

BLOGS AND PODCASTS AS STUDENT DELIVERABLES

Kathy E. Gill

University of Washington
Seattle, USA
kegill@u.washington.edu

Abstract

Institutions of higher education face many challenges; one is to provide a learning environment that acknowledges the unique skills and interests of the Net Generation. This paper explores these challenges within the context of computer-mediated communication (CMC) instruction. Specifically, the paper explores the use of social web technologies – blogs and podcasts – as methods of student learning and assessment.

Podcasting and blogs facilitate online communication in a community network; both combine old and new communication methods to rapidly and inexpensively deliver words, text and audio via the Internet. Most reports of the use of these technologies in an educational setting focus on teacher-centered communication, specifically, podcasts of lectures. However, these technologies can also be used as an alternative, experiential and innovative method for active student learning. The paper provides a framework to help others create similar learning opportunities; it identifies pitfalls and best practices; and it provides a set of recommended tools.

Keywords

Computer-mediated communication, Net generation, blogs, podcasts, communication technology, Web 2.0, higher education

1. INTRODUCTION

The litany of challenges facing higher education in the 21st century range from the role of the academy in society to the relationship of the institution to the private sector, from fostering lifelong learning to meeting society's need for professionals, from fostering citizenship to expanding our knowledge of the worlds around us [1,2,3]. Adding to those challenges are the sheer numbers of students. Writing in the Chronicle of Higher Education in 2006, Greg Forster asserted, "Virtually everyone who is academically qualified to go to college actually goes to college" [4]. Thus today, in the United States, almost two-thirds of those who graduate from high school will attend some institution of higher education, taxing system resources [2].

There is another stressor on the institution, however, and it is the nature and expectations of today's student body, the Net Generation or Digital Native. The Net Generation describes those born from 1982-1991 [5,6,7,8]. These young people grew up with computerized technology being as central to their lives as television and records were to Baby Boomers. For example, in 2002, the Pew Internet & American Life project reported that one-fifth (20%) of

students then in college had begun using computers between the ages of 5 and 8; all were using computers by age 18. [10]

In contrast, educators and administrators are more likely to be Digital Immigrants, whether they are Matures (born 1900-1946), Boomers (born 1946-1964) or Generation X (born 1965-1982). As a generalization, Digital Immigrants see these computer-based technologies as innovations, as something different from the analog world that surrounded their formative years, and they speak the language as a second, not first, one. [8] These differences in experience lead to differences in learning and teaching styles.

1.1 Net Generation Learners

In addition to using computer technologies differently from most educators and administrators, the Net Generation has a distinct learning style. From Skiba et al as well as Sanders and *Educating the Net Generation*, I have derived the following themes that should inform the structure of today's classroom [6,7,8]. Net Generation learners are

- Active information seekers and creators rather than passive recipients of information
- Innovative users of technology
- Curious
- Always on, accustomed to a 24x7 world
- Interested in learning by doing rather than by reading or listening
- Multi-taskers
- Consumers of multi-media rather than text, when given a choice

As a result, this cohort is less amenable to the "sage on a stage" class form, according to a survey reported in Chapter 3 of *Educating the Net Generation* [6]. For example, a group of 25 students at the University of Pittsburgh–Johnstown students rated "their preference for the level of interactivity in the learning environment, with various forms of technology understood as key enablers of interactivity" [6, p 3.4] All 25 picked the 50-50 lecture/interactivity option, rejecting the traditional lecture class outright. Nevertheless, the lecture course remains a mainstay of freshman and sophomore classes at research universities, simply by virtue of the size of the student body.

Whereas most undergraduate students are Digital Natives, most educators are Digital Immigrants. Sanders writes, "When immigrants encounter a new culture they try, often in vain, to do their best to adapt to it but they still bring along a large baggage of their own cultural legacy." His implications for educators: move "from instruction to construction and from one-size-fits-all to personalized approaches to learning" (217). Sanders does not address who will train the educator in new classroom techniques or how institutions will fund the necessary infrastructure, which includes campus-wide WiFi and computer labs.

Although computers are not the only technologies central to the lives of the Net Generation – other key tools are digital cameras and mobile phones, texting and instant messaging – two computer-mediated communication

technologies that might help educators meet these generational challenges are the focus of this paper [8].

