Implementing web 2.0 tools in the classroom: Four teachers' accounts

By Cindy Kovalik, Kent State University, Chia-Ling Kuo, Kent State University, Megan Cummins, Green Local Schools, Erin Dipzinski, Little Miami Intermediate School, Paula Joseph, Kent State University, and Stephanie Laskey, Edison Middle School

Abstract

In this paper, four teachers shared their experiences using the following free Web 2.0 tools with their students: Jing, Wix, Google Sites, and Blogger. The teachers found that students reacted positively to lessons in which these tools were used, and also noted improvements they could make when using them in the future.

Keywords: technology integration; Web 2.0 tools; 21st-century skills

As Web 2.0 continues to develop rapidly, the World Wide Web has become a place where people share content, collaborate on projects and interact with one another. Although Web 2.0 tools have been widely used by individuals for personal use, the integration of Web 2.0 tools in classroom settings is still relatively new (Pan & Franklin, 2011). Some teachers have integrated Web 2.0 tools into the curriculum and shared their experiences across teacher networks, including blogs and wikis; however, case studies of the Web 2.0 tools and research- based studies are generally limited (Albion, 2008).

Educators have long known that "show and tell" is an effective way to engage students in sharing knowledge and experience. Show and tell also is an effective strategy for helping preservice teachers learn how to use technology (Koh & Frick, 2009); in fact, professional development for in-service teachers often includes sharing strategies and resources (Duran & Fossum, 2010) as well as explaining how these strategies and resources can be used to incorporate real-world situations to the curriculum (Cormas & Barufaldi, 2011). With the growth of and easy access to Web 2.0 tools in today's environment, teachers may know about tools such as blogs and wikis but may lack the confidence to integrate them into their classrooms (Pan & Franklin, 2011); therefore, accounts of in-service teachers successfully having done so allows them to share their practical, real-world experiences. These accounts may then encourage other teachers to learn how to use a specific Web 2.0 tool, identify how it can be used to help students achieve curricular goals, plan appropriate learning experiences and activities, and implement them with their students.

Web 2.0 tools are attractive to educators because many are free and easy to learn to use through online tutorials, and educators can often establish a protected area within the application where they and their students can use the tool through teacher-controlled access. This paper describes four different teachers' use of free Web 2.0 tools—Jing, Wix, Google Sites, and Blogger—with their students.

Jing

Jing is a Web 2.0 application used to capture images and to record computer screenshots in movie format. Introduced in 2007, Jing was developed by TechSmith Corporation and is available at http://www.techsmith.com/jing. A free account allows up to five minutes of screen recording, includes markup tools to edit or annotate images and provides a free account at Screencast.com that can be used to store and share Jing videos. Online tutorials are available on the Jing website, making it fairly easy to learn.

Seven high school students in a homeschool cooperative setting were taught how to use Jing to create narrated online portfolios of their artwork. The curricular standards used to design the lesson related to critical thinking, creativity, writing for a specific audience, and communication. Students were required to select the artwork to be included in their portfolio,

screen capture photographs of the artwork that were already uploaded on the computer, write and record an audio commentary about each work, and sync the audio recording with the appropriate visual images of their artwork. The screen capture and audio components were completed using Jing, resulting in a video file.

The students, who had no prior knowledge of Jing, were introduced to it and instructed on its use, its capabilities, and its limitations. Examples of Jing videos and screen captures were shown. Approximately one hour of class time was devoted to this instruction. Students had no difficulty in downloading Jing to their respective computers and establishing their Screencast.com accounts. Students were allowed to practice with the application before creating their portfolio videos.

Students were excited and motivated to create Jing videos. These particular students are talented artists and appreciated learning about a tool that may provide a new way for them to promote their work in an online environment. The teacher felt the learning goals of the activity were achieved because all students successfully created a video of their artwork, and the videos included audio commentaries written and recorded by the students. Students reported that the most difficult part of the assignment was aligning the audio recordings so that they would start and end at the same time that a specific artwork was in view. Although students said this alignment was difficult, all were successful in this regard. The success of the activity was demonstrated in the students' subsequent use of Jing to create additional videos on their own.

