RESEARCH ARTICLE

AWARENESS, USE AND IMPLICATIONS OF WEB 2.0 FOR SUPPLEMENTING CLASSROOM TEACHING AT GRADUATE LEVEL

VIRENDRA SINGH NIRBAN*, ANUSHREE RASTOGI

Birla Institute of Technology and Science, India, Department of Languages

ABSTRACT

VIRENDRA SINGH NIRBAN

With every revolution in human communication, the dynamics have vastly changed for all purposes. To enumerate a few, the script enabled the idea of objects to travel without the objects: the printing machine enabled reproduction of content in huge amount while the electronic revolution defeated the notion of national and continental boundaries. The Internet explosion of the last couple of decades and the Web 2.0 phenomenon of the last five years has virtually taken the communication revolution to individual homes and offices. This phenomenon has touched and influenced many aspects of our life in a positive way. Education sector has been no different. This research paper is an attempt to identify and analyze formal and informal ways in which students and teachers use Web 2.0 technologies for academic purposes. This research study is a pilot study of graduate students for their awareness, indulgence and implications of web 2.0 technologies in academics. The objective is to identify ways in which the web 2.0 technologies can be used to supplement classroom teaching. A structured approach has been used to elicit and quantify the responses of the sample population of 100 students and teachers. Also, qualitative approach will be used to explain certain aspect of the subject at hand.

INTRODUCTION

In the past, the internet has allowed us to make phone calls, send text messages, download and play music, surf the web, take and send photos, play games, etc. But now the internet is becoming a platform for unparalleled creativity. This is largely because the content user is now increasingly becoming the content creator. The web 1.0 was the web of reading, receiving and researching, whereas the web 2.0 is the web of contributing, collaborating and creating.

The web 2.0 has provided opportunities for teachers to explore out-of-the-classroom teaching methods and for students to indulge in collaborative learning. With so much emphasis being given to education in government policies and otherwise, it becomes imperative to explore methods in which web 2.0 can be used as a pedagogy. The Web 2.0 phenomenon, started around 2004, can be identified as development of special technologies which allowed

internet users to communicate in numerous ways and directions. It allowed a coming together of users for purposes ranging from social to research. These new Web 2.0 applications take full advantage of the network nature of the Web: they encourage participation, are inherently social and open (Ullrich, C et.al. 2008). Web 2.0 has been defined as "participatory" (Jenkins et al. 2006) and "read-write" (Berners-Lee & Lawson 2005) web. According to Hall, XML technologies, Blogs and Wiki offer opportunities for communication, self expression and learning (Hall 2008). Brown has also emphasized that blogging enhances personalization, community building while services like Facebook and Myspace provide a range of communication modes for online communities (Brown 2008). These characteristics are in line with modern educational theories such as constructivism and connectionism and thus make Web 2.0 applications very attractive for teachers and learners. (Ullrich, C et.al. 2008).

Methodology

This pilot research study is a descriptive study of graduate students for their awareness, indulgence and implications of web 2.0 technologies in academics. An effort has been made to understand the existence and application of Web 2.0 technologies in education domain. With a systematic approach, an attempt has been made to describe the perspectives of students and teachers with respect to the Web 2.0, the ways in which they use it and its implications. A structured approach will be used to quantify the responses of the sample population. Also, qualitative approach has been used to explain certain aspect of the subject at hand. Questionnaire has been used as an instrument to gauge students perspectives on the new interactive technologies. Of the large sample size 40 students were selected randomly with similar proportions from different years of study. The sample size was administered successfully to all of them via online mode and responses were collected. The responses were tabulated and the data was analyzed to reflect the awareness, uses and implications from students point of view.

Findings

Awareness and Uses : The survey results reflected the various responses that were obtained when students were asked about their awareness about the various popular Web2.0 tools. Wikis, blogs and social networking websites are popular web2.0 applications among the student community. However, the use of blogs and wikis is a relatively new phenomenon. People today are keen to share their knowledge and experiences. This is particularly helpful when experts write their blogs and update wikis that students start following them. Students are free to refer to these blogs. Often people can post their doubts as comments and get very quick responses from either the writer himself or from other people who happen to visit that blog.

