Design and Evaluation of a Socially Enhanced Classroom Blog to Promote Student Learning in Higher Education

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ABSTRACT

As college students today become savvy users of social networks like Facebook, Twitter and Google +1, teachers are taking this opportunity to motivate learning and foster engagement through the use of Web 2.0 software such as classroom blogs. This study discusses why social learning matters in education, and how can social technology help promote student learning. The study demonstrates how to design, implement and evaluate a socially enhanced classroom blog for higher education through a case study. The evaluation result shows significant, positive correlations between the use of socially enhanced blogs and student learning, which were measured in aspects of student perceived learning, social interaction, satisfaction, community of practice, and actual learning results.

Keywords: Social learning; social interaction; social network; human computer interaction; management information systems

INTRODUCTION

A unique generation of college students was created from the dynamic evolution and mass adoption of Web 2.0 websites, web and mobile applications in recent years. A network of knowledge resources becomes simply clicks away. From popular websites that help students find the definition of a new term or solution to a academic problem such as Wikipedia or Youtube, to countless social networks and open communities that help answer questions faster, more accurate and for free, the web is changing the very nature of learning. As college students today become savvy users of social networks like Facebook, Twitter and Google +1, teachers have taken this opportunity to motive learning and foster engagement through the use of social media software such as classroom blogs (Baird & Fisher, 2006; Richardson & Swan, 2010; Tetard, Patokorpi, & Packalen, 2009; Zhang & Olfman, 2010; Zhang, Olfman, & Firpo, 2010).

Originally, a blog is a website where individual posts opinions and information in a journal style on regular basis. Blogs often provide options to reach out to the public and deepen the conversational nature, such as categories, tags, RSS feed, permalinks (human readable and search engine friendly URLs), trackback (blogs referring to each other), and blogroll (a list of links to other favorite blogs). Soon after its emergence to the web, the use of blogs has quickly extended from personal online journal to a variety of practices, including personal and corporate web sites, content management systems, web/mobile application platforms, e-commerce, and social learning environments. There are many benefits of using blogs in classroom: allowing students to reflect on their learning experiences and share them with peer and public timely; motivating active learning, especially for the students who do not feel comfortable speak up in classrooms; supporting collaboration and discussion; and presenting as digital portfolios for career development and graduate school applications.

WHY DOES SOCIAL MATTER IN EDUCATION?

Social Learning Theories

The connection between the use of social software and learning can be supported by the application of social constructivism and social presence pedagogy in higher education.

Social Learning Constructivism

Constructivism and social learning theories (Bandura, 1976; Bruner, 1974; Piaget, 1950; Vygotsky, 1978) state that knowledge is constructed based on personal experiences and hypotheses of the environment continuously tested by the learners through social interaction. Therefore, learning is an active, constructive and social process. In education environment, students learn more effectively through their own experiences (personal constructivist) and interaction with others (social constructivist), such as hands-on experiments, field studies and group projects, than through traditional (objectivist) activities, such as lectures and textbook

reading. Classroom blogs support both personal constructivist and social constructivist learning activities. For example, students create and manage their own blog posts, categories, and pages; at the same time, students share their blog posts, make comments, and interact with classmates and peer outside the classroom.

Social Presence

According to Short, Williams, and Christie (1976), a medium's social effects are principally caused by the degree of social presence, which it affords to its users. By social presence it meant a communicator's sense of awareness of the presence of an interaction partner. This is important for the process by which man comes to know and think about other persons, their characteristics, qualities and inner states. Researchers (Richardson, Jennifer and Swan, 2003) found that a student's social presence in online education environments positively relates to the student's perceived learning and satisfaction with the teacher. Similar to online courses, a classroom blog can also provide a virtual learning environment where students establish their social presence by sharing their knowledge and reflection with peer and the teacher.

Community of Practice

Community of practice is a group of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly (Wenger, 2007). Wenger further extended the work of CoP to organizational and educational learning. His "Social Theory of Learning" model integrates the following components necessary to characterize social participation as a process of learning and of knowing: "Meaning (learning as experience); Practice (learning as doing); Community (learning as belonging); and Identity (learning as becoming)". Wenger suggests that learning should be primarily a practice of identity formation and modes of belonging, and not just accumulating skills and information. In classroom environment, students and teacher learn and share knowledge and skills through various learning activities such as class meetings, labs, and projects, and they create a sense of community during the process.

Moving Classroom Blogs to Public

Student sharing and making their writing public have been found to benefit learning significantly (Isaacs and Jackson, 2001). Public writing in classrooms promotes student-writers' abilities to see themselves as responsible writers and to view writing as a social activity, and provides more significant social interaction and motivation to extend students' writing not available through private writing, in which students submit their work only to the teacher for evaluation and feedback. In recent years, teachers have used weblogs in classrooms (Lowe and Williams, 2004) and found that by extending the discourse to a large community outside of the classroom, their student bloggers regularly confront "real" rhetorical situations in a very social, supportive setting.

Benefits aside, finding one particular classroom blog out of millions of others in search engine results can be comparable as finding a needle in a haystack. Fortunately business organizations in the industry have worked out Search Engine Optimization (SEO) solutions for the problem.

