

Web 2.0 Tools in the Reading Classroom: Teachers Exploring Literacy in the 21st Century

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As the WWW has begun to evolve into a more cooperative and easily publishable environment, educators are exploring how this phenomenon can be harnessed to impact student learning and achievement. Teachers are beginning to experiment with more interactive, collaborative web-based applications, sometimes labeled “Web 2.0” technologies. This study explores the use of Web 2.0 tools (specifically blogs and podcasts) in a graduate course for K-12 reading specialists. The blogs and podcasts created and shared through this course are described. Areas such as digital storytelling, digital yearbooks, electronic storybooks, oral reading and publishing are explored through the use of these Web 2.0 tools. Specific assignment parameters are articulated and referenced. Furthermore, potential impacts on fluency, vocabulary development, and comprehension for the reading student are examined.

Keywords: Web 2.0, reading instruction, K-12 education, digital technologies, blogs, wikis, podcasts, fluency, vocabulary development, comprehension, reading specialist

INTRODUCTION

The metamorphosis in communication that has occurred since the advent of the World Wide Web is well documented. After fifteen years of growth in global, digital publishing of hypertext and multimedia, we are now faced with transitioning as the WWW continues to evolve. Growth in access to Internet connectivity, increasing data transfer speeds and bandwidth, better compression protocols for audio/video/animation content, and the popularity of synchronous and asynchronous communication tools have propelled us into the age of “Web 2.0.” Far from being an exact upgrade to past “post and view” web environments, Web 2.0 is a descriptor loosely used to note the shift online to spaces that are globally coauthored in real time, spaces that are collaborative, peer-reviewed, updated and revised. WikiPedia is one of the first, widely-adopted Web 2.0 spaces. Since its debut, blogs, wikis, podcasts, and social-networking sites have exponentially been

harnessed to share perspectives and information for a plethora of topics (Dearstyne, 2007).

Businesses have hurried to take advantage of the Web 2.0 phenomenon, astutely aware of its potential to broaden their customer base, track consumer trends, and respond to market concerns. While the current illusion of a global community denies the reality that entire populations have limited access to Internet technologies and that English is a primary language on the web, online participation is expanding. Translation tools, the “One Laptop per Child” initiative, and increased dedication to providing Open Source application alternatives combine to support the vision of a true global communication system in the near future. In other words, we will continue to see an explosive growth of Web 2.0 exchanges of ideas, media, and work.

So what does this mean for K-12 education? While an active debate ensues about the “worthwhileness” of Web 2.0 technologies in the classroom (Gorman, 2007), many educators are demonstrating the utility of these tools for teaching and learning (Achterman, 2006; Bull & Ferster, 2006; Lunsford & Bruce, 2001; Richardson, 2007; Warlick, 2006). Certainly in the United States, our goal has been to prepare an active and effective citizenship. It follows then, that students must learn to step into the global conversation and develop competencies in using the technological tools that support collaboration, media literacy and evaluation (Alexander, 2006; Borja, 2006; McAnear, 2006). More specifically, for reading specialists, dedicated to student growth and achievement in reading and writing effectively across the subject areas, this newest evolution of the World Wide Web provides opportunities for students to challenge their literacy skills. This manuscript details the activities of a group of K-12 reading specialists, exploring Web 2.0 tools of blogs and podcasts as conduits for student reading/writing fluency, vocabulary development and comprehension.

USING WEB 2.0 TOOLS IN THE READING CLASSROOM

Teachers have already documented the effectiveness of using blogs to support student dialogue and storytelling (Huffaker, 2005). Web 2.0 tools have also shown strong results in impacting the quality of undergraduate writing (Luce-Kapler & Dobson, 2005). Wikis have also been successfully used to support graduate student coursework (Bold, 2006). With these documented examples in mind, the author set out to design Web 2.0 assignment elements in a graduate reading technology course that could affect K-12 student success in the area of reading.

