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Dattatraya Sakharam Adane

Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur, India, dattatraya.adane@gmail.com

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EFFECTIVE TEACHING-LEARNING USING WEB TOOLS*

Dattatraya Sakhamam Adane¹

Abstract:

Collaborative learning is a buzzword in education system today. Rapid developments in new technologies coupled with slow pace of reforms or updations in the university curriculum and increasing awareness levels of the students, it has become necessary for the teachers to fine tune their teaching skill so that relevant education is imparted to the students. It is necessary to go beyond the usual Chalk-Duster teaching (off course there is no substitute for it) to make teaching more effective. In this paper I list out a set of existing tools and methods which can help the teachers in imparting quality education and their research activity. Specifically I will be dealing with using of Blogs, Wikis, Screencasting, Class portals and RSS (Real Simple Syndication). Each of these tools is discussed and explained in the remaining sections of this paper. I also provide valuable links and suggestions for getting started with the tools.

1. Introduction:

The emergence of internet has greatly revolutionized the people to people communication, information gathering and knowledge acquisition in general. At a click of a button all the latest information is available on any topic. Data sharing, interacting with other people through mails or video conferencing is common scene today. As such, keeping oneself updated on the subject of interest is easier today than ever before. It is this power of internet which can be harnessed by the teaching community at large for their teaching and research work. Number of ways and tools are available through which teaching activity can be made relevant and effective. Blogs, Wikis, Screencasting, Class portals and RSS (Real Simple Syndication) are the tools to make collaborative learning faster and easier. Each of these tools is discussed and explained in the the remaining sections of this paper. Sections 2, 3, 4, 5 and 6 discuss Blogs, Wikis, Screencasting, Class portals and RSS tools respectively. This is followed by my conclusion.

2. Blogs:

There are many definitions of Blogs given by different people depending on the purpose for which the blog exists. [1] defines the blog as follows:

Blog is short for Web log. Blogs are publicly available web pages, with personal views and links expressing the opinions and observations of a particular person, usually on a specific topic or theme and are usually updated regularly reflecting the personality of the author. Blogs are online diaries/news forums that feature links to news items and stories from across the Internet's World Wide Web. Most blogs are headed by an individual called a blogger and many of these are those who want to bring their own views online. Other bloggers are journalists or industry insiders who create forums for expressing their opinions without editorial constraint. There are a few Web logs that are a collection of vocal individuals providing opinion, commentary and links. Some of these sites have an editor filtering through submissions and a few allow members to grade contributions. In [2] the definition says that a blog is an online journal where users post thoughts, comments or news in a chronological format. Updates are often frequent and done on a regular basis. Whereas, link [3] defines it as personal websites consisting of regularly updated entries displayed in reverse chronological order. Essentially an online diary or journal. Finally a wikipedia link [4] defines it as a user-generated

¹ Assistant Professor, Department of Information Technology, Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur, India.

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website where entries are made in journal style and displayed in a reverse chronological order.

Thus, blogs allow us to express our views and know that of others on a particular topic of interest.

Many blogs provide commentary or news on a particular subject such as food, politics, or local news; others function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs. Most blogs are primarily textual, although some focus on art (artlog), photographs (photoblog), sketchblog, videos (vlog), music (MP3 blog) or audio (podcasting) and are part of a wider network of social media. Micro-blogging is another type of blogging which consists of blogs with very short posts. As of September 2007, blog search engine Technorati [5] was tracking more than 106 million blogs.

2.1 Collaborative Blog: A case study:

In context of teaching community, interactive teaching-learning and exchange of up-to-date information is important. From that perspective I present here an important type of Blog specially useful for teachers called as Collaborative Blog. I have taken the information for this blog from [6].

A collaborative blog is a type of weblog which publishes posts written by multiple users. The majority of high profile collaborative blogs are based around a single uniting theme, such as politics or technology. While every collaborative blog is unique they can usually be placed in one of two broad categories: Invite Only and Open Invite.