1.2. Computer-Mediated Communication

John December defines computer-mediated communication (CMC) as "the process by which people create, exchange, and perceive information using networked telecommunications systems (or non-networked computers) that facilitate encoding, transmitting, and decoding messages" [11]. CMC has the potential to facilitate discussion and experiential learning, two factors that are directly linked to the Net Generation learning style [12]. This paper focuses on two forms of CMC: blogs and podcasts.

Blogs are a web genre with a specific set of characteristics [13]:

- Reverse chronological journaling (format)
- Regular, date-stamped entries with their own URL (timeliness, permalink)
- Links to related news articles, documents, blog entries within each entry (attribution)
- Archived entries (old content remains accessible via its permalink)
- Links to related blogs (blogrolling)
- RSS or XML feed (ease of syndication)
- Passion (voice)

Blogs differ from the websites of the early 1990s in several respects. First, the unit of measurement (and interest) has changed from a webpage to a blog post [14]. The blog post is a self-contained unit, with its own URL, and may be a single sentence or a fully-crafted essay. There are usually many blog posts (with the most recent one first) on the main page of a blog.

Second, blogging technology fosters community and conversation when the blog publisher allows readers to comment on posts, thus allowing the reader to become an author, a creator. When these comments are unmoderated, the reader can immediately see her contribution. With most blogging software, a specific comment can be easily referenced because it has its own permalink.

Third, blogging technology has eliminated the need for the publisher (in this case, student or educator) to know or understand the technologies behind the scenes (FTP, HTML, databases) that make Web publishing possible.

Blogging is far removed from the roots of CMC, which is marked by an alphabet soup of under-the-hood technologies (e.g., DOS, UNIX, TCP/IP, FTP) [12]. Podcasting, the New Oxford American Dictionary "word of the year" in 2005, is a newer form of CMC that requires more technical expertise than blogging. The formal definition: "a digital recording of a radio broadcast or similar program, made available on the Internet for downloading to a personal audio player" [15]. Although the noun (podcast) and verb (podcasting) are linked to Apple's iPod, audio recordings known as podcasts can be played on any digital music player capable of processing the mp3 format.

Blogging and podcasting technologies are part of the social web, otherwise known as Web 2.0, a term coined by Tim O'Reilly [16]. Characteristics of Web 2.0 technologies include treating the reader (or listener) as a "co-developer" (the reader becomes a creator). Another is the RSS subscription, which makes it easy for a reader or listener to instantly – and without effort – obtain the latest post or podcast. Because Web 2.0 CMC puts the focus on people, it's called the social web. How these social technologies can enrich today's classroom is next.

2. BLOGS AND EDUCATION

In the early 1990s, the World Wide Web promised that anyone who wished could be a publisher, assuming they had some technical expertise. By the end of the decade, there were a handful of websites that we would call blogs today. By 2002, analysts estimate that there were 500,000 blogs [13]. In 2003, Blogger (which is owned by Google today), announced it had 1 million registered users [17]. Today, Technorati is tracking 112.8 million blogs [18].

Blogging is easy, it's free, it's popular and it facilitates a basic human need to communicate. According to the Pew Internet & American Life study, in 2004 about 1-in-3 Internet users read blogs, 1-in-10 had made a comment on a blog post and 1-in-15 had started a blog [19]. In December 2007, Pew reported that "64% of online teenagers ages 12 to 17 [engaged] in at least one type of content creation" and that 35% of female teens blogged [20]. Although a minority of Digital Natives create blogs today, the trend appears to be rising. If the ratio of creators-to-readers holds constant, it also appears that almost all teens read a blog of some type.

2.1 Types of Blogs In The Classroom

Using the Web as a publishing platform for student projects predates the development of the blog, as does the practice of having students share their writings. Sharing writing helps students develop a sense of community and take an active role in their learning [17]. Also, Lowe and Williams assert, "students take real-world writing more seriously when it is done on the web, where it might actually be seen and used" [21]. Blogging software facilitates the creation and sharing processes; students do not have to be physically present in the same room at the same time to exchange a piece of paper. Nor do they need to be comfortable with complicated technologies. It is for these reasons, among others, that educators began incorporating blogs into classes.