Nine Masters in Reading students (preparing to be reading specialists in K-12 schools) participated in these activities. Five of these Beginning Reading Specialists (BRS) had been classroom teachers, who returned to the university to gain this credential. The other four were certified teachers, working on their Masters Degree, before beginning their careers in the classroom. These BRS partnered with current classroom teachers (cooperating teachers) to gain practical experience in integrating various strategies in reading instruction. As a part of a “Technology in Reading Instruction” course (<http://edhd.bgsu.edu/~sbanist/627>), these BRS developed blogs and podcasts, targeting their focus of providing tools to support the teaching of reading in the K-12 environment. The course website noted above contains additional information about the course structure, assignments and resources. The following paragraphs detail their work and their discoveries, as they navigated these Web 2.0 experiences, focusing on the integration of blogs and podcasts in the reading classroom.

ADVENTURES IN BLOGGING

As the course began, the BRS were asked to create a blog or wiki. These were used to discuss class readings, share discovered resources, and to express K-12 classroom strategies for the reading teacher. All BRS opted to create a blog, rather than a wiki, viewing the blog as an easier technology to develop and manage. Topics such as digital yearbooks and electronic storybooks were critiqued (see Figure 1), as a part of their blogging assignments. Students were provided with posting prompts initially (similar to prompts that would be given for an online discussion board) and instructed to read all classmate blogs and post comments to at least two of these. The course instructor also posted comments to each of the blogs, as a strategy to provide constructive feedback to the process. The structure and visual design of the blogs was completely at the discretion of the authors, so the BRS used a variety of templates and images to give their blogs a personal touch

Figure 1. Digital yearbooks and electronic storybooks critiqued in a blog.

Figure 2: Digital Storytelling Center Examined through Blogging

Figure 1.

BLOG ARCHIVE
▼ 2007 (13)
▼ March (2)
[Digital Yearbooks and Storybook Reading](#)
[Implementing Change](#)
► February (5)
► January (6)

ABOUT ME
Kristin
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TUESDAY, MARCH 20, 2007
● ● ● Digital Yearbooks and Storybook Reading

Our text featured a school that made multimedia their classroom project. I felt that this project was a lot of technology and creative thinking skills, able to personalize their yearbook by bringing in digital video. I feel that this project would be something that students would be proud to share. I see many benefits to this project, I also feel it is really important. I feel that disks are more outdated. Therefore, I feel that this activity could be a regular yearbook. It could also be simplified if it were to create a project with so much detail.

Electronic vs. Paper Storybook Reading

The text also discussed electronic versus paper storybooks. The teacher did research to see what students responded to. Her research she found that students responded to human-read stories. I feel that students sometimes find listening to their teacher read a story after school boring. Therefore, electronic storybooks add variety to the classroom. Through this, students are motivated or interested because it is something that I would use electronic storybooks in my classroom. It would be an effective extension for read aloud.

Posted by Kristin at 6:17 AM

Figure 2.

Ann Marie
Monday, March 5, 2007
Digital Storyteller Center

The Digital Storyteller Center is a nice introduction into creating our own digital projects. I have enjoyed watching others digital stories and it has sparked several ideas for my own digital story. There are a variety of interesting case studies to read about at this site. The one that I find the most compelling is "Silence Speaks." (<http://www.silencespeaks.org/>)

On this website digital storytelling is used to support healing and support of violence prevention. Violence and abuse are heavy topics and they can take a toll on any individual that has had to deal with them. The digital stories on this site can be difficult to watch based on the topics they deal with, but they are an important step towards prevention as well as healing. Each of the stories on this site have a unique message and they are all worth watching.

