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Teaching and Learning with Social Media

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It is a human tragedy that we can live only one life within ourselves. We can mitigate this limitation by going inside the mind of others via books and movies or by talking closely with friends. Social media is popular because it allows us to have relationships in a new way. We can have ongoing conversations with numerous others simultaneously and spontaneously in a web application like Facebook. For most people more than 100 friends are difficult to follow without chaos ensuing. By reading friends' short cumulative posts and watching the webpage or video content they repost, we get a sense of living many other types of lives. The variety of interests and small incidents add up to lives being lived that one can match and compare to one's own. Although it may look to denigrators as if Facebook content is shallow, derivative, and inconsequential, the sharing of one's life is based on trivia, that taken all together over time adds up to the consequential. It is up to the viewer of this type of social media to assimilate and relate all the posts and content sharing of a friend or acquaintance to form a complete picture of the other. Over time, the changes and development of another's online personality becomes evident, which may or may not match their face-to-face personality. That potential dissonance between online and in-person has meaning as well about individuals, some revealing themselves easily online while others take on a completely different persona. Since teaching is still fundamentally about relationships (or should be at its best) in spite of current socio/economic movements to commercialize and industrialize all facets of higher education, social media should have great value for teaching and learning. Since a majority of college students spend an average of more than 30 minutes a day on Facebook[1]*, it would seem that social media has great potential for engagement.*

[1] M. Stollak, A.Vandenberg, A. Burklund, S. Weiss, *Getting Social: The impact of*

Contrary to common criticism of social media as a dangerous, frivolous time-waster, technology allows people to connect in meaningful ways or they would not be using it.

The latest in a series of surveys on social media by the Babson Survey Research Group and Pearson Learning Solutions questioned a random group of 1920 higher education faculty about their use of social media in teaching. Two survey results in particular show the current extent of faculty use of social media and clearly show that social media's effectiveness needs more in-depth study.

Figure 1. Faculty use of social media in class and for student assignments[2]

Faculty Use of Social Media	
Used in class	64%
Assigned students to read/view	42%
Posted content for class	30%
Assigned students to post	20%

Figure 2. Comparison of faculty personal and professional use of social media by site[3]

	Professional	Personal
YouTube (video-sharing)	40%	49%
Facebook (net-working)	30%	57%
Blogs (webpage posting)	24%	21%
LinkedIn (net-working)	18%	22%
Wikis (shared file editing)	16%	14%
Twitter (micro-blogs)	7%	11%
Flickr (image-sharing)	4%	6%
SlideShare (presentations)	3%	2%
Myspace (net-working)	2%	2%

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social networking usage on grades among college students, Proceedings of ASBBS Annual Conference, Las Vegas 2011, 18:1, www.asbbs.org/files/2011/ASBBS2011v1/PDF/S/StollakM.pdf, [08.15.2011].

[2] Adapted from M. Moran, J. Seaman, H. Tinti-Kane, *Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media,* Pearson Learning Solutions, Babson Survey Research Group, and New Marketing Labs, Boston 2011, p. 22, http://www.pearsonlearningsolutions.com/educators/pearson-social-media-survey-2011-bw.pdf, [10.10.2011].

[3] Ibidem, p. 28.

Terminology and Functional Categories

Social media is relatively new and as with all new phenomena, the terminology is still in flux. The terms during the 1990s for low and no cost web applications were shareware and freeware. As can be seen in the Google Books Ngrams chart (Fig. 3), those two terms fell from their 1995 height to intersect in 2005 on their downward popularity path with an upward swing of social networking. An individual typically programmed shareware applications while large teams now program social media sites. The use of social media as a term increased in 2005 as the number of larger interactive applications exploded. Social media sites have become much more complex in code, design, functionality, and relationship to economic models and publicity. Social media is used as the umbrella term for all web-based and mobile websites that offer free accounts with interactive connectivity. The accounts allow one to view and contribute user-generated media on one's own site and to communicate with others about that media. Social media includes several functional categories.

- Social networking focuses on networking with friends and associates as its major function, as in Facebook, although there also may be media possibilities. Facebook is excellent for role-playing activities, such as having students construct their page as an historical persona and interacting through status updates and photo or URL postings with other „friends" in the class in that role.

- Blogs, such as Blogger, or the micro-blogger, Twitter, allow one to follow the words of any other person in a more public manner than social networks. Twitter is particularly useful for quick announcements or updates from fieldtrips when used on smart phones.

