learning 2.0: An Innovative E-Learning Approach in Higher Education Using Web 2.0 Technology

Deepika Sharma*

Abstract: Information and communication Technology has become one of the basic building blocks of modern society. ICT have an important role to play in changing and modernizing educational systems and ways of learning. ICT boosts e-learning tool to promote innovation in educational processes and to foster the development of creativity in faculties and students. E-Learning is an important tool for delivery, interaction, and facilitation of both teaching and learning processes. E-learning with the diverge means of social media can be described by several key features of an expanded Web that is more interactive; allows easy social interactions through participation and collaboration from a variety of human sectors; responds more immediately to users’ queries and needs; is easier to search; and provides a faster, smoother, realistic and engaging user search capability, often with automatic updates to users. The use of Wikipedia, YouTube, Flickr, Slideshare and Delicious is becoming accepted as shared information sources. The role of web 2.0 applications and more specific social media in e-learning is growing. The deployment of web 2.0 technologies in social media approaches have stimulating impact in higher education for teaching and learning. Web 2.0 technology plays its role in enabling the development of innovative teaching and learning methods.

The purpose of this research is to analyze the impact of social media tools using web2.0 technologies in higher education for teaching and learning purpose. This study will also assess faculty and students opinions on e-learning using web 2.0 technology to determine how they perceive e-learning, and how they might choose to integrate it into their everyday teaching activities at graduate and post graduate students and faculties in higher institutions in the Delhi region. Key Words: Knowledge Management System (KMS), Innovation, Information, explicit Competitive Advantage.

Keywords: Web 2.0, e-Learning, Blog, social media, collective intelligence, e-participation, harness

Introduction

In development literature, ICT has been characterized as having the potential to enable national development. However, ICT has been conceptualized mostly as a monolithic and homogeneous entity. To a great extent, the ambiguous findings and diverse opinions on the role of ICT in national development can be attributed to this limited focus. From activities to operations, from research to development from health services to amusement, from education to governance, ICT has become an essential component of basic life.

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McKenzie (1998) said that technology would transform the act of teaching, whether or not faculties or students are ready for this inevitable change. According to McKenzie, when faced with new technology, students and/or teachers would likely adopt one of two approaches: they would either embrace it or they would dismiss it. In other words, teachers and students will either learn how to use new technology, or they would ignore it—the later of which would put them at a disadvantage compared to their more technologically literate peers. Ballard opined that technology is reshaping today’s educational institutions by offering students new ways of seeing and learning, giving teachers new ways of teaching and imparting knowledge; and administrators new ways of organizing our educational system (Ballard, 2000).

E-Learning

Innovations in teaching and learning have emerged, and educators are in the midst of becoming more adept at using new educational technologies. This fact is reflected in our changing language. Terms such as “open education,” “distance education,” “distance learning,” “virtual learning,” “remote learning,” “online learning,” and “e-learning” are now part of educators’ everyday lexicon. Use of such terminology helps to define and shape the creative innovations taking place. E-learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning. Fundamentally, they all refer to educational processes that utilize information and communications technology to mediate asynchronous as well as synchronous learning and teaching activities. E-learning comprises specific media to implement the learning process and enhances the transfer of skills and knowledge. E-learning applications and processes include Web-based learning, computer-based learning, virtual education opportunities and digital collaboration. It would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices.

- E-learning may also comprise combinations of the foregoing types of activities.
- E-learning is growing in popularity in all areas and levels of education and training.
- The critical attributes of e-learning include flexibility of time, place and pace of study.
- E-learning affords opportunities to design learning environments that are authentic, situated in the learning context, and also problem-based in order to provide students with “learning by doing” experiences.

Web 2.0

Tim O’Reilly coined the term Web 2.0 and defines it as “the business revolution in the computer industry caused by the move to the internet as an interaction and enabling platform, and an attempt to understand the rules for success on that new platform.”

The major among those rules is:

- harnessing collective intelligence turning the web into a kind of global brain by sharing and participation of knowledge by the people and for the people benefits.

Web 2.0 is the second coming of the internet and represents the rapid proliferation of new generation Internet based technologies. Web2.0 has created the platform for increasing interpersonal content facilitation, sharing, creativity service delivery, innovation and collaboration. Teaching faculties and students in higher educational institutions can take advantage of Web2.0 technologies by providing a social and collaborative learning platform by sharing their experiences and working knowledge.

Web 2.0 and higher education

According to the European Commission Directorate General Education JRF scientific and Technical Report organizations are using web2.0 to support innovation, creativity, collaboration and information sharing. The emergence of new technologies can foster the development of innovative practices in the Educational and Training domain and incorporation of new tools into learning and teaching activities opens up new opportunities for a better learning environment for teaching faculties and students.