An Invite Only collaborative blog is one in which a founder blogger personally selects a small group of co-bloggers, inviting them to contribute to his or her blog. The Invite Only blog typically focuses on a single common interest subject - i.e. politics, legal issues or, occasionally, comedy. For instance, in July of 2003 Chris Bertram established Crooked Timber [7], a collaborative Invite Only blog frequented by such

established bloggers and academics as Kieran Healy, Ted Barlow and Henry Farrell, beginning with the introductory post: "Crooked Timber is a cabal of philosophers, politicians manque, would-be journalists, sociologues, financial gurus, dilettantes and flaneurs who have assembled to bring you the benefit of their practical and theoretical wisdom on matters historical, literary, political, philosophical, economic, sociological, cultural, sporting, artistic, cinematic, musical, operatic, comedic, tragic, poetic, televisual etc. etc., all from perspectives somewhere between Guy Debord, Henry George and Dr Stephen Maturin. We hope you'll enjoy the show".

Conversely, Open Invite collaborative blogs allow any user to register for a blogging account, providing instant access. Perhaps the most famous of these blogs is DailyKos, a left-leaning collaborative blog founded in 2002 by Markos Moulitsas [8]. DailyKos allows bloggers the opportunity to post their opinions on the site without pre-approval of the content.

Open Invite collaborative blogs succeed on the basis that the community acts to weed out trolls, spammers and other troublemakers. Much like online forums (like Wikipedia), the accessible nature of the Open Invite collaborative site is protected by dedicated moderators and fellow bloggers who will act quickly to quell any signs of spamming.

There are advantages and disadvantages of collaborative blogs as far as Bloggers and the readers are concerned. In recent years the blogosphere has seen the emergence of many new Invite Only collaborative blogs, each accepting contributions from a group of established bloggers. While it may be unfair to ascribe this trend to any particular cause it is often the case that the pressures of maintaining a popular individual blog for an extended period of time can become too great, leading the successful blogger to naturally tend towards a lower pressure collaborative effort. One well-known example of this phenomenon can be found at Protein Wisdom [9], a popular blog written by surreal conservative Jeff Goldstein. A much publicised incident in which Goldstein was harassed by University of Arizona adjunct lecturer Deborah Frisch - combined with various other real-life

obligations - led Goldstein to retool Protein Wisdom as a collaborative site frequented by a number of guest posters while Goldstein partially withdrew. Today Goldstein blogs both at Protein Wisdom and the high profile collaborative blog Pajamas Media [10]. Collaborative blogs (especially of the Open Invite variety) allow those without their own personal site (or those with poorly-trafficked sites) the opportunity to present their opinions to a much larger audience than they would typically have access.

A primary advantage for the readers of collaborative blogs is the simple fact that a collaborative effort usually make for a more regularly updated site. It is not unusual to find collaborative weblogs publishing new material 24 hours a day, allowing readers the opportunity to read new material on an almost constant basis.

While Open Invite collaborative blogs encourage vibrant discussion on such subjects as politics and current affairs they unfortunately tend to attract bloggers who are more interested in promoting personal websites and baiting readers with controversial viewpoints. The task of policing a large collaborative weblog can be enormous, requiring the dedication of community-minded moderators to remove/modify material that conflicts with the terms of service and general ethos of the site. In Invite Only collaborative blogs the problems can become much more serious, if easier to police. While most Invite Only collaborative blogs consist of a small number of like-minded bloggers it is often the case that individuals within the group differ in opinion on divisive issues (i.e. abortion or the War on Terror). While in-fighting on these blogs can make for interesting reading it can sometimes become a problem.

Lastly the important question: How to create a Blog?. To start with number of sites are available which allows free blog hosting service to start our own Blog. [11] and [12] are the examples of such sites. One has to only register by giving the details of the blog and follow the simple steps to get one registered. An interesting link for creating a blog is [13].

3. Wikis:

Wiki is a piece of server software that allows users to freely create and edit Web page content using any Web browser. Wiki supports hyperlinks and has a simple text syntax for creating new pages and crosslinks between internal pages on the fly. Wiki is unusual among group communication mechanisms in that it allows the organization of contributions to be edited in addition to the content itself. Like many simple concepts, "open editing" has some profound and subtle effects on Wiki usage. Allowing everyday users to create and edit any page in a Web site is exciting in that it encourages democratic use of the Web and promotes content composition by nontechnical users.