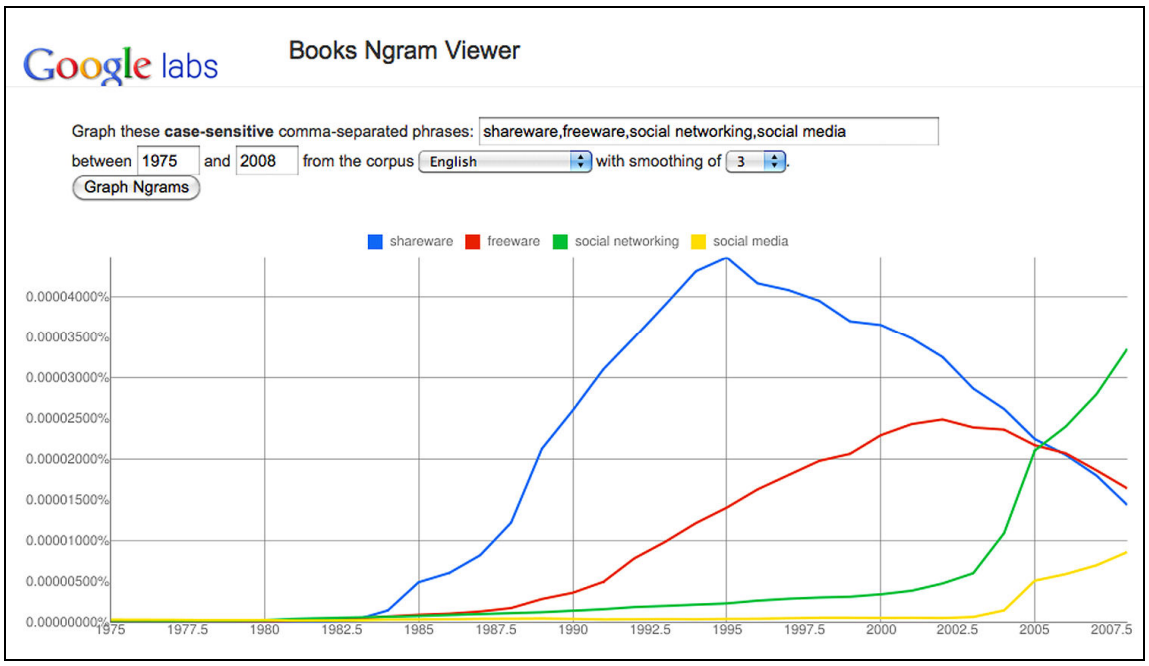
- Multimedia sites, such as Flickr and YouTube, concentrate on the user-generated media side of social media. Art courses, in particular, find the storage and sharing capabilities invaluable. Students are beginning to find

video creation assigned as often as paper writing, and YouTube is the usual destination for display. Real world distribution often intensifies student efforts.

- Synchronous tools like Skype offer video connection online in real-time as immediate as face-to-face communication. Oral speech rather than written text is typical. Skype and other live video-conferencing software allow traditional teaching methods such as real-time lecture/discussion and sharing of one's desktop to illustrate software, PowerPoints, and a whiteboard, while also viewing, chatting, and texting one another.

- Virtual worlds like Second Life allow inhabitants to take a cartoon like persona or avatar and socialize, build, walk, or fly about a three-dimensional geographical landscape. Common assignments involvement interviewing virtual communities across the world and exploring architecture and exhibits.

Figure 3. Google Books Ngrams Chart of 4 terms (social media, social networking, shareware, and freeware) popularity in books by year[4]



Pedagogical Background

The oral lecture has existed as a primary pedagogical method throughout recorded history. It is more efficient in paperless societies to speak to groups rather than individuals. Clearly there are problems with the standard classroom method of teaching by oral lectures in higher education. Watching a room full of half-somnolent undergraduates is disheartening. Lectures, if written, can now be read in a quarter of the time it takes to listen to them. The larger the audience, the less chance there is for interaction between the instructors and students to occur. Even with the most entertaining of lecturers, the activity of listening, while efficient, is passive and doesn't involve the necessary processing, creating and applying that is crucial for deep learning.

[4] Google Books Ngrams, http://ngrams.googlelabs.com, [08.11.2011].