Now days, institutions of higher education across the world started developing adoption of Web 2.0 in their educational system. There are several cogent reasons for adopting and implementing web 2.0 into an teaching and learning process:

- The growth of information technology
- It is information rich
- Alternative learning strategy

Learning 2.0 shaping education by the emergence of Web2.0

Learning 2.0 is an emergent phenomenon, fostered by adopting social computing or ‘Web 2.0’
in educational contexts. Although social computing originated outside educational institutions, it has huge potential in formal Education and Training (E&T) for enhancing learning processes and outcomes and supporting the modernisation of Educational institutions. The new learning 2.0 technology emphasize on social learning by social software such as blogs, wikis, podcasts so that knowledge is socially constructed. Learning 2.0 takes place through conversations about content and grounded interaction about problems and actions. The strategic objectives of learning 2.0 are:

- Make lifelong learning and learner mobility a reality;
- Improve the quality and efficiency of provision and outcomes;
- Promote equity and active citizenship;
- Enhance innovation and creativity, including entrepreneurship, at all levels of Education and Training.

Learning 2.0 contributes the knowledge for students and teaching faculties in higher education to meet the demand of their continuous learning curve, and is to engage in e-learning a time and place convenient to them. Learning 2.0 thus derives numerous benefits to meet the objectives of continuous learning. It:

- Offers links to useful learning materials
- Provides online materials to guide teaching faculties and students learning processes
- Increases access to content-rich learning materials
- Facilitates interest via increased interaction
- Provides immediate feedback and positive reinforcement
- Creates a flexible learning environment
- Provides ongoing support for teachers
- Facilitates dialog between and among teachers and students (Haugland and Wright, 1997)
- Augment traditional classroom offerings, thereby freeing up valuable resources and expanding the offering to greater numbers of learners

Current use of Learning 2.0.

Learning 2.0 approaches can be used as a means to increase academic achievement.

A growing number of educators and learners at higher education institutions worldwide have already begun integrating Learning 2.0 practices into their teaching as it is reaching out to virtually meet people from different age groups and sociocultural backgrounds, linking to experts, researchers or practitioners in a certain field of study and thus opening up alternative channels for gaining knowledge and enhancing skills. From this point of view, Learning 2.0 enables teaching faculties and students to broaden their horizons and collaborate across borders thus anchoring their learning experiences in a rich world of diverse cultures, traditions, languages and opinions.

Social computing supplies learners and teachers with a wide variety of methodological tools that can be fitted to their respective learning objectives and individual needs with a positive effect on their performance and achievement. Research evidence suggests that Learning 2.0 strategies can be used successfully to enhance individual motivation, improve learner participation and foster social and learning skills.

Objectives

- To study the know-how the inclusion of social media in order to promote better teaching and learning process in Indian higher institutions for educational goals
- Perception of teaching faculties and students towards the use of social computing in learning process
- To use the findings to make recommendations on the adoption of social media to higher institutions of learning

Methodology

The study was conducted in the form of questionnaire survey in February 2012 to identify the status of the use of web 2.0 technology in higher educational institutions. Structured questionnaire were formulated in order to identify different uses of Web 2.0 technology in achieving educational goals. The study is based on 45 students and 35 faculty members in 5 selected colleges. The respondents were students of MCA, MBA, and B.Tech course. It assessed the pace of incorporating web 2.0 technologies in these institutions. Information regarding ease of using web 2.0 technology, generating new ideas and collaborative knowledge were collected from the respondents.

Sampling and sampling procedure

Random sampling method was adopted in selecting the participants for the study. The sampling units are full time graduate students and master students of any of the departments of management.
studies, marketing, business studies and information technology of the selected higher institutions in Delhi region.

Data analysis, results and discussion

Analysis were calculated by using the Weka tool. Findings for the opinion measures found in the questionnaire are reported in Table. The faculty members were asked few questions to investigate the use of web 2.0 applications for educational goals in their institutions.

The majority of faculty members does not shown any interest in using脸书 for educational purposes (see figure 3). They use facebook as a social network for chatting and entertainment purpose.

The results indicate that the most of the faculty members are not using blogs comments in their teaching methodology in these institutions. (see figure 4)

After looking the results this has been concluded that faculties are not exploring discussion boards for their teaching purpose.