Posted by Ann Marie at 7:24 AM

2 COMMENTS:

Tech Connections said...
Several of your classmates chose "Silence Speaks" as well; very powerful.
March 18, 2007 3:48 PM

jaime said...
I enjoyed reading Silence Speaks also. I thought it was so powerful. This would be great to show students, and then encourage them to do something like this about themselves, someone they know, or

Blog Archive
▼ 2007 (13)
▼ March (5)
[Macs](#)
[Implementing Change](#)
[Digital Storyteller Center](#)
[Web Resources](#)
[\\$100 Laptop](#)
► February (3)
► January (5)

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Ann Marie
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These BRS were exposed to model literacy projects that integrated various technologies through class readings (Cummins, Brown, & Sayers, 2006) and their own research. Activities in creative writing, described in class reading assignments (Cummins, Brown, & Sayers, 2006; Gura & Reissman, 2001), were replicated in the blogs. "A Winter Walk" was one such assignment; BRS were told to take a short walk, alone, and then write a short essay on their blog, about what they experienced. Students

used examples from the Digital Storytelling Center to model their own digital stories (see Figure 2). Topics such as “A Pacific Children’s Literature Web Project” and “Vignettes From Literacy Teachers” were discussed in the blogs (See Figure 3). As they used the blogs, the BRS began to identify various activities that they could implement in their future classrooms: activities that supported student growth and development in reading/writing skills using blogs. Throughout the semester, these BRS affirmed that the “web log” format provided K-12 students with a resource to support fluency in reading and writing.

Figure 3. Issues in literacy explored in blog pages



These BRS were given limited instructions on exactly how to create a blog or wiki; tools such as Blogger (<http://www.blogger.com>), Class Blogmeister (<http://www.classblogmeister.com>), Wikispaces (<http://www.wikispaces.com>), or PBWiki (<http://www.pbwiki.com>) were noted in class with simply the URLs and a few minutes of comments on what features could be utilized within these free, online venues. By the end of the semester, all students had continued to use their blogs, rather than wikis, for course assignments and communication, noting the ease and comfort of the blogging format. Their use of these blogs for online conversations regarding reading instruction, critical examination of strategies related to reading instruction, and exploration of possibilities for student authorship/publishing was consistently of high, professional quality.

In evaluating the benefits of blogs in the reading classroom, these BRS noted that fluency, creativity, and ownership in the reading/writing process were primary possibilities. As Rasinski and Padak (2001) affirmed, one of the key elements in developing successful readers is *fluency* and *fluency* is most positively impacted by *practice*. Student reading and writing in classroom blogs provides an excellent practice environment. This, combined with the creativity students can employ in designing their blogs and the ownership they experience in this process, demonstrates the powerful impact blogging can have on student reading achievement.

How could blogging be better or different from some of the other, lower-tech methods of encouraging the development of reading fluency? Several reasons were noted by the BRS, including the currency of the medium. Day-to-day updates could be created, with frequent comments being offered by peers; paper/pencil activities cannot be as quickly shared. Publishing in blogs, sharing ideas with multiples audiences (fellow students, parents, community member, etc.), is a far different experience than creating a printed (hardcopy) paper or book to share with a more limited audience. In addition, the ease of editing in this digital format, encouraged more writing, and the archiving features of the blog kept a long-running history of the exchanges. In an analog reading classroom, these long-term dialogues are difficult to chronicle. Finally, the “green-friendly,” more paperless process of blogging supports students’ transition into the digital world of reading and writing.

PODCASTING IN THE READING CLASSROOM

The BRS also created podcasts, as examples of tools for the reading classroom. The assignment (See Figure 4) specified that students should create a series of audio files (episodes) that could be examples of K-12 student book reports, reading of favorite texts, or commentaries related to specific works of literature. As a model, the instructor created a podcast of the BRS Winter Walk writings, adding introductory music and pictures of snowy scenes to complete the series.

Figure 4. Podcasting assignment for beginning reading specialists (BRS)

Podcast Project

For this project you will create a podcast (series of audio files) for use in a reading/literature classroom. These could be examples of students reading their own compositions, or favorite books. They could also contain your audio descriptions or commentary related to specific works of literature or an assignment you've developed for students. Another possibility is to create a podcast containing various audio reflections documenting your field experiences in your program.