SEO refers to the process of improving the ranking (i.e., visibility) of a website in search engines' results. Although search engines are programmed to rank websites based on their popularity and relevancy, as the number of websites and the competition for a higher ranking grow exponentially, SEO has become a critical success factor for doing business on the Internet today. Five pillars of SEO in year 2012, listed in the order of their significance are: Links, Social mentions, Content, Accessibility, and Usability (Cabage, 2012). In the aspect of Social (media) mentions, many businesses and individuals have taken the opportunity to connect to Facebook, Twitter, LinkedIn, and Google Plus etc. and build brand names. The direct value is that social sites drive traffic themselves. Indirectly, recent social mechanisms such as retweeting, Facebook Sharing, and Google Plus Likes have attributed in search rankings, as search engines like Google considers them as relevant information in the organic search results. These effects are further weighted by the visibility or influence of people involved; some have much more social reach and effect than others. In the case of classroom blogs, if someone "likes" or "shares" a blog post on Facebook, or if he/she retweet a post on Twitter, these serve as social validation similar to how inbound links work. If the blog post gets a retweet from someone that is a guru who has many other influential followers in the field, that mention is worth much more and can spread faster and to wider crowd. By connecting to the social networking sites like Facebook, Twitter and Google Plus, classroom blogs can optimize their search engine exposure, and attract more readers and contributors writing and commenting on the blogs.

RESEARCH QUESTIONS

In this study, we are interested in the relationships between the use of socially enhanced classroom blogs and student learning. Figure 1 shows our research model. We ask the following research questions:

Question 1: Is there a significant relationship between using a socially enhanced classroom blog and knowledge sharing?

- H1: Using a socially enhanced classroom blog is positively associated with knowledge sharing.

Question 2: Is there a significant relationship between using a socially enhanced classroom blog and student learning, in terms of student perceived learning, satisfaction, social interaction, and community of practice?

- H2a: Using a socially enhanced classroom blog is positively associated with student learning.

- H2b: Using a socially enhanced classroom blog is positively associated with social interaction among students.

- H2c: Using a socially enhanced classroom blog is positively associated with student satisfaction towards the course.

- H2d: Using a socially enhanced classroom blog is positively associated with community of practice in the classroom.

Question 3: Is using a socially enhanced classroom blog associated with better student learning results than one that is not socially enhanced?

- H3: Students achieve better learning results using a classroom blog that is socially enhanced than one that is not.
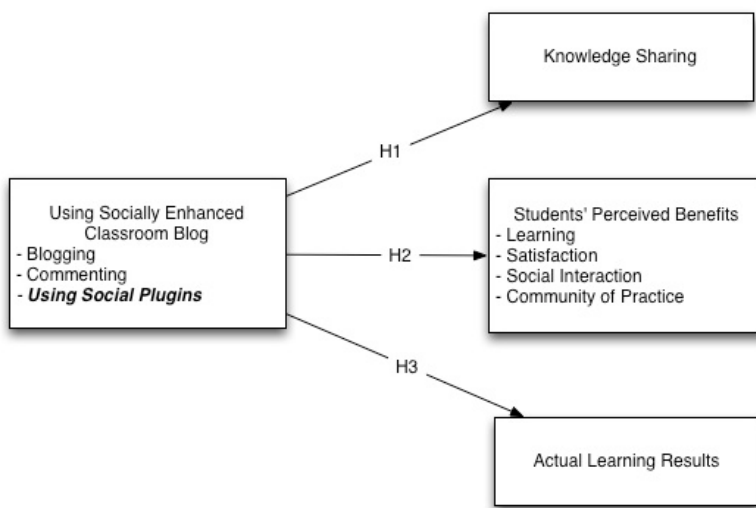