In the future, the teacher intends to expand the use of Jing by showing students how to upload Jing videos to websites like YouTube and how to add music to their videos.

Wix

Wix.com is a Flash-based, Web 2.0 website builder that is used online, eliminating the need to download an application to a computer. Web pages built on Wix are stored online and accessible on any computer that is Flash player compatible. Wix is appropriate for the classroom because it is a valuable and customizable tool for students and teachers to use and share information.

The project using Wix dealt with the changes in technology over time or the evolution of a product. Seventh- and eighth-grade students engaging in this project learned that technology fulfills our societal wants and needs. They learned about the positives and negatives surrounding the use of technology in society. They also learned about how aspects of Science, Technology, Engineering and Mathematics (STEM) concepts and ideas work together to create and improve products.

To prepare for the student assignment, a classroom Wix page with hyperlinked buttons for each student was created so that students could access their peers' web pages. Wix.com was introduced as "PowerPoint on steroids" to the students. The program was as easy to use as PowerPoint, but it had much more to offer such as animation, hyperlinks, videos, music, all available to users online 24 hours a day. When students realized they already knew how to use the PowerPoint program, they became more confident using Wix. They were less apprehensive about learning a new program when they already had a basic understanding before they began.

The students began their technology investigation assignment after watching the two-minute "how-to" video from Wix. The teacher assisted as needed for any material not covered in the video. Most students were excited to work with Wix and needed little training. The students who were unfamiliar with technology were seated next to students who were advanced in order for them to assist each other as needed. The lesson took approximately eight days to complete from the day it was introduced. The students who finished the assignment early were given an (optional) additional page where they were to put a quotation from the inventor about the invention or innovation. These students also became helpers, assisting other students as needed.

The results of the technology investigation assignment using Wix were remarkable. The resulting projects provided evidence of what each student learned. Each website documented what STEM can do for products and how products changed over time. It was interesting and fun for students to look at their peers' web pages. During the project, the students were highly motivated; in fact, after working on it one day in class, they returned the following day and reported that they had worked on the assignment at home. Students had so much fun with Wix that they actually *wanted* to do their work; furthermore, many students shared their projects with their parents, from whom the teacher subsequently received positive feedback.

The students had met the learning goals set for them once they had completed their Wix pages and the teacher was able to compare their projects to the rubric. If the teacher were to do the project again, she would make

sure that all students complete the tutorial on Wix and build a practice website in order to learn how to use Wix in a relaxed way. As a cautionary note, this project would be difficult for a teacher who is unfamiliar with Wix. The teacher recommends that any educator who wants to use Wix in his or her class use it thoroughly prior to giving the assignment.

One aspect of this project that surprised the teacher was that the students were astonishingly good at Wix. The teacher was a little nervous at first to give the students an assignment worth a large number of points based on the use of a new tool. A few students were initially apprehensive, but using existing templates, they were able to create pages that showed their knowledge in a fun and creative way. The students really took to Wix and even showed the teacher new features by the end of the project. The Wix technology investigation assignment was a positive experience for the teacher and the students because the teacher was able to introduce the students to a new Web 2.0 tool and they were able to use it effectively.

Google Sites

Google Sites, a free tool that comes with a Google account, allows a user to design and create a website. In this project, teams of four 5th-grade students designed a website to demonstrate their knowledge of science concepts and to document their technology skills.

Students were introduced to the project, called Planetary Adventure Website, and were given website guidelines and a grading rubric. The overall goals for the project were for students to understand and explain how the planet Earth compares to other planets in the solar system, and to understand and use Google Sites to collaboratively design an educational website.

The first and most critical step in planning was identifying the grade-level standards and indicators that led to the learning goals for the project. The second step was to establish checkpoints for evaluation and specifying assessment criteria for each checkpoint. Three major checkpoints were included: conducting research, designing a storyboard and creating a website. To assist students with the research portion project, the teacher provided preselected websites and a handout. In addition, storyboard templates for the homepage and subpages were provided to help students design their website, and a tutorial on Google Sites, concentrating on the tools and techniques required for the project was developed by the teacher.