The most commonly used Web2.0 tools from amongst our sample group are blogs, wikis, social networking and multimedia sharing. 92% of the students used social networking websites. The current trend of sharing experiences as well as the need to collaborate and communicate with peers are major driving factors behind this. Social networking may be used as a means of communicating with peers, seniors, teachers, etc and thus find out more and more about the available opportunities as well as to seek guidance in times of need, when it is not possible to meet people face-to-face in these very busy times. A healthy interaction is thus brought about.

Multimedia sharing is also slowly becoming a frequently used tool. Various multimedia sharing sites such as YouTube provide to-do-yourself and how-to videos for students. A lot of tutorials are also uploaded by users which aid classroom learning in a big way.

The survey results indicated that despite the high level of awareness amongst students regarding the use of Web2.0 technologies, it is still primarily being used as a means of entertainment. This is mostly due to the fact that despite the availability of these technologies, teaching primarily continues to remain traditional and these technologies have not yet been incorporated in the teaching methodology in a big way. However, the statistics do show a significantly high number of students who use Web2.0 tools for education. This shows the feasibility and usefulness of these tools.

Despite the fact that they have not been incorporated into classroom learning in a very big way, these tools continue to remain popular with the student community.

According to the survey responses students spend a significant amount of time using Web2.0 tools for educational purposes. 34% people spend more than 2 hours making use of these tools. This is proof of the fact that the tools are helpful and engrossing. In addition to this, the very fact that these tools are mostly self explanatory and easy to use, no formal training is generally required, making them ideal for use by one and all. The time spent on these Web resources ends up being very productive as not only do students interact with other students and faculty members, they also get to tap into a huge database of collective knowledge and contribute to it in return, making the entire process a two-way situation.

The various purposes for which Web2.0 tool may be used include interaction with other students and faculty, submission of assignments, projects, etc , collaborating with students from other institutions and exchanging knowledge and also for further reading and research purposes.

As per our study results, most students used Web2.0 tools extensively for research purposes. With online web resources and journals available research has definitely gained impetus. These come in handy when students are interested in obtaining an in-dept knowledge of their subject. Web2.0 tools are also used extensively for submitting assignments and projects.

Applications of Web2.0 Technologies in Education

Formal way by using in labs and classrooms : Most people gave a "somewhat agree" answer to whether they thought Web2.0 technologies could help in education through formal education, incorporating it in labs and classrooms. This could be attributed to the fact that the student community is not sure of the logistics of using Web2.0 in labs and classes. However, it is evident from the results, students do feel that Web2.0 technologies could aid in classroom teaching and this is a positive sign for further development of Web2.0 aided technologies to supplement classroom teaching.

Informal way, beyond classroom learning : A majority of students either had an agreement to the introduction of Web2.0 tools as a means of education at the informal level. This is mostly because students are already using Web2.0 tools to supplement their education on a day to day basis and a slowly becoming aware of its benefits. As more and more people slowly turn to this medium, its knowledge database becomes richer and richer. Blogs, wikis, pod casts, multimedia sharing, etc are all forms of usage of Web2.0 to supplement education informally. Since there are no major inputs required, this form of education is cost-friendly, widely available and interesting to use.

For teaching : Most students showed an agreement, albeit not a very strong one to using Web2.0 tools for teaching purposes. This slight reluctance can be attributed to the fact that although these tools are slowly making their presence felt, they are yet to be put to any significant use at the teaching level. And their usage for now, continues to be representative. However as more and more of these tools are being made available, teachers are slowly getting over their prejudices and are beginning to incorporate these tools as a part of the teaching process.

For evaluating students : Students were mostly apprehensive about the usage of Web2.0 technology for evaluation purposes. Although through tools like intrabits assignment upload, some usage is being made, this field remains mostly dominated by manual work on the part of teachers. There are many reasons for these apprehensions. Firstly, the general perception of Web2.0 based tools is one of casualness. Not a lot of students and teachers understand that fact that it offers coherent and reliable technology which has a reasonably high level of security and is not easy to tamper with. In addition to this, there are concerns regarding the fairness of this process, the method of evaluation, etc, which tends to be an inhibiting factor as far as using Web2.0 for evaluation is concerned. Considerable amount of work needs to be done to make the process fair, reliable and transparent.