Figure 1: Research Model

ARTIFACT DESIGN

The MIS Class Blog

In this study, a classroom blog site called "MIS Class Blog" (Figure 2) is built using WordPress blog platform in a LAMP (Linux, Apache, MySQL and PHP) environment. Free, easy to install, use and customize, Wordpress has become the most popular open-source blog software used today. It is supported by a wide community of users and developers, and offers extensive, feature-rich themes, plug-ins and widgets. The MIS Class Blog is designed using a WordPress theme called "Edmin" by Themify, offering multiple layout options, threaded comments, social media and SEO features. On the home page of the original MIS Class Blog, the posts are displayed in two columns on the right; each displays the post date, title, number of comments, blurb, author's name and categories. The full content of the post as well as its comments can be viewed by clicking the title. The left sidebar consists of 3 sections: 1) Categories, which provides an option to browse posts by topics; 2) Archives, which provides an option to browse posts by date; 3) Tags, which provides the option to browse most popular topics by the signifance of the keywords used to tag the posts (the bigger the font size of the keyword in the cloud, the more posts in that topic). In addition, a search bar is provided on top of the page, allowing users to find posts by keywords. An About page, Login link, and an RSS feed link for the posts and comments are also displayed on the top of the page. The About page contains a brief introduction to the blog site, and all the student authors' names, each linked to posts made by the student, with a dedicated, user and SEO-friendly URL. The sidebar, search box, About page, Login link and RSS link are also displayed in each individual post page as well. All posts on the MIS Class Blog are viewable by public. However, to prevent spamming by machine bots, posting and commenting are restricted to registered users only. Figure 1 shows what the MIS Class Blog looks like before adding social enhancements.
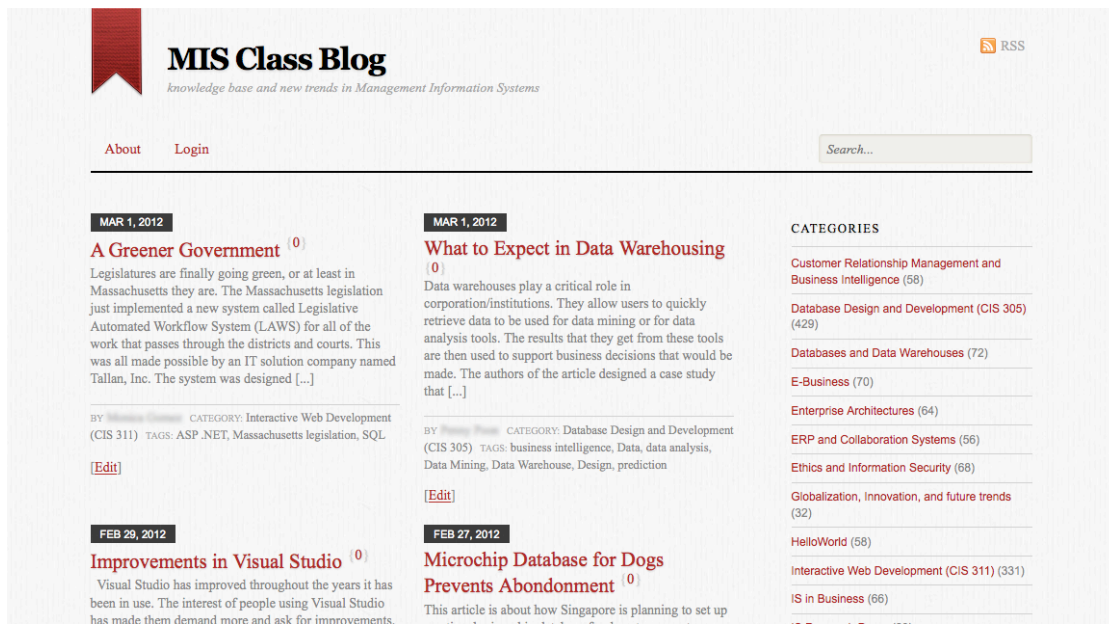
Figure 2: The MIS Class Blog Before Adding Social Enhancements

Social Enhancements

WordPress platform provides many cost effective and feature rich social learning plugins. As this paper was written, WordPress.org has 294,162,344 downloads, 19,292 plugins, among which there are over 1,000 social plugins. These social plugins often use popular social site icons that are easy to identify, remember and has good brand visibility. They are also highly customizable - one can easily modify the settings without requiring any programming skills. In addition to WordPress social plugins, popular social networking sites like Facebook, Twitter and LinkedIn also offer various plugins to be added to one's website easily. To enhance the MIS Class Blog socially, we added two widgets to the sidebar: Facebook Like Box, Most Shared Posts. We also added two plugins to each individual post page: Facebook Comments and TF Social Share - a social media plugin offering a group of popular social media connections including Facebook Like, Tweet This, Google Plus, StumbleUpon, and LinkedIn Share. These social enhancements allow students see what their classmates and friends like, comment on or share on their posts across the web. The following describes how each one works in more details:

Facebook Fan Page and Facebook Like Box

A Facebook Fan Page (Figure 3) was created to promote the MIS Class Blog. The Fan Page wall publishes the most update posts syndicated via the blog's RSS feed. It also allows teacher (the admin of the Fan Page) and students to follow up on questions asked during class meetings, post useful resources or interesting news. Unlike the classroom blog, friends and people can post comments to the Fan Page with their Facebook identity.

Figure 3: The Facebook Fan Page for the MIS Class Blog

A Facebook Like Box was added to the sidebar, which displays on the home page and each individual post page (Number "1" in red in Figure 4). Facebook Like Box is a social plugin that enables Facebook Fan Page owners to attract and gain Likes from their own website (in this case, the MIS Class Blog site). The Like Box enables users to:

- See how many users already like this Fan Page, and which of their friends like it too.
- Like the Page with one click, without needing to visit the Page.
- Share the site with friends on Facebook. When the user clicks the Like button, a story appears in the user's friends' Facebook News Feed with a link back to the original website.
- Read the most update posts on their Facebook News Feed after liking the Page.

Most Shared Posts

A widget called "Most Shared Posts" was added to the right sidebar on the home page and each individual post page (Number "2" in red in Figure 4). This widget was enabled using a Wordpress plugin called "Most Shared Posts", which fetches Facebook Likes, Twitter Tweets and the new Google +1s, and displays the top 5 blog posts that have the most social shares, and the number of social counts besides each social share. In other words, it shows the users the most popular content. The widget also caches results to ensure good performance.