In order to provide a positive learning environment, teams consisted of one inclusion student, one student with behavior challenges, and two students with good work habits. As one of the first activities in the project, each team completed a team contract (created by the teacher) that helped them clarify each member's roles and responsibilities for the project and team plans for functioning throughout the project. Most students took the contract seriously and learned how best to communicate with their team members. Several teams hesitated at first but reached common ground and were able to establish clear goals and expectations.

Students were successful in completing the research component of the project. Those who quickly collected their facts met with the other team members to offer assistance in gathering needed information. As a result, inclusion students received assistance from their teammates and were able to complete the work needed in a collaborative fashion.

In working on storyboards, students used their time efficiently. Conversations among members were focused and positive. Students helped one another develop creative ideas as they designed their storyboards. Throughout the project, students were encouraged to participate in peer reviews, in which they referred to the grading rubric as they informally assessed each other's work and offered suggestions for improvement.

The final aspect of the project was a team presentation, which served as a means for students to demonstrate the depth of their knowledge related to their planet. Students presented factual information creatively and answered questions from the audience. The information they provided from their websites adhered to the project guidelines, their individual team contracts and the grading rubric. However, the questions asked by students in the audience may have provided the best evidence of students' level of understanding of space concepts. The presentations served as a good conclusion to the Planetary Adventure Website because they provided students an opportunity to showcase the knowledge, understanding, and skills gained in addition to providing evidence that students had met the learning goals.

After evaluating the websites and presentations, the classes were debriefed about their overall experiences. A general consensus indicated that students felt they had grown and learned how to collaborate with others. In addition, students suggested that websites could be used for many educational purposes, and they wanted to create another one. Several students noted that their parents had asked them to assist in designing a website for the parents'

work, showing students how Google Sites are beneficial beyond the classroom.

The teacher identified three specific changes to the project to make the project run more smoothly from start to finish. First, more time needs to be allotted for the initial tutorial, and the manner in which students are given directions needs to change. Multiple initial directions were given to students in the classroom and they were expected to remember the directions after relocating to the media center. Many students were overwhelmed with trying to remember the directions and thus lost focus on what they were to accomplish. In the future, the teacher plans to use an interactive white board and the projector to provide directions once students are in the media lab and logged on to a computer.

Second, students must be required to include their references. The teacher provided citation information for preselected resources; however, many teams wanted to find additional information from books and additional websites. Unfortunately, students did not acknowledge these additional resources. To avoid plagiarism and to give proper credit to authors and resources used in the project, the teacher will require that students create a reference list. To help in this regard, the teacher will provide guidelines for Modern Language Association (MLA) format and assist students in organizing their sources.

Third, time for peer review must be included in the project timeline. Learning how to critique and provide positive and helpful feedback to others is important. In addition to providing time to complete peer reviews, time must be allotted for revisions and modifications based on the peer review feedback.

The overall experience from the project was overwhelmingly positive. Most students went above and beyond the minimum requirements, and for some students, it was one of the few times that the teacher saw motivation and excitement about learning. The knowledge and skills gained support the use of Google Sites as an educational tool and provide evidence that fifth-grade students can acquire and develop the necessary knowledge and skills to foster their success now and in their future careers.

Blogger

A blog is a place to write, upload images and documents, create hyperlinks, and invite others to comment on the content the blogger has provided. Blogs can be public or private and provide ongoing updates and dialog. Blogger is a Google blogging tool, a free Web 2.0 tool that is easy to use.

The following is an account of a teacher's initial trial use of Blogger. This educator taught a language arts class comprising 29 sixth-grade students identified as "gifted/superior cognitive gifted in all areas." She decided to test the tool first with a few students from the class before the Blogger was opened to all of her students. The teacher started with six students—three boys and three girls—who were known as both avid readers and good writers. The purpose of the blog was to discuss books they had recently read and to make recommendations to their peers.

By using a blog in the classroom to discuss novels, the teacher hoped to encourage students to read more and to create a dialogue about their reading. The primary goal of the project was to motivate the students to think deeply (critically) and to develop or deepen their love of literature. A blog can facilitate questions and responses that might not arise in class and expose students to books with which they might otherwise be unfamiliar. By having students participate in an online blog that revolves solely around novels targets several of Ohio's state standards for both reading and writing.