Benefits of Web2.0 Technologies in Education

For obtaining student's feedback : Most students agree to Web2.0 being used as a means of collecting student's feedback. There are several reasons for this. Firstly,

response collection is quick and efficient and all similar responses can be rapidly grouped together, so that acting on those responses becomes easier. In addition to this, total secrecy is maintained and students have full confidence that their identity is protected, since there is no physical interaction with any person. Student's giving feedback find this technique to be extremely lucid and hassle free, without any extra paper-work, thus making it ideal for today's busy life.

For following Student's Interest Trends : Most students were open to the idea of the usage of these tools to gauge their interest levels in various fields. This is, in fact, what is happening when sites keep a count of the number of visitors for any blog post or for any particular link. Web2.0 allows for knowing which particular links are visited most often. Naturally, the most often visited links are also going to be the ones that students found the most useful. This helps teachers know what portions or teaching methodologies interest their students and accordingly chalk out further strategies for going about their work, making the job of both the student and the teacher that much easier.

For improved inter-departmental communication : Students mostly felt that introduction of Web2.0 to teaching would, in fact, help improve the inter-departmental communication. Since most Web2.0 based portals can be accessed by all departments, there need not be too many personal meetings between the concerned people and the departments may collaborate through these portals only. This saves up on the time of the department-heads and various teachers and also makes their work easier.

For improved teacher-student interaction : Web2.0 tools perform an efficient means of communication between the students and the teachers. This is because there is no constraint of time in this case and students can post their doubts/queries at any time and teachers can respond to them as and when they find the time. This greatly reduces the amount of time that is wasted for both parties involved. In addition to this, there is a free availability of web resources which both the students and the teacher can refer to simultaneously, instead of going through a long and cumbersome search, saving on time. For example if a teacher needs

to explain some point to a student, he can always attach a link of some video clipping or animation, etc which will further help the student visualize what the teacher is trying to explain. Solutions like these can further be customized to suit the needs of a particular class or institution, creating discussion forums for students and teachers and also by maintaining a free-blogging space for teachers, etc.

For improved parent-teacher interaction : There was a mixed response to whether students feel Web2.0 based technology helps in parent-teacher interaction. Students feel that it is essential to some extent for parents and teachers to meet in person so that they are able to discuss freely the performance and other personality-related aspects of the students. Discussions like these should be highly informal and confidential, thus moving them to a web-based portal is something that might hamper the process. In addition, students feel that even general discussions between parents and teachers are essential, which cannot be held so easily over discussion forums which require a specific subject and concise questions. An in person meeting is, therefore, the preferred choice for students, though supplementary relay chats might also be used.

Implications of Using Web 2.0 in Education

It may lead to ignorance of classroom learning : Students were asked if they thought the introduction of Web2.0 to education would lead to ignorance of classroom teaching. As is evident from the results, majority of the students felt that this is, in fact, likely to occur. Students believe that classroom teaching is essential and cannot be entirely replaced by web based resources. This is because a healthy teacher-student interaction is essential for gaining a further insight into their topic of interest. In addition to this, classroom teaching encourages development of new ideas and also serves to clarify certain concepts which are otherwise not very clearly explained. A web-based learning resource, hence, is no substitute for a teacher, but merely an aid.

It may lead to serious compromise in terms of sincerity on student's part : Since there is no means of cross validation whether a certain amount of work has been done by the students themselves or it is material directly from the internet, there is a high probability

that students would take all exercises in a very casual way. In addition to this, web2.0 based methodology usually have a very low level of difficulty and rigorous practice is rarely given importance. Since the impetus is on the students, sometimes, they do not take their work seriously as there is nothing to push them forth. In such scenarios classroom teaching becomes important where focus is on hard work and rigorous practice.