While Most Shared Posts aims to give blog users only the most popular posts, the blog admin can track the share statistics of all posts through a Social Metrics Dashboard in the backend. This allows the admin to monitor the blog's overall social performance, conduct testing and optimize the site to reach wider and more valuable public.

Figure 4: The MIS Class Blog After Adding Social Enhancements #1, #2

Facebook Like, Tweet This, Google +1, StumbleUpon, and LinkedIn Share buttons (number "3" in red in Figure 5)
Facebook Like, Tweet This, Google +1, StumbleUpon, and LinkedIn Share buttons were added to left sidebar on each individual post page (Figure 5), allowing users to share a specific blog post with their Facebook, Twitter, Google +1, StumbleUpon and LinkedIn networks by posting the URL and comment (optional) without having to leaving the page. This feature was enabled using another Wordpress plugin called "Twitter, Facebook Social Share", which automatically display the social share buttons floating left side of post. Javascript is by default loaded in footer, providing the most efficient way to load scripts for social share buttons while making sure that the other site contents are loaded first and the script loading do not interfere with them, also speeding up the site loading which is an important criteria for SEO.

The Facebook Like button allows visitors to easily like and share individual blog post content with their Facebook friends. Users have the option to post the URL, summary and comment of a specific blog post to their Facebook wall and be seen in their friends' newsfeed. Working similarly to the Facebook Like button, the Tweet Button allows users to easily share the page with their Twitter followers, which has become a popular way to drive traffic to one's website. The Share Box appears already completed with customizable information provided in the properties of the Tweet Button. Similarly, the LinkedIn Share button allows one to share the post with his LinkedIn network or group.

The StumbleUpon button allows visitors to bookmark and share the URL of a specific blog post at StumbleUpon, which is a popular social bookmarking site. From the usability perspective, social bookmarking allow users to be able to access their favorite website, provided there is a working computer and Internet connection. From the SEO perspective, bookmarking one link at popular social bookmarking sites like De.licio.us may result in multiple links being built quickly.
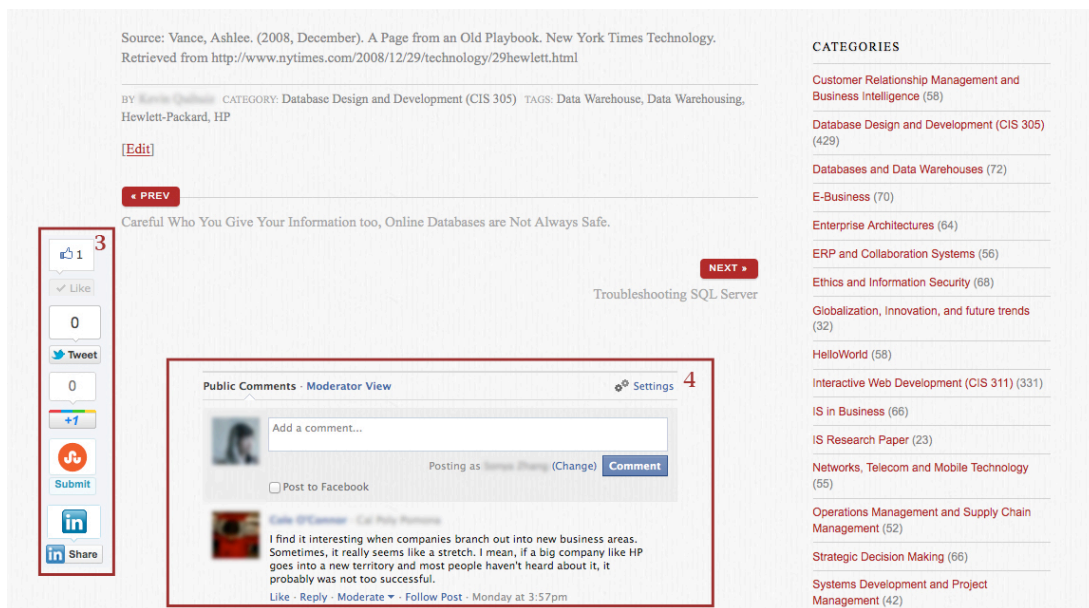
Figure 5: The MIS Class Blog After Adding Social Enhancements #3, #4

Facebook Comments Box

Facebook Comments Box (number "4" in red font in Figure 5) enables visitors to comment via their Facebook account without needing to leave the page.

Social Relevance: Comments Box uses social signals to surface the highest quality comments for each user. Comments are ordered to show users the most relevant comments from friends, friends of friends, and the most liked or active discussion threads, while comments marked as spam are hidden from view.