At the time of this writing, no specific lesson plan for using Blogger in this class had been completed. When eventually using Blogger with more students, the teacher planned to keep its use somewhat informal. She would like to see the use of Blogger tied to reading for pleasure. If blogging remains informal, it will be more inviting to students and foster a love of reading as well as serve as an incentive to read. If students perceived blogging as a requirement, the teacher was concerned that their enthusiasm would diminish, defeating the purpose of the blog.

First, the teacher sent permission slips home with the students who were chosen to help with the blog. When they returned the signed permission slips, she explained what they were expected to do with the blog. The students were asked to write an informal review of a book about which they felt strongly and submit the review to the teacher. After the review of the book was approved, the student was asked to login to the blog and type the review. The six students were provided passwords so they were each able to access the blog and edit their posts.

Because the teacher wanted the blog to be student controlled, she did little of the planning. The aspect that took the longest was creating the actual blog and preparing it for student use. Once the blog was created, it was the students' responsibility to read books and write their

reviews. These six students were shown the blog, and then teacher demonstrated how to create a post. None of the students had ever used a blog before, but Blogger is a simple tool to use; and the students seemed comfortable with the tool and grasped the concept easily.

The students selected seemed excited about contributing to a blog. They also recognized that not everyone in the class had been selected to participate in this trial blog, so they felt proud, too, yet only two of the six students submitted reviews. The lack of participation was attributed to the informal approach. Because the teacher did not want students to feel pressured about contributing to the blog (thus making it seem like work and not something for fun), she had not asked them about their progress nor had she pressured them to participate. In hindsight, the teacher believes she would need to be more proactive in her encouragement and direction in future assignments. The use of a blog would have little value without student involvement.

Learning goals had not been met at this point because only two book reviews were posted. In addition, the teacher was prohibited from activating the comment option because the school principal felt uncomfortable allowing students to comment, thus they were unable to respond to blog postings. The teacher can moderate the comment feature in order to have control over who responds and what kind of messages students leave on the blogs before they are posted. The teacher hoped to present the school principal with a strong argument to allow the comment feature to be used. In order for the students to meet any of the main objectives, they must be allowed to communicate via the comments.

To test the use of a blogging tool with students, the teacher was relatively satisfied with her procedure. Starting with a small group of students allows the teacher to identify potential problems. Although the use of the comment feature had yet to be resolved by the teacher, she strongly recommended that other teachers try it. Students love social networking; furthermore, blogging fosters their active involvement and critical thinking about their reading, especially when they are able to contribute their thoughts and ideas to blog posts.

The teacher hoped to expand on this activity during the subsequent school year and to engage more students. She wanted to allow students to comment on one another's blog posts. If comments were allowed, she would provide more structure to the Blog and use it for class assignments as well. An example of a simple assignment is requiring each student to log onto the blog twice a quarter and comment on a book review.

The teacher was surprised that the selected students did not submit more reviews. They loved to read and were excited about using a blog. The teacher did not know why they did not submit more, but she may have been partly to blame. She did not remind them or ask them about the blog. Perhaps the teacher was too informal about what she wanted students to do. Although she wanted student use of a blog to be fun, she believed she needed to engage students by asking what they were reading and what they planned to contribute to the blog.

Conclusion

Implementing technology in the classroom can take many forms and can serve many purposes. The accounts presented in this paper describe ways specific teachers have used free Web 2.0 tools with their students. These first-hand accounts highlight the careful planning that preceded using technology with students, lessons learned, and both positive and negative outcomes. The information shared describes ideas about how to integrate Web 2.0 tools in a classroom to promote 21st-century skills, but these ideas are not the only ways that the specific tools can be used. Technology affords opportunities to educators to explore ways to use these tools to help students learn at multiple levels - from informal to formal activities, lessons, and assessments.

Correspondence regarding this article should be directed to: Cindy Kovalikmm Kent State University, (email) ckovalik@ kent.edu,(phone) +1-330-672-6330, 405 White Hall, Kent State University, Kent OH, 44242.

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