Web 2.0; Open Opportunities for Turkish Universities

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ÖZET

Bu çalışmanın amacı web 2.0 ların ve open sourceların eğitim sitemlerinde kullanılması dır. Çalışma özellikle bu teknolojik sistemlerin yüksek öğrenimde uygulanması ile ilgilidir. Dünyada ki bilinen üniversitelerden uygulamlalı örnekler veildikten sonra Türkiye' deki üniversiteler içinde bu sistemlerin kurulması ve uygulanması için farklı çözüm yolları sunulacaktır.

ABSTRACT

The purpose of this paper is giving an overview of web 2.0 and open sources technologies in educational settings. The paper focuses specifically on implementing these tools in higher education. After giving some cases in universities around the world, the paper will give suggestions to implement these technologies in Turkish Universities to improve students' learning.

Keywords: web 2.0, wiki, open source, collaboration, social networking, student-centered learning. Socialcultural Theory

Introduction

The developments in technology have been affecting the way human being live. The utopians of last decades are becoming true now. The technological tools which we saw only on movies are part of our life. Today's generation cannot even think a world without email or chatting. Photo cameras are considered only digital now. Almost every house has a computer available to kids.

As a result of that change, there are some 'digital divide' among generations. Prensky's classification; digital immigrants and digital natives [1], become obvious in most of communities. While digital natives have born with new technologies, digital immigrants are still considering these technologies as luxury, extra, difficult, or trouble maker. Another social observation is claimed by Barron [2]. According to Barron 'digital divide' is changed from access to technology skills that users have.

This inevitable development in technology has influenced in several areas including culture of technology. There have been new tools and systems available to human beings.

Web 2.0 and open source applications are some of the new developments in technology in last few years. This paper, thus, will open new windows for Turkish universities to integrate web 2.0 technologies into their educational systems. The paper starts with introducing web 2.0, its brief history, and some features of each web 2.0 applications. The second section of the paper will touch on learning theories for web 2.0 learning environments. The implementation of web 2.0 in different universities will be explored in the third section. Turkish university case will be examined at the fourth section of the paper. And at the end, we will conclude with practical suggestion for implementing web 2.0 in your settings.

Section 1: What is Web 2.0?

In 2004, Tim O'Reilly at O'Reilly Media conference brought a new approach to World Wide Web. They came up with a new term called web 2.0 which is believed that this term "describes the changing trends in the use of World Wide Web technology and web design that aim to enhance creativity, communications, secure information sharing, collaboration and functionality of the web. Web 2.0 concepts have led to the development and evolution of web culture communities and hosted services, such as social-networking sites, video sharing sites, wikis, blogs, and folksonomies." [3].

Web 2.0 goes beyond the one way communication that html based sites believed to provide. With new interaction features, web 2.0 applications replace most of the web 1.0 applications for example Google AdSense almost replaced DoubleClick, where personal websites not become personal blogs. The followings are the list of well known web 2.0 applications and sites for that application [4].

1-A wiki is a webpage or set of webpage that can be easily edited by anyone who is allowed access. With history function, wiki allows previous versions to be

examined. This function is very useful for group works. [5]
www.pikiwiki.com/ , www.pbwiki.com/, docs.google.com, www.wetpaint.com www.wikispaces.com , www.mediawiki.com

2- Blog refers to a simple webpage consisting of brief paragraphs of opinion, information, personal diary entries, or links, called *posts*, arranged chronologically with the most recent first, in the style of an online journal. Most blogs also allow visitors to add a *comment* below a blog entry. On blogs, there is usually a main author and other users build knowledge by posting comments [5]
http://wordpress.org/ http://www.blogger.com/start, http://www.bblog.com/

3- RSS are common for numerous people to get updates on certain topics from certain sites on time. This feature allows users to access information immediately.

4- Social bookmarking and tagging allow users to cite articles and share with other in defined way by tagging them. www.del-icio-us.com, www.citeulike.org, www.digg.com , www.furl.net

5-Content Management Systems help user start webpage page with the new design ready system; designing and maintaining a website get, therefore, easier.
www.joomla.org, www.google.com, www.yahoo.com

6- Picture and video sharing: Video sharing probably is the mostly known web 2.0 application in several countries. Giving users to upload and edit videos and content make these applications more popular. Pictures sharing applications also carry similar values with video sharing applications. www.youtube.com, www.flickr.com, www.snapfish.com, www.vsocial.com

7- Podcasting and audio sharing: After the millennium, podcasting get popular in academia. Lecturers from famous scholars have been on air for public. It is now easy to find many lectures from Harvard or MIT professors on online with podcasting.

8-Mashups, Facebook, myspace, Google Orkut, and more.

Section 2 : Learning Theories Supporting Web 2.0 Tools

The inevitable development in technology has influenced education. Researchers started to think the ways to integrate technology into education. This integration, of course, is not for sake of use. It is believe to improve learning. For example, Vygotsky's sociocultural-historical theory which also studied and implemented by Rogoff [6] states that individuals are part of the community and they engage in the culture. However, the way that individuals are engaging in culture got changed. Technological tools are the main means to provide that engagement between individuals, community, and culture. Getting from the similar perspectives, Piaget the father of constructivism also state that individuals learn from their previous experience and with interacting witn individuals.