Distribution: Comments are easily shared with friends or with people who like the Facebook Page. If a user leaves the "Post to Facebook" box checked when he or she posts a comment, a story appears on the friends' News Feed indicating that she's made a comment on the blog site, which will also link back to the blog site. Friends and people can then respond to the discussion by liking or replying to the comment directly in the News Feed on Facebook or in the Comments Box on the blog site. Threads stay synced across Facebook and on the Comments Box on the blog site regardless of where the comment was made. Figure 6 shows what the Facebook Comment Moderation Tool for the MIS Class Blog looks like.
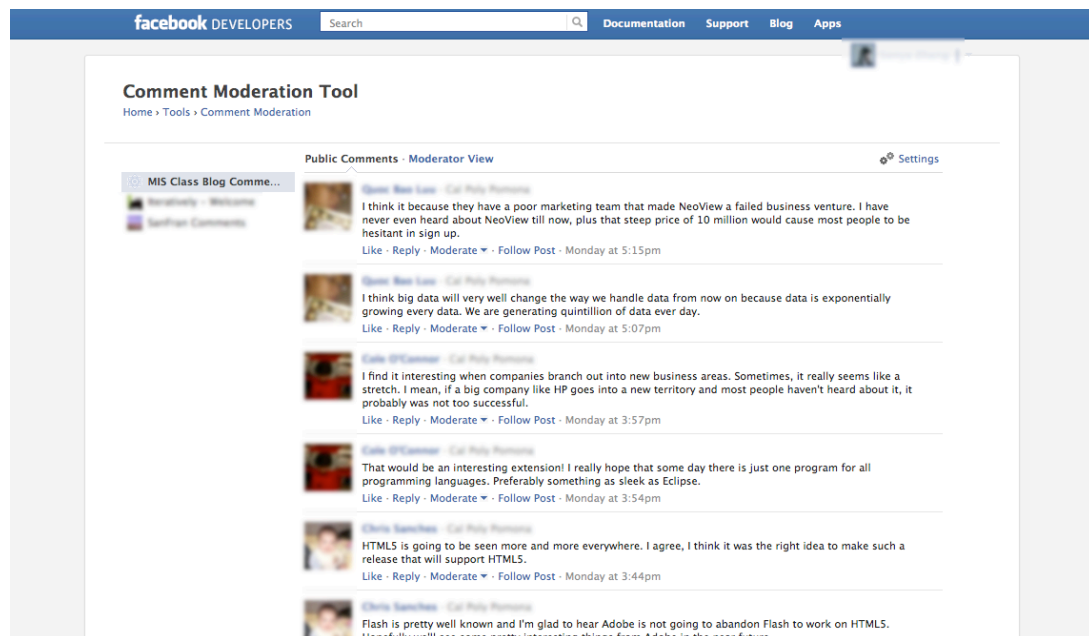

Figure 6: The Facebook Comment Moderation Tool

Plugins, Widgets and Other Customization for Search Engine Optimization

As this paper is written, when searching the keyword "MIS class blog" in Google, top seven results are from the MIS Class Blog, in which the URL of the MIS Class Blog (http://misclassblog.com) ranked no. 1, two blog posts about Google Drive and Apple HTML5 demo ranked the 2nd and 3rd, and the Facebook Fan page ranked no. 5. When enter the word "link:" followed by the URL of the MIS Class Blog in Google, 321 inbound links (i.e., websites which contain a link to the searched site) were returned. A more accurate link metrics for MIS Class Blog provided by OpenSiteExplorer.org (a search engine for links by SEOMoz) shows page authority of 30/100, domain authority of 23/100, linking root domains of 3, and total links of 25.

The following table shows a list of plugins, widgets and other customization that are applied to the blog design to help increase search engine ranks and click through rates.

Table 1. SEO features in MIS Class Blog

Feature and Description	Implementation in MIS Classroom Blog
Links	• Create inbound links on the universities' websites (domain authority 83/100) • Blog about the blog site on well-known educational blog sites • Bookmark the blog site on popular social bookmarking sites including Delicio.us and StumbleUpon. • Create Google+ page (Google rank their own pages well)
Social Mentions	• Google+ page, Facebook Fan Page, Like Box, and Facebook Comment. • Twitter Facebook Share - Allows visitors to share the site easily with many popular social networks including Facebook, Twitter, Google +1, StumbleUpon and LinkedIn.
Content	• WordPress SEO by Yoast - Allow users to create SEO friendly meta tags, title tags, indexation, etc. • Jetpack After Deadline - An artificial intelligence based spell, style, and grammar checker. • Related Posts - Show related posts on sidebar when displaying a single post. • Keyword statistics - Check the content of a post or a page for keyword-density as the author is writing content. • Tag Cloud - Depict the keyword metadata (tags) on blog posts, and their importance.
Accessibility	• Google XML Sitemap - Generate a special XML sitemap with complete structure of the blog site, and automatic update of any new content. • WPtouch - Automatically transform the blog into a simple, powerful and elegant mobile theme to increase mobile rankings. • Semantic URLs - Create immediately and intuitively meaningful URLs to both non-expert users and search engines.
Usability	• Force gzip - Send compressed response using gzip to cut load times. • W3 Total Cache - Add page, object and database caching to improve speed and user experience. • Google Analytics for WordPress - Add Google Analytics to generate detailed statistics about the visitors to the blog site. • WP-stats-dashboard - Display blog's stats graph plus blog traffic, social engagement and social influence. • FeedBurner Stats by DevMD - Monitor day-to-day feed performance.