Your podcast should contain at least **3** independent episodes, formatted to be distributed in a series. Each episode should be 1-5 minutes in length. Use Audacity or GarageBand to construct your files. Use Podomatic or another xml podcast creator app to construct the podcast (RSS enabled). Be sure your description embedded in your podcast identifies the audience and context for your work. Don't fret, most of this work will be done in class. :)

Possible Points	Criteria
15 points	Content fitting for identified audience
15 points	Audio recording is of high quality (articulate, clean, well-mixed)
10 points	3 episodes, each of 1-5 minutes in length
10 points	RSS tags created appropriately
50 points	Total

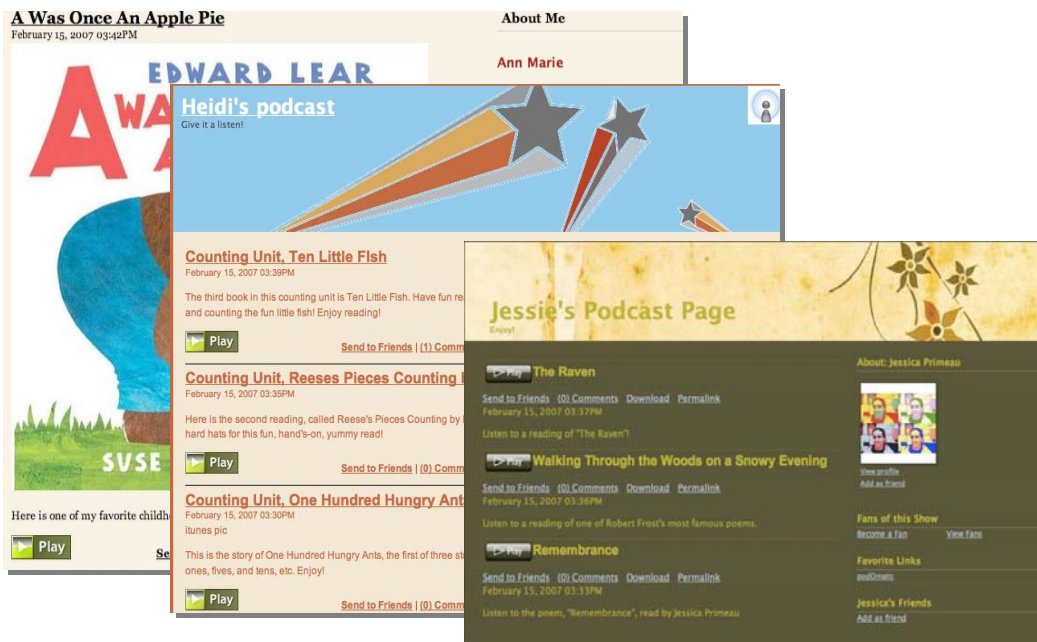
Here is the link to Savilla's sample podcast based on your free text "Winter Walks" creations.

Before constructing their own podcasts, BRS investigated the types of podcasts already available for the reading teacher. Researching “podcatchers” on a comparison

website at <http://www.podcatchermatrix.org/>, they became familiar with the tools available to locate and subscribe to podcasts. Through querying in podcatchers, such as iTunes, they used RSS (formally "RDF Site Summary", known colloquially as "Really Simple Syndication") technology to obtain subscriptions to podcasts such as Dictionary.com Word Exploration, 2nd Grade Goobers or Pride and Prejudice (Jane Austin's novel). By acquiring and listening to these podcasts, their awareness and comfort with the medium increased. The BRS excitedly shared their discoveries with each other, during regular meeting times, or on their blogs. Determining what type of a podcast to create for their future reading classroom was an easier task, after these research experiences.

Using PodOMatic (<http://www.podomatic.com>), a free web-based podcasting application, students created episodes, with images and RSS tags embedded (See Figure 5). This resource provided users with 50 MB of space for hosting the audio files, and allowed for the potential of enhanced (still images included) podcasts or video-casts (vodcasts). In addition, the tool could be used to record (audio or video) directly to the web, for quick podcasting capabilities. Some students chose this option, while others used other audio-recording applications such as GarageBand (Apple-only software) or Audacity (an Open Source application, available for all operating systems). These multiple-episode-podcasts were authored in a few hours, with mixed results in quality.