In 2004, Williams and Jacobs lamented the lack of "refereed published material on the subject of blogs" in education [22]. Even today, much of what is published about blogs in education focuses on "how to" not "why to." The most common ways blogs are used in the classroom follow:

- Student journals
- Student portfolios
- Class projects
- Course website

2.2 Student Blogs in Introduction to New Media

I have been using blogs as a method for students to reflect on course readings since Spring 2004. In COM300, Introduction to New Media (an undergraduate course), students create a personal blog that serves as a portfolio for the course. There are several elements in this digital portfolio, which is hosted (free) at Wordpress.com: weekly reading reflections and discussion questions; a discussion leader assignment; in-class assignments; and, when it's part of the course, information about their podcast.

Prior to class each week, students post a reading reflection, assisted by guided questions. This reflective, low-stakes writing helps students synthesize concepts and link course material to their everyday lives, an important element for Net Generation students. Reading posts are scored on whether they meet the goal of the assignment, not grammar or punctuation.

This example, from Spring 2007, demonstrates the impact of digital media – specifically, blogging -- on a student's life:

It is not too outrageous to argue that the technology of blogging is changing my life on a very personal level. This bold statement may surprise many of my friends and family because just five months ago, I had no idea what a “blog?” even was. Nor did I imagine that it would become a piece of technology that would play such a fundamental role in my personal and professional development...

My newfound interest in blogging technology prompted me to enroll in COM 300. I also applied for, and was accepted, into an internship position at Zillow in Public Relations. Specifically, my job will be to maintain and contribute to the zillow.com blog content. This internship could change my career trajectory and alter the future of my professional life. How amazing that blogs could have so much impact on my life within such a short amount of time! [23]

In this post, the student linked current technologies in a manner that provided a personal, not sterile or abstract, response, clearly meeting the goal of reflecting on the reading in the process.

In addition, students prepare open-ended discussion questions each week. This part of the assignment has several goals: to focus class discussion on material that students feel is relevant; to help students prepare for their role as small group discussion leader in the second half of the course; and to learn to craft open-ended questions, which better facilitate discussion than closed.

Students are encouraged to incorporate multimedia digital artifacts, such as YouTube clips, to enrich their discussion presentations. In addition, they create their own multimedia story using Powerpoint. These materials are included in their discussion leader blog post, making it easy for other students to find those resources if needed at a later date. From another student's course blog, reflecting on that experience:

I also like the small discussion groups because I feel that more people are willing to answer questions and actually have a discussion... it spurs new ideas that are actually interesting. Small groups also breaks up the class time as well. Overall, a good experience [24].

The class meets for two hours, two days a week, in a classroom designed for both lecture and lab. During lecture, the instructor can see faces rather than a sea of monitors. Yet the configuration also makes it easy to incorporate in-class assignments that entail student use of lab computers (if they do not have their own laptops). Students complete these low-stakes assignments using their blogs.

Each of these interactive assignments reflects Digital Native learning styles and, arguably, constructivist learning theory [25]. The final use of the blog is to provide access to the student's podcast.

3. PODCASTS AND EDUCATION

In 2005, the Pew Internet & American Life Project reported that almost one-third of Americans (more than 6 million people) who owned a digital music player had downloaded a podcast [26]. This is certainly an impressive number of people, but it pales in comparison to the number of people (32 million) who said that they read blogs. Clearly, blogs were more mainstream than podcasts, a relative position that continues to this day.

The most common use of podcasts in education seems to be faculty-provided audio-files of lectures. Duke, Stanford and Berkeley were among the United States universities pioneering the institutional use of this technology:

"Before I podcasted, I worried about whether I would be able to have the full experience of a lecture," said UC Berkeley sophomore Paul Cho, 19. But his skepticism has melted. "As I listen to the podcast I write down notes, and it keeps me on target without being distracted," he said. [27]

"I'd never even heard of a podcast before I took [a course that uses podcasting]," says John Vickery, a student at Duke University. [28]

3.1 Students As Creators

Podcasts created by students provide an outlet for creativity and personal expression. Teachers in the K-6 system are beginning to create similar multimedia assignments [29]. This precedent will inform the classroom expectations of future undergraduates.

Just as it is logical for early-adopting blogging faculty to teach English or New Media classes (a digital publishing platform), it follows that early-adopting podcast faculty might teach a class about radio (audio stories). Carie Windham interviewed Duke University Professor Daniel Foster about his use of podcasts as a student deliverable in his "Radio and the Theater of the Mind" class, "a course centered on the exploration of old-time radio production" [28,30].