IMPLEMENTATION

The Participants

45 undergraduate students in two computer information systems classes in a U.S. university participate the study. All students have taken pre-requencies in computer basics and programming. One class focuses on System Development Life Cycle, user experience design, client-side and server-side development, and Internet marketing. The other class focuses on relational database design and development using entity relationship diagrams and CASE tools, accessing and updating databases with SQL, data warehouse and data mining, information integrity and security issues, and database management. Both classes meet twice a week for 10 weeks.

Weekly Blog Assignments

The goal of the assignments is to understand and extend weekly knowledge content and reflect learning experience through social software such as blogs.

Selection of the article: Each week students find an article that is related to the topic(s) of the course, and preferably, the topic(s) of the week. Useful resources include: leading peer-reviewed academic journals (e.g., MIS Quarterly, IEEE Transactions, AIS Transactions, ACM Transactions, Journal of Management Information Systems (journal articles are available from online library databases such as ABI/Inform, ACM, or IEEE Xplore), information technology magazines (e.g., PCWorld, PCMagazine, Wired), or technology websites (e.g., CNN Technology, NY Times Technology, TechCrunch, TED).

Summary: in one paragraph, the student author summarizes the article in his/her own words. Students are informed that direct copy and paste from the article without appropriate quoting is considered plagiarism and has serious consequences.

Reflection: in two paragraphs, the student author explains why it is related to the topic(s) of the week, what he/she likes about it, and discusses the connection between the reading and his/her knowledge and/or experience.

Citation: at the end of the post, the student author cites the source/reference of the article following APA standard.

Title, category, and tags: The student author gives each blog post given a proper title (which must be different from the original article's), a broad category (e.g., web development or database management), and one or more tags. For example, if a student selected an article called "Google Says Mobile Optimized Sites Will Factor Into Landing Page Quality And Perform Better In AdWords" from TechCrunch.com, he/she may put "Web development" as the category, and "Google", "mobile", and "landing page optimization", etc. as the tags. This allows readers and search engines to easily find the post.

Multimedia evidence: Students are strongly encouraged to submit supporting evidence (e.g., images, charts, MP3, Youtube video, etc.) and quality content. Multimedia evidence that is not the student's original creation also needs to be cited.

Commenting: Each blog post must be published, and allow comments by the due date. Each week, students are required to read two classmates' posts and make constructive or helpful comments. Simply saying "good job!" or "I agree." does not count.

Presentation: Students are required to review their weekly blog posts and comments to others before class. At the beginning of each class meeting, 3-5 students volunteer or are selected by the teacher to present their blog posts. Each student presents for about 5 minutes. The class is encouraged to ask questions or provide feedback anytime during the presentation.

Adding Social Enhancements

The social enhancements are added to the classroom blog at the beginning of the 6th week (i.e. in the middle of the quarter). The students spent equal amount of time to make posts and comments on both blog platforms (i.e., one without the social enhancements for the first 5 weeks, and one with the social enhancements for the second 5 weeks).

EVALUATION

Data Collection

Instruments including quizzes, survey questionnaires, system usage statistics (e.g., number of posts and comments), and site traffic provided by Google Analytics (e.g., average Number of pages per unique visitor, average Time on Site) are used to measure the use of socially enhanced classroom blog, student perceived learning, social interaction, satisfaction towards the course, community of practice, and actual learning results.

System Usage

During a quarter (10 weeks), 45 students made a total of 426 blog posts and 723 comments on the MIS Class Blog. Even though the students made the same number of the posts before and after adding the social enhancements, and even though students didn't receive extra credits for making more comments, the number of total comments increased significantly (69%) after adding the social enhancements. Among 374 Facebook comments, non-student users made 17 of them. Table 2 shows the numbers of blog posts and comments made through the quarter-long experiment (10 weeks).

Table 2. Number of Posts and Comments

	1st 5 weeks	2nd 5 weeks	Total
Posts	213	213	426
Original Blog Comments	268	81	349
Facebook Comments	0 (Social enhancements including Facebook comments were not yet added)	374 (Including 17 made by non-student users)	374
Total	Total comments in the first 5 weeks: **268**	Total comments in the second 5 weeks: **455**	Total comments through 10 weeks: 723