The author was first exposed to an alternate method in ancient language courses at the University of Michigan that were limited to 20 to 25 students. Waldo Sweet taught a Latin course that was supplemented with his programmed learning workbooks[5]. Skinner and behaviorist psychology, with its emphasis on environmental control structures of rewards[6], influenced this methodology. A Latin sentence was read, a question or missing word was answered in Latin, and then the correct answer uncovered in a continuous sequence. Rather than artificially memorizing declensions, this method allowed one to internalize the language. Classroom time was spent in questions, oral practice, and a variety of supplemental activities, dependent upon student interests.

By the 1980s, group work in college courses had become popular and some lectures were being transformed to Socratic dialogue, based on cognitive psychology[7], and providing mental memory models, free-writes, and group collaborative work. During the 1990s, online threaded discussion boards were a natural progression in pedagogical methods from group discussions in the classroom to online forums. Forums had the advantage of allowing students to see each other's writing and, through peer editing and competition, to improve. The currently dominant learning theory of constructivism fit well with online methods[8].

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[5] W. Sweet, *Artes Latinae/Latin Self-Teaching: Lectiones Primae/Graded Reader, Level One*, Bolchazy Carducci Publishers, Illinois 1966.
[6] B. F. Skinner, *Science and Human Behavior*, Macmillan, New York 1953; B.F. Skinner, *The science of learning and the art of teaching,* „Harvard Educational Review", 24:2, p. 86-97.
[7] A. Bandura, *Social Learning Theory*, General Learning Press, New York 1977; J. Bruner, *Toward a Theory of Instruction,* Harvard University Press, Cambridge 1966.
[8] C. Cheal, B. Rajagopalan, *Chapter 3. A Taxonomy Showing Relationships between Digital Learning Objects and Instructional Design*, Learning Objects and Instructional Design, eds. A. Koohang, K. Harman, Informing Science Press, Santa Rosa 2006.

As discussion boards became more complex in the 2000s, they evolved into learning management systems with numerous administrative and teaching facilities for higher education (e.g. Blackboard and Moodle) and social media (e.g. Facebook and YouTube) for public Internet users. Learning management systems, organized into courses with faculty and students in password-protected environments, combined the four essential tools of online courses: discussion boards, chat, online quizzes, and file upload. Refinements included additional management tools like grade-books and facilities adapted from social media such as wikis and RSS feeds.

In contrast to learning management systems, social media is wide open to the public. It is self-organized by individuals adding their own accounts and friends and groups. Instead of only producing and sharing text discussions, social media allow users to upload, share, and comment on media such as image, audio, and video files. With greater functionality than learning management systems, it was inevitable that faculty in higher education would begin to experiment with these free online tools in their teaching.

Students, in a practical sense, need to use technology productively in their work. Social media helps in both areas by providing tools that are easy for non-professionals to edit media, upload it, view one another's work, and comment on it in a way that wasn't possible before the social media era. For example, an art historian instructor couldn't have taken the time in the early 1980s to ask students to photograph images or slides (with film from books, which took a special stand, camera, and film), edit them (with darkroom techniques), display them (matted on posters or with a slide projector), create art analyses of each image, and read or listen to each others' analyses and comment on them. We simply would not have had the time to do such projects and still learn about all the art history that was required for the course. But now it takes significantly less time to search for images on the Internet, edit them quickly with software, upload them and create commentaries, that it's possible to assign group and individual image projects in social media programs like Flickr, Facebook, Second Life, YouTube, and even Twitter.

There has been a general trend in the past 15 years to ask students to be more active in their own learning. This is bolstered by advances in educational theories like social constructionism, experiential learning, and problem-based learning among others. Constructivism emphasizes the individual as the constructor of reality based on former experience and new self-produced learning. The former model of education that stemmed from Enlightenment theories of reason and autonomy overlaid with a 20th century factory system that sees students as products stocked with memorized data is changing to a new model where knowledge is a shared, global experience[9]. The nature of social media is to encourage active media production and global commentary on those productions, so rather than a fad, social media is well positioned as a technological metaphor for this new model of education.

Benefits of Teaching with Social Media in Higher Education

A fundamental problem is whether or not specific social media applications will promote student engagement and learning. Critics would say that there is no proof that using social media for teaching works. Because social media's popularity is so recent, teaching methods that use specific software applications are in the nature of pilot studies. But initial studies in a collection of studies from 20 faculty using varied social media in different disciplines show the following benefits[10].