The Web2.0 tools used by the faculties of various colleges in their teaching purpose, the concluded data is given in tabular format below.
Table 1

<table>
<thead>
<tr>
<th>S. No</th>
<th>Web2.0 tools</th>
<th>No. of faculties using the tool for teaching purpose</th>
<th>No. of faculties not accessing the tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wiki Pages</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>2.</td>
<td>YouTube</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>Face book</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>4.</td>
<td>Blog</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>5.</td>
<td>Discussion Boards</td>
<td>9</td>
<td>26</td>
</tr>
</tbody>
</table>

The results of this study provide evidence that some faculty feel that integrating Web 2.0 technologies such as blogs and wikis into the teaching-learning environment can be effective at increasing student satisfaction with the course, improve their learning and them to better create and retain knowledge.

The Web2.0 tools used by the students of various colleges in their learning purpose, the concluded data is given below:

Table 2

<table>
<thead>
<tr>
<th>S. No</th>
<th>Web2.0 tools</th>
<th>No. of students using the tool for teaching purpose</th>
<th>No. of students not accessing the tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wiki Pages</td>
<td>24.5</td>
<td>3.536</td>
</tr>
<tr>
<td>2.</td>
<td>YouTube</td>
<td>11.5</td>
<td>4.95</td>
</tr>
<tr>
<td>3.</td>
<td>Face book</td>
<td>11</td>
<td>1.414</td>
</tr>
<tr>
<td>4.</td>
<td>Blog</td>
<td>10</td>
<td>2.828</td>
</tr>
<tr>
<td>5.</td>
<td>Discussion Boards</td>
<td>9.5</td>
<td>0.707</td>
</tr>
</tbody>
</table>

This study seems to suggest that the social media applications are becoming potential tools for educational purpose. The students started making use of social media applications. But after investigating fewer students and faculty members made use of web2.0 tools for educational goals.

Although relationship with instructors through the social media at moment seems minimal, communications about home work and instructor’s guide are shared using some of the social media tools by the students.

Table 3. Mean and standard Deviation

<table>
<thead>
<tr>
<th>S. No</th>
<th>Web2.0 tools</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wiki Pages</td>
<td>24.5</td>
<td>3.536</td>
</tr>
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<td>2.</td>
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The mean data shown in Table 3 indicates there were no negative opinions towards using Web 2.0 by higher education student and faculty members but relatively it is not so positive also. The standard deviation also reveals the spread of the score distribution to be small for most of the items, indicated that faculty members and students tend to hold similar opinions towards about e-learning. In sum, the data collected revealed that the higher Education faculties and students generally held fair opinions towards introducing web2.0 technology.

Findings

The purpose of this study was to assess faculties and students awareness of the benefits of Web 2.0 to supplement in e-learning and better understand faculty’s and students decisions to adopt these tools. Findings indicated that while some faculty and students members feel that some Web 2.0 technologies could benefit in their teaching and learning purpose. Additional results indicates that stakeholders use web2.0 tools for

- preparing lectures,
• making notes,
• reading new articles
• making assignment

Further study indicates that students and faculty members find web2.0 tools easy to use and accessible any time, anywhere. They find the content interesting, attention grabbing and faith in the content written by different moderators as it is already used and tested by the content writer and has updated information.

Limitations of sample

The sampling model, specific to institutions in the Delhi region is not representative of other higher institutions of learning in entire Delhi. Thus the results of the study and any inferences drawn may be implied only with reference to these colleges surveyed. The sample selection for the survey allows for generalization, only to the point of these institutions involved. The study measures the attitude of the teaching faculties and students of the selected institutions in this region and hence the imposition of the outcome of the study with reference to the five higher educational institutions on entire Indian higher institutions is not valid.

Conclusion

Web 2.0 tools have led to a powerful paradigm shift in delivery of education and pedagogical content, course material and literature. The use of web2.0 tools for educational purpose is a new idea, and a huge opportunity for higher education and lifelong learning. Using Web 2.0 technologies involves developing in the students and faculty members the ability to continuously update them, to optimize the learning process of education. Higher education entities and decision makers need to adapt to the new realities that inform key areas of their work.

Recommendations

It is recommended to have large scale exploration of educational uses of web 2.0 applications in India. Higher educational institutions need to support knowledge-sharing between different existing initiatives and develop new approaches and tools building on the gathered expertise. By capitalizing on personalization, participation, and content creation, existing and future Learning 2.0 practices can result in educational experiences that are productive, engaging, and community based and that extend the learning landscape far beyond the boundaries of classrooms and educational institutions.

Additionally, while these tools show pedagogical promise, “best practices” models are needed to further facilitate the adoption of these emerging technologies as tools for improving teaching and learning in higher education.

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