Site Traffic

Google Analytics is implemented in the source code for the classroom blog to track site traffic (see Figure 6). Within the 10 weeks, there were 3,252 visits, including 1,643 unique visitors and 11,165 page views (about 160 page views/day), which yielded 3.43 average pages per visit. Average time on site was 6 minutes 31 seconds. However, these numbers also include Internet users around the world. To make sure that the statistics more accurately represent the students taking the classes, a map overlay can be used to narrow down the geographic information of the visitors to the state level. The map overlay result showed a lower number of visitors (2,665), a higher average page views per visit (3.91) and a higher average time on site (7 minutes 50 seconds).
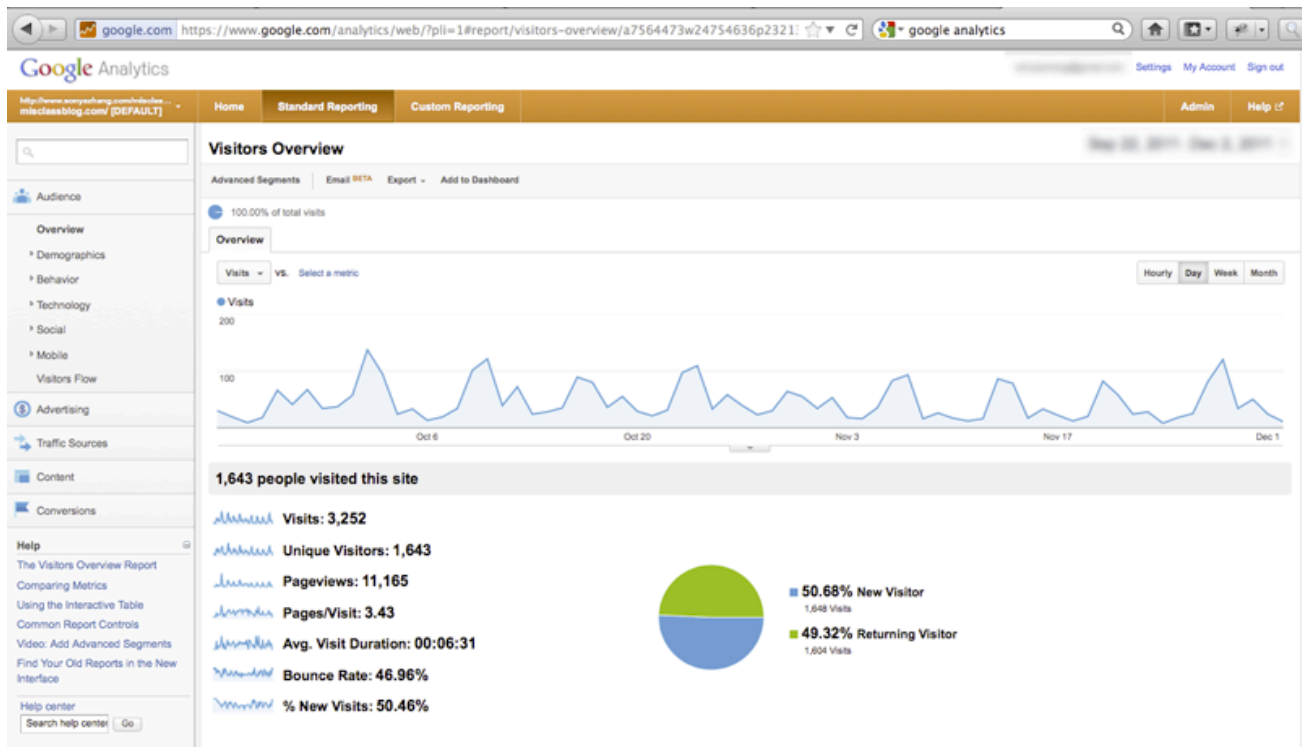

Figure 7: Google Analytics for the MIS Class Blog

Survey Questionnaire

Students filled out a survey questionnaire containing five-point Likert questions and open-ended questions. The survey questionnaire was adapted from a tested instrument from another social learning study (Zhang X., 2009). 42 completed, valid questionnaires were collected and data were analyzed using SPSS. Table 3 shows the demographic information of the student participants.

Table 3. Demographic information of Participants

Age	18-22 31.0%	23-35 57.1%	>35 11.9%		
Blog Experience	Never 57.1%	Rarely 26.2%	Sometimes 11.9%	Often 2.4%	Always 2.4%
Social Network Experience	Never 11.9%	Rarely 19.0%	Sometimes 23.8%	Often 16.7%	Always 28.6%
Technological Expertise	Beginner 11.9%	Somewhat intermediate 16.7%	Intermediate 42.9%	Somewhat expert 14.3%	Expert 14.3%

Table 4 shows the frequency and mean of the answers to related survey questions. Majority of the student participants perceive positively towards blogging and using the social enhancements, including all four categories: perceived learning, satisfaction towards the course, social interaction with classmates and networks, and community of practice.

Table 4. Frequency and Mean (1=Strongly Disagree 5=Strongly Agree)

Survey Item	1	2	3	4	5	Total	Mean
Blogging enhanced my learning from this course.	1	1	7	28	5	42	3.83
Blogging increased my satisfaction with this course.	2	3	10	21	6	42	3.62
Blogging increased interaction with my classmates and peer.	0	1	4	22	15	42	4.21
The class became more of a community as the result of blogging.	0	3	8	20	11	42	3.93
I found the comments motivated me to write better.	1	8	13	12	8	42	3.43
I found commenting motivated me to write better.	1	2	12	16	11	42	3.81
Blog commenting increased my satisfaction with the course.	1	3	10	23	5	42	3.67
Blog commenting increased interaction with my classmates and peer.	1	2	2	28	9	42	4.00
The class became more of a community as a result of blog commenting.	1	3	6	22	10	42	3.88
Using social plugins enhanced my learning from the course.	3	4	17	11	7	42	3.36
Using social plugins increased my satisfaction with this course.	3	3	16	12	8	42	3.45
Using social plugins increased interaction with my classmates, peer, friends and acquaintances from Facebook or other social network.	5	5	11	16	5	42	3.26
Using social plugins helped my blog posts to reach wider audience.	4	2	9	17	10	42	3.64

Table 5 shows that blogging significantly and positively correlates to perceived student learning, satisfaction towards the course, and community of practice (i.e., the class became more of a learning community). Table 6 shows that commenting significantly and positively correlates to perceived student learning, and community of practice (i.e., the class became more of a learning community). Table 7 shows that using social enhancements significantly and positively correlates to all four categories: perceived student learning, satisfaction towards the course, social interaction, and community of practice (i.e., the class became more of a learning community).