1. Student perception surveys show positive feedback. Guthrie from Florida State University teaches a leadership education course and uses YouTube assignments for video creation and reflection. One assignment asks students to interview at least 5 individuals about their definition of leadership. The students then make short videos from the interviews and upload them to YouTube. Although the campus media support office provides technology help, the majority of students have their own phones and cameras with video capability. Formats for the projects have varied from a late night talk show to musical backgrounds to parodies. In addition to creating

[9] J. Rifkin, *Empathic Education: The Transformation of Learning in an Interconnected World*, „The Chronicle of Higher Education", 3005.2010. http://chronicle.com/article/Empathic-Education-The/65695/, [08.16.2011].
[10] C. Cheal, J. Coughlin, S. Moore, eds. *Transformation in Teaching: Social Media Strategies in Higher Education,* Informing Science Press, Santa Rosa 2011, to be published.

media, the students reflect on both their own learning and each other's work. Guthrie conducted a student perception study based on a survey with 12 course sections over 3 semesters (N=127) and 6 focus groups over 3 semesters (N=43), which demonstrated that students believe that YouTube assignments contributed to their learning experience. They appreciated the opportunity for interacting with the well-known video platform, the intentional development of a public persona, and the verbal and nonverbal communication opportunities for analysis and critical thinking.

2. Increased quality of student work. Smydra and Mitzelfeld from Oakland University, Michigan, adapted Blogger for an honors writing course, developing both personal reflection and public discussion. The authors use two types of blogs for course learning—the individual student blog for creating their own writing voice and a common course blog for developing community. The importance of blogs depends upon their public nature and the assistance they give the student to construct knowledge over time, becoming subject matter experts. Public comments on a student's writing encourage re-evaluation and highlight writing as a process of making meaning jointly with one's audience. Smydra and Mitzelfeld have found increased quality when comparing student work before using online blogging methods.

3. Increased motivation. Macbride and Hall from Emerson College, Boston, Massachusetts, describe experiences using Facebook for specific role-playing assignments in an Abnormal Psychology class. Students become famous psychologists by creating profiles, images, notes, and status updates about their biographies and contributions to theory. High enthusiasm for the assignment motivated students to tackle the challenge of more difficult theoretical material.

4. Enhanced course content. Nugent and Lindgren from Boston College, Massachusetts have helped students build a location-based web-service, *Walking Ulysses: Joyce's Dublin Today,* so readers of James Joyces' Ulysses can journey through 19th century Dublin with their smart phones. Like Homer's Odysseus, Joyce's hero is on a journey, so place is particularly important. Students collected descriptions of Dublin locations from 19th century primary texts. They then traced the journeys of

the characters and embedded content as notes into Google Maps at the relevant locations. Using a small grant, the database of content was put into the open source content management system, Drupal, as the students outgrew their wiki. A JavaScript was written to enable users of the map to toggle between map layers of old Dublin and modern Dublin. A mobile interface, a walking tour with audio, text, and images for the relevant locations, was also built for users who were actually walking the path of the characters in Dublin with their cell phones. This is a remarkable project in which the students created their own learning and developed their own social media application for others. Each subsequent class continues building on the work of the class that came before.

5. Better grades and learning outcomes. Crabill, Youngquist, and Cayanus from Oakland University, Michigan conduct exciting research in reducing public speaking apprehension in Second Life, a virtual world. Because the fear of public speaking is one of the most commonly known fears, topping even the fear of death, it would be a benefit for students to acclimatize to public speaking by practicing first in a virtual world and then in real life. In a controlled study, 27 undergraduates in a public-speaking course participated in an experiment to present in a virtual world, inhabiting an avatar on a stage in front of other avatars seated in a coliseum. The students answered surveys that measured their communication apprehension, computer-mediated communication apprehension, and general technology use. Those who were nervous about speaking to a live audience, who did not generally relate to their audience for prompts, found speaking in a virtual world a less threatening and excellent place to practice. Exercises in this virtual world could systematically desensitize the apprehension of those students.

Conclusion

Social media allows for student learning through collaboration whether with text or other media. Adapting learning in higher education from former lecture methodologies is not without problems, such as finding relevant assignments, taking the time for students to learn the software interfaces, and finding the right hardware solutions. But the possibilities of high student engagement and active learning

through doing or constructivist learning validate the extra effort and time required to experiment with new pedagogies.

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