Some of the other definitions found on internet are as follows:

- This is a website that includes the collaboration of work from many different authors. A wiki site allows anyone to edit, delete, or modify the content on the web. (The first wiki creator named the site after a chain of buses in Hawaii; Wiki means "quick" in Hawaiian.) [14].
- From a Hawaiian word that means "quick", a wiki is a website that can be quickly edited by visitors to produce a kind of collaborative website[15].
- A wiki is a website that visitors can edit using their browser. Groups can use a wiki to author documents collaboratively. An example is Wikipedia.org, the collaborative encyclopaedia [16].
- A Wiki enables documents to be authored collectively in a simple markup language using a web browser. `Wiki` `wiki` means `super fast`; in the Hawaiian language, and it is the speed of creating and updating pages that is one of the defining aspects of wiki technology[17].
- A wiki is a website that allows visitors to add, remove, edit and change content, typically without the need for registration. It also allows for linking among any number of pages. This ease of interaction and operation makes a wiki an effective tool for mass collaborative authoring [18].

In order to create a Wiki one can use an existing free site such as [19] which enables free development of public wikis but charges nominal amount for private Wikis. Teachers and students can use password protected wikis to create their own textbooks. Subject specific online text books can be created for a particular semester, subject and for a particular class. Students can add graphics or links, post powerpoint presentations, video files and spreadsheets. Only a group of students and the teacher can have access to the site with the help of password with the site creator having the right to allocate the passwords and change the existing ones. A classic example of such a wiki is [20] which contains entire national high school curriculum for South Africa.

4. Screencasting:

A screencast is a digital movie in which the setting is partly or wholly a computer screen, and in which audio narration describes the on-screen action. It's not a new idea. The screencaster's tools—for video capture, editing, and production of compressed files—have long been used to market software products, and to train people in the use of those products. What's new is the emergence of a genre of documentary filmmaking that tells stories about software-based cultures like Wikipedia and content remixing. These uses of the medium, along with a new breed of lightweight software demonstrations, inspired the collaborative coining of a new term, screencast.

Some screencasts are carefully produced works designed to educate, entertain, or influence an audience. But the confluence of broadband, blogging, and ubiquitously multimedia-capable computers has also opened the door to ad hoc uses of the medium. For users of software products interested in explaining those products to other users, showing and telling—that is, screen-recording and narrating—can be both easier and more effective than written descriptions accompanied by static screen shots. An ad hoc screencast can also be the best way for a user to communicate with a developer about a hard-to-reproduce bug or a user-interface wrinkle.

Screencasts are useful for demonstrating software features. Creating a screencast helps software developers show off their work. Screencasts are a

useful tool for ordinary software users as well, to help report bugs (the movie takes the place of potentially unclear written explanations) or to show others how a given task is accomplished in a specific software environment. Screencasts are excellent tools for learning how to use computers, and several podcasts have started to teach computer users how to use software through screencasts. A podcast is a digital media file, or a bunch of such files, that is distributed over the Internet using syndication feeds for playback on portable media players and personal computers. Considering the high cost of instructor / faculty led training and the relative ineffectiveness of typical computer based training (CBT) systems, screencasting is likely to become a very popular technique for imparting high-quality knowledge at a low cost. For example, organizers of computer related seminars may choose to routinely record complete seminars and make them available on DVDs to all attendees for future reference and/or sell these recordings to people who cannot afford the fee of the live seminar or don't have time to attend it. This will generate an additional revenue stream for organizers of seminars and make the knowledge available to a broader audience, so generating a win-win situation for everybody. In order to produce screencasts number of useful and free tools are available on internet. SENTRYWORKS ABRA [21] is an excellent freeware program that allows you to record a computer screen (your own or another on a network). The fullscreen recordings can include audio and can be saved to Flash SWF file format. WINK (tutorial software) [22] A useful freeware program which can be used for creating screencasts. CAMSTUDIO [23] An easy to use light weight capturing application able to capture full screen resolution screencasts and encode directly into Xvid and DivX.

5. Class Portals:

A portal is a central place for making all types of information accessible to an audience of varying range. Portals can be roughly broken down into two major classifications: the enterprise information portal and the content management portal. In most cases, you'll find that you need to combine the two implementations in order to meet the full spectrum of your business needs.