Among the correlation results, there was not any significant positive correlation between blogging and social interaction. This may be due to the nature of blogging was a self-constructive learning process rather than social learning one as the student does research for the topic, select an article, summarize it and reflect upon related knowledge and experience or thoughts. Interestingly, neither was there any significant positive correlation between original blog commenting and satisfaction or social interaction. This may be due to that original blog commenting features were used in the first 5 weeks of the quarter, and students were not yet familiar with their classmate, teacher or classroom environment hence there lacks higher level of satisfaction or deeper level of social interactions.

Table 5. Pearson Correlation – Blogging

		Learning (Question 14)	Satisfaction (Question 17)	Social Interaction (Question 20)	Community of Practice (Question 23)
Blogging (Question 13)	Pearson Correlation	.490**	.576**	.216	.439**
	Sig. (2-tailed)	.001	.000	.169	.004
	N	42	42	42	42

** Correlation is significant at the 0.01 level (2-tailed).

Table 6. Pearson Correlation - Commenting

		Learning (Question 27)	Satisfaction (Question 32)	Social Interaction (Question 33)	Community of Practice (Question 34)
Commenting (Question 25)	Pearson Correlation	.335*	.291	.171	.433**
	Sig. (2-tailed)	.030	.062	.279	.004
	N	42	42	42	42

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 7. Pearson Correlation – Social Enhancements

		Learning (Question 39)	Satisfaction (Question 40)	Social Interaction (Question 42)	Community of Practice (Question 43)
Commenting (Question 38)	Pearson Correlation	.604**	.456**	.452**	.520**
	Sig. (2-tailed)	.000	.002	.003	.000
	N	42	42	42	42

** Correlation is significant at the 0.01 level (2-tailed).

Quizzes

Students take 2 quizzes, one at the end of week 5, and the other at the end of week 10. For each quiz, the student select a blog post and answer 3 questions: 1) What is the thesis of the article and what are the author's arguments and evidence to support such thesis? 2) Can you provide one specific example of how the technology discussed in the article can be used in a particular business or organization and benefit them? 3) What did you learn from your classmates' comment(s)? Table 8 shows that students perform significantly better in quiz 2 than quiz 1. Table 8 shows that students performs better in Quiz 2 than Quiz 1, so we can conclude that using social enhanced MIS Class Blog is positively associated with actual learning results measured by the quizzes.

Table 8. Paired Samples Statistics for Quiz 1 and Quiz 2

Paired Samples Statistics	Mean	Std. Deviation	Std. Error Mean
Quiz 1	87.62	8.657	1.336
Quiz 2	92.86	8.760	1.352
Paired Samples Correlation	Correlation 0.635	Sig. 0.000	
Paired Samples Test	Paired Differences Mean -5.238	St. Deviation 7.441	St. Error Mean 1.148
	Sig. (2-tailed) 0.000	95% Confidence Interval of the Difference	t -4.562 df 41 Lower -7.557 Upper -2.919

Hypothesis Results and Observations

We observed a few things that are worth noting: 1) students have learned how to use blog and the social enhancements fairly quickly; 2) students spent decent amount of time and effort writing blog posts, reading and commenting on others'; 3) students have given positive feedback regarding using the blog and the recently added social enhancements; 4) students have made more comments and have been speaking up in class more about what they blogged; and 5) about an average of 300 people world-wide visit the blog site each week. At the same time, some students were concern of privacy in using personal social profiles such as Facebook, Twitter and LinkedIn to post school assignments. Students were informed that using the social enhancements is optional, and they can choose to use anonymous instead of their actual names on the blog site. Some students on the other hand listed their blog page URL (each student has a unique URL that shows only posts he/she has published) on their resumes to potential employers. Table 9 shows our hypothesis results.

Table 9. Hypothesis Results

Hypothesis	Instrument	Reject Null Hypothesis
H1a (Learning)	System Usage	Yes
H2a (Learning)	Survey	Yes
H2b (Social Interaction)	Survey	Yes
H2c (Satisfaction)	Survey	Yes
H2d (Community of Practice)	Survey	Yes
H2 (Actual Learning Results)	Quizzes	Yes

CONCLUSION

As college students today become the savvy users of social networks like Facebook and Twitter, teachers are taking the opportunity to motivate learning and foster engagement through the use of classroom blogs. It is important for the educators to understand and utilize the value of social (media) mentions, as they not only help classroom blogs to reach valuable public, but also enhance student learning from multiple aspects.

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