"I think their [podcast] work is actually better than their writing is," Foster says. "They do all the acting. They choose the music. They do the sound effects. Their work is very professional-sounding. There are a couple of pieces on the Web site for the class that are really quite good. They can certainly stand up to much of the podcasting that's out there" [28].

As with projects involving blogs, by creating podcasts students learn through doing. But in the case of podcasts, these skills move beyond writing. Students prepare a script, record and edit the spoken word; find appropriate digital music; and then stitch it all together with software. Experiential learning from start to finish.

3.2 Student Podcasts in Introduction to New Media

Because creating podcasts requires more technical skill than producing a blog, I first tested the project with a set of five student volunteers in the Spring 2006 class. The success of the pilot led me to introduce this project to the 29 students in the Winter 2007 class. My goals were for the students to have fun producing multimedia on a topic of personal interest while learning about important issues in digital media, such as copyright.

I took liberties with the definition; for this course, I defined a podcast as a digital audio file created by mixing multiple digital audio tracks containing voice and audio (a portion of a sound recording).

I invited a representative from Apple to conduct a demonstration using Garage Band, even though our computer lab is PC-based. Many students have Apple laptops, and there are Apple labs on campus. Given the simplicity of GarageBand's visual interface, I chose this approach to try to minimize the anxiety about making podcasts that was expressed by some students. Later, I demonstrated Audacity, which is an easy-to-use (free) cross-platform editor.

To record their scripts, students could check out compact USB digital recorders from the Department; use headsets designed for gaming or for Skype; or borrow a microphone from me. Students were not required to record their own voice; some ESL students took this option.

The podcast assignment was integrated with course modules on copyright and Creative Commons. Students selected a Creative Commons license, which they placed on their blog. They also linked their podcast to this page on their blogs, making them publicly accessible.

4. LESSONS LEARNED

In my experience, both blogs and podcasts work well in small and medium-sized classes; I do not work with a teaching assistant, because my class numbers do not meet the minimum in my Department. I do not know whether the use of either technology might scale.

In order to manage reviewing the student blogs, the faculty member should be comfortable using an RSS reader such as Bloglines or Google Reader. It's important to manage student expectations on the amount of feedback to expect; I let students know that I have read their posts by commenting on a few throughout the quarter. I also feature student questions and reading reflections in each lecture.

I use Wordpress because of its features and lack of ads. I ask all students to use the same blogging service to facilitate ease in commenting. However, students are unlikely to enter into this "conversation" without encouragement; some see the process as a task rather than a way to learn from one another. Consider requiring comments if students are collaborating on a project; otherwise, do so with caution.

Because most students have not experimented with audio editing, anticipate some student anxiety with the podcast assignment. One way to minimize anxiety is to have students bring a short sample of their voice to lab; in addition to getting early practice recording, they also get used to hearing themselves over, and over. Rather than create my own demos of how to edit with Audacity, I purchased a training DVD from Lynda.com. This allows me to plan labs knowing the exact length of each example. If pressed, I can loan the DVD to a student.

Podcasts should be MP3 files, but Audacity does not natively export this format and students may have iTunes configured to save files as AAC. Consider having students use a free conversion utility like Zamzar.com to convert the finished product to an MP3. In addition, if students do not have generous server space on campus or if there is no easy way for students to FTP the finished files to their student accounts, consider using a free option such as the Internet Archive to host the MP3 files.

The biggest challenge I've faced with podcasts is not the technology but student desire to use copyrighted music as the background of the podcast. However, I am a fluent Digital Immigrant; before adding either of these technologies to a course, I recommend deep, hands-on emersion.

5. CONCLUSION

Digital Native students are active information seekers and creators who prefer learning by doing to reading or listening; this cohort comprises most of today's undergraduates and will continue to do so for much of the next decade. University faculty who teach small- to medium-sized classes – or who have access to teaching assistants – are encouraged to consider incorporating new deliverables to assess student learning. Two computer-mediated communication technologies – blogs and podcasts – serve as an innovative form of active learning. One additional benefit is acquainting students with Web 2.0 technologies that are increasingly common in the business and personal Web; another is enhancing student digital literacy.

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