Figure 5. PodOMatic assignment for beginning reading specialists (BRS)



The BRS soon learned to be mindful of background noises, computer processor power, and Internet connection speeds. All of these factors influenced their abilities to produce high-quality results. Those who chose to record their podcast episodes in the computer lab sometimes captured the sounds of a busy lab (talking, furniture moving, typing on the keyboard, etc.), rather than their own voice. Since audio files especially CD-quality sound files can be quite large, students discovered that using an older computer, with little power or memory, could be a slow, painful process. While they could download and install a free, Open Source application, such as Audacity, on their

computer, a five-minute podcast episode could require 30-minutes of processing time. Using Pod-O-Matic's recording feature depended on a high-speed, steady Internet connection, or the recording would be interrupted. Most took these technical challenges in stride, however, and managed to produce podcasts that they found useful and enjoyable.

Regardless of quality, their peers in the classroom reviewed these podcasts, and the BRS were impressed with the potential impact on vocabulary development and comprehension, for reading students. Those that had an opportunity to introduce their K-12 cooperating teachers to their podcasts, also received positive feedback. Teachers were intrigued and excited about the integration of these audio resources into the reading classroom. Many teachers indicated that they had used audio tapes/CDs with students for years, as an adaptation for those with reading difficulties. The teachers assured the BRS that providing K-12 students with audio resources, such as podcasts, could impact student achievement in vocabulary development and reading comprehension. Teachers also expressed a belief that students could benefit from creating their own podcasts by using this medium to supplement oral reading strategies. BRS and their cooperating teachers affirmed that podcasts could be a valuable method for providing content for students, as well as for students sharing their reading/writing in an audio format.

In comparing podcasting to traditional oral presentations done in the reading classroom (Opitz & Rasinski, 1998), podcasting does offer several benefits. Creating podcast episodes of readers' theater events, oral readings, or book reports allows students to *edit and update their performance*. This type of editing encourages repetition, re-reading, and enhanced oral expression; these activities support reading comprehension. Podcasting also allows student performance to *reach a broader audience*. Parents, community members, and school administrators can review student oral readings. Students respond to this presence by increased motivation and attention to detail in their work. RSS technology facilitates communication and awareness of student presentations; *work is easily accessed*. Since parents can subscribe to a classroom podcast, they don't have to repeatedly search for new content, the content is automatically pushed to them. Finally, podcasting offers asynchronous content, *removing the limits of time and space* in experiencing student oral performances. These factors suggest that podcasts could become a powerful tool for reading teachers.

CONCLUSION

From these graduate classroom experiences, Web 2.0 tools (specifically blogs and podcasts) were demonstrated to be innovative and effective resources in supporting reading achievement for K-12 students. These resources have the potential to expand reading and writing in the K-12 classroom. Areas such as fluency, vocabulary development, and comprehension of texts could all be positively influenced through the use of these collaborative environments. Particular strengths of these Web 2.0 tools are their features that are sequential and archival. The ease of updating content allows for material to stay current, while users may still access posts or episodes from months (or years) earlier. Content is also easily extended in these environments, as links to additional information may be included.

This reflective examination, while limited, does indicate the potential of blogs and podcasts in the teaching of reading and writing. Providing BRS with experiences related to these resources provoked powerful responses. BRS feedback recounted their interest and willingness to introduce Web 2.0 resources in their classrooms. The documentation of their work provides a framework for others interested in integration Web 2.0 technologies in their teacher preparation courses, or in their K-12 classrooms. Further

data collection, as these activities are integrated in K-12 reading classrooms, will provide more specific relationships between reading achievement and the integration of Web 2.0 tools. This type of research will perhaps provide empirical evidence of the impact Web 2.0 applications in reading and writing achievement.

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