- Enterprise information portals are primarily intended to consolidate a vast array of information from a multitude of sources onto a single screen. The users of this information typically do not publish to this type of portal; rather, they are the consumers of the information prepared and published by others. For example, consider a corporate portal that provides access to the following:

- o Announcements of corporate programs, events, quarterly earning reports, and so on
- o Reports that enable users to acquire information and/or make key business decisions
- o News, weather, and stock quotes from syndicated content feeds
- o Availability of e-mail, calendar, meeting schedule tools, and other heavily used business applications
- o Access to smaller portals created and maintained by independent departments within the company

The presentation of this information is frequently augmented by typical portal services like customization (the ability for users to specify their own content of a page), as well as a sophisticated search engine to help users locate critical information quickly.

An enterprise information portal can support thousands of users or just a handful. Yahoo! is an example of a commonly used enterprise information portal, providing up-to-the-minute data from financial institutions, weather feeds, and other sources all over the globe.

- Content management portals are designed to improve the access and sharing of information. In a content management portal, self-service publishing features allow end users to post and share any kind of document or Web content with other users, even those geographically dispersed. For example, consider a development group consisting of engineers, product managers, and quality assurance engineers working at locations scattered all over the world. Each has documents they need to share with members of their own teams as well as the other groups. Nearly every

user has the ability to add documents to the portal; certain users have privileges to modify documents produced by other users or groups. As opposed to an enterprise information portal, with this type of portal the majority of users are empowered to both publish and retrieve information within the portal framework.

- o Users of a content management portal typically require services like:
- o Check-in/check-out capabilities, so that users cannot overwrite each others changes
- o Version control, so that successive versions of a particular item can be retained or overwritten
- o A security mechanism, by which content can be protected from unauthorized view or manipulation
- o Workflow, which establishes a process through which a document or request flows among users
- o Organizational mechanisms to create a content structure that is easily browsed by the portal user

This list of services is not solely applicable to the content management portal; builders of the enterprise information portal may find some of them useful as well. The teachers, school or college administrations can build a portal which can be a vibrant place where one can read current news stories, catch sports results, read the latest edition of district newsletter, browse the district calendar, see what's for lunch, and search the Alumni Directory for old friends. And that's just the public part of our Website. The Website can also house a password-protected area, the teacher's Lounge, which can be for staff only. Here staff members can manage hotlinks, view and register for in-service courses, complete professional development evaluation forms, manage a class Website, and add high school and college sports stories. They can also use this area to maintain a hardware and software inventory, manage the course schedule, and Alumni Directory. An example of such a portal is Barker Central School Website [24]. There are vendors who actually help out in bringing out the portal one wants, [25] is one of them.

6. Real Simple Syndication (RSS):

RSS is the new killer application for conducting research by the teachers specially engineering teachers. The basic idea behind the system is to streamline the searching activity so that it is just restricted to a single site. For e.g. suppose we wish to get all internet content on a particular topic say Web Security then instead of visiting the different web sites, Search engines, Journals and Blogs to get the contents, it possible through RSS to get the contents to us. All we need to do is subscribe to the Feeds of the content. RSS uses a software called Aggregator or Feed Collector which checks the feeds we had subscribed to, collects the new contents and puts in the Aggregator. All we have to do is to open the Aggregator and edit its contents. Thus even if we had subscribed to 10 Feeds, the system automatically brings the contents of interest to us instead of we visiting different sites in search of information. Furthermore, there are no advertisements, no spam, just the new content. This facility enables the teaching community to update their research without spending their valuable time browsing through the internet.

Number of sites offering RSS feeds are given in [26]. The Feed Reader or News Aggregator software which allows us to grab the RSS feeds from various sites and display them are available for different platforms. Some popular and free feed readers include Amphetadestk (Windows, Linux, Mac), FeedReader (Windows), and NewsGator (Windows - integrates with Outlook). There are also a number of web-based feed readers available. My Yahoo, Bloglines, and Google Reader are popular web-based feed readers.

Once you have your Feed Reader, it is a matter of finding sites offering feeds and adding their RSS feed to the list of feeds our Feed Reader checks. Many sites display a small icon with the acronyms RSS, XML, or RDF to let you know a feed is available. Link [27] gives the complete information on RSS and the corresponding links to the Feed Readers and the sites offering RSS feeds.

7. Conclusion:

The rapid developments in technology and the digital divide between teachers and the new generation students makes it absolutely necessary for the teachers to adopt new ways of teaching. Collaborative learning using web based tools offers an effective solution to this problem. Tools such as Blogs, Wikis, Screencasting, Class portals and RSS provide a way to bridge that gap between knowledge and Rapid developments to large extent.

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