As Bruns and Humphreys [7] explained; web 2.0 are most supportive tools for social cultural and constructivist based learning; "This kind of pedagogy is construction based, in that it builds on existing knowledge of the learner as well as interaction with the environment. It is also activity based. The interaction and collaborative aspects of the learning scenario trigger a variety of different types of learning processes, through explanation, disagreement, the development of mutual regulation strategies and so on. It is reasonably clear how this particular set of activities carries over into the project-based, collaborative work environments many students will find themselves in upon leaving university."

Samarawickrema [8] studied implications of web 2.0 applications among university professors where they used Joomla, Gallery2, and MediaWiki. After interviews with the study participants, the researcher found out that provide learners with their own space to collaboratively build knowledge, provide a formative peer-feedback mechanism, reduce the presence of the lecturer, use plug-ins (Joomla), display and share work (Gallery2), and use as a research method for case study (MediaWiki). All respondents felt their efforts were recognized by the University as they had received invitations to showcase their work in their faculties,

Section 3: Implication in other Universities

Web 2.0 is described as "glocalization" by Boyd [9] since web 2.0 is about making global information available to local social contexts and giving people the flexibility to find, organize, share and create information in a locally meaningful fashion that is globally accessible. This sharing information globally trend had impact in several top universities in the United States and other countries.

Harvard Law School, for example, opened some its lecture to public with video sharing applications. MIT, another top university in the world, started Open

Course Ware program to give others access to their lectures.

In 2006 IBM and The University of Arizona made a new collaborative initiative to develop a course aimed at helping developers build online communities and social network systems using Web 2.0 technologies. The curriculum is designed to equip students with skills in the creation and management of online communities. It has been on news recently that Google is trying to get the biggest libraries on web and open to public.

Even developing countries implemented some of the web 2.0 applications in their universities. According to Networkworld news [10], 12 universities in African countries got together to train in the use of Web 2.0 applications and open-source software. The training in Web 2.0 applications is aimed at enabling the 35 lecturers and professors to carry out collaborative research in the field of agriculture, while the training in open-source software seeks to popularize the medium among higher institutions of learning. Some of the applications, for instance, are wikis, blogs, Skype, and Facebook. Similar to that, eIFL.net and American University of Central Asia organized the workshop "Open Access and Web 2.0: Improving the scientific communications" in Kyrgyzstan to promote web 2.0 application among libraries.

Section 4: Promoting Web 2.0 in Turkish Universities

Turkish people and culture is not far from using technology. According to Turkish Statistical Institute (TUIK) in 2008 data [11], the use of internet in corporations and institutions increased to 90.6 %. The data also proved that there is a huge change in accessing computers and internet at home as well. However, this accessibility may cause social and educational problems if technologies changes are not manipulated by experts.

Universities in Turkey, thus, are highly encouraged to start implement web 2.0 applications for their learning environments. By setting such applications, the universities will give opportunities to their students to build their own knowledge bases with peer collaboration.
For instance, Anadolu University has many years experience in implementing to different technological systems for their distance education. Lessons over TVs have been used for years in that system. Indeed, AnadoluUniversity already started to use such open source Course Managemnt Systems as Moodle, WebCT.

Based on experience and implementations, it is proven that using web 2.0 open source system will lower the cost of IT infrastructure. By collaborating on these applications, the students' knowledge base get grow and there will be acceleration in innovations.

Before wrapping up this paper, I like to also give some practical implications of web 2.0 for Turkish University systems.
First of all, blog is a affordable system to set per school or departments. After setting these, the professors have to be trained in the first year to use blog. The professors can post assignments, resources and announcements to have clear communication with their students.

Wiki is another great tool to build knowledge base. Professors and students can together or separately build, class, department or even university wiki to share research ideas. Wiki, for example, has been used a lot even middle schools and high schools in the United States. By sharing knowledge students will also rebuild their own knowledge

Podcasting allows students to access lectures anytime anywhere. With podcasting, the students will be able to download the lectures on their mp3 players or even cell phones to improve their learning.

Flickr is another good application to use in art and social sciences. As it has been done in several universities, students can build a community with sharing photos under similar themes. These community can later be community if practice with adding other applications.

In order to implement web 2.0 applications in Turkish Universities productively, the following points have to be considered.
1-Support from department and university administration
2-YÖK support. YÖK should pass policies to make easier and encouraged for professors to use web 2.0 applications.
3-Training or professional development: It is highly recommended for universities to train the staff before they start use web 2.0 applications in the classroom.
4-Technical Support: the previous research also support that teachers more complaint about less support when there is technical problem. School implementing web 2.0 applications must provide live help.
5-Equpment support: university staff should be let alone to set their own web 2.0 application by them. It may become barrier to ask staff to find a hosting company to set their own applications.
6-Instrucational Designer: Universities have to have instructional designers available for staff to access and receive help about integration strategies.

Conclusion

The goal of this paper was giving and overview of web 2.0, its applications, where have been used and how can be used in Turkish Universities to improve learning. Because of space limit, most of the sections are briefly explained.

However, as it is explained above web 2.0 applications are new open source opportunities for Turkish Universities to use the available technologies to improve learning of their students. In addition, these applications may also help professors to build new sharing environments for research purposes.
In order to implement web 2.0 application in your university or in your class, the following points have to be considered. First of all, with web 2.0 students will start produce their own knowledge base and they will be able to share with other community members. We, thus, have to design our instruction based on student centered learning. It is important to get support of university presidents and dean of faculties on using web 2.0 tools in university.

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