It may lead to intellectual property rights problems : Students feel that usage of Web2.0 based technology may, eventually, lead to intellectual property rights problems. Since all resources are freely available on the web, students may be tempted to use them without citation, or, in the worse case, people might claim certain work as their own. Since it is very difficult to cross validate such claims, such cases might go undetected, leading to lack of sincerity and hard work on the part of the students. Hence strict measures need to be taken to prevent plagiarism and intellectual property theft in any way.

CONCLUSIONS

The student community is adequately ware of the new Web2.0 technologies. They use these primarily for entertainment purpose but are also using it to communicate with friends and family. They also share their experiences and feedback on various things. The student community also believes that Web2.0 technologies provides an opportunity to explore new mediums of instruction. This they believe can be use to great effect to substantiate classroom teaching. This opinion also implies that classroom teaching is still of primary concern. Also they believe that the new medium can bridge the gap between teachers, students and parents. However, there are implications also. The student community is not sure whether all students will use the new medium wisely. According to them there are chances that many may indulge in use of unfair means and plagiarism.

REFERENCE

Berners-Lee T. & Lawson M. **Berners-Lee on the read/write web.** *BBC News*. Accessed August 1, 2008 from: http://news.bbc.co.uk/1/hi/technology/4132752.stm

Brown L. **Students face Facebook consequences.** *Toronto Star*. Accessed August 1, 2008 from: http://www.thestar.com/News/GTA/article/309855

Melis E., Goguadze G., Homik M., Libbrecht P., Ullrich C., and Winterstein S. **Semantic-aware components and services of activeMath.** *British Journal of Educational Technology*, 2006, 37(3), pp.405-423

Evans, J. **What are RSS feeds and why haven't I heard about it? (RSS feeds from an educator's perspective).** In T. Freedman (Ed.), Coming of age: An introduction to the new World Wide Web. Ilford, England: Terry Freedman Ltd, 2006.

Facer K., Furlong J., Furlong, R. and Sutherland, R. **ScreenPlay: Children andcomputing in the home.** London: Routledge Falmer, 2003.

Ferdig, R. **Examining social software in teacher education.** *Journal of Technology and Teacher Education,* 2007, *15*(1), pp. 5-11.

Freedman, T. **Using blogs in school.** In T. Freedman (Ed.) Coming of Age: Anintroduction to the new world wide web. Ilford, England: Terry Freedman Ltd, 2006.

Hall, R. **The Impact of the Read/Write Web on Learner Agency.** *E-Learning*. 2008, 5(3), pp. 285–297.

Collins, J., Hammond, M. and Wellington, H. **Teaching and learning with multimedia**. London: Routledge, 1997.

Jenkins, H., Purushotoma, R., Clinton, K.A., Weigel, M. & Robison, A.J. **Confronting the challenges of participatory Culture: Media education for the 21st century.** White paper co-written for the MacArthur Foundation. Accessed July 14, 2008 from: http://www.projectnml.org/files/working/NMLWhitePaper.pdf

M. Sharples, J. Taylor, and G. Vavoula. **Towards a Theory of Mobile Learning.** *Proceedings of mLearn*. 2005 Conference, Cape Town, South Africa, 2005. http://www.mlearn.org.za/CD/papers/Sharples-20Theory%20of%20Mobile.pdf.

O'Reilly, T. **What is Web 2.0: Design patterns and business models for the next generation of software.** Retrieved from the O'Reilly Network website:http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html

OECD, Editor. **Learning for Tomorrows World | First Results from PISA**. Organisation for Economic Co-operation and Development (OECD) Publishing, 2004.

R. Lelouche. **Intelligent tutoring systems from birth to now.** *Kunstliche Intelligenz,*1999, 4(5), pp. 11-17.

Ullrich, C, Kerstin Borau, Heng Luo, Xiaohong Tan, Liping Shen, Ruimin Shen (2008). **Why Web 2.0 is Good for Learning and for Research: Principles and Prototypes.** *Proceedings of the 17th International World Wide Web Conference.* Beijing, China, 21-25 April, 2008.