Digital Storytelling: Moving from Promise to Practice

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Abstract: Student-created digital storytelling projects provide a number of promising opportunities in the classroom including encouraging student voice, demonstrating deep content learning, and encouraging a greater understanding of the use of media in our culture. Along with this promise come many challenges with both pedagogy and the technology. This paper provides an overview of several different digital storytelling projects in K-12 and teacher preparation classrooms, observations on issues arising in the implementation, and future directions to assist educators in moving from promise to practice with digital storytelling in the classroom.

School children today are bombarded with images, video, sound and other media from a variety of sources including television, radio, the world wide web, and even their own cell phones. The current generation of school aged children are consumers of media in unprecedented means and amounts. Yet, even in Silicon Valley, technology continues to remain at the periphery of instructional practice (Cuban, 2001). Digital storytelling in the classroom offers potential for teachers to combine content learning, various discipline specific processes (revising, editing, inquiry, analysis, etc.) and 21st century skills in student-centered engaging ways. Challenging students to demonstrate their understanding of a course topic through the creation of digital movies not only engages them in the “language of their generation,” but also shifts children from consumer of media to producer. While digital storytelling projects are becoming more widely undertaken, considerable challenges arise in implementing this kind of work.

In working with a range of students (5th graders to graduate students) on digital storytelling projects over the past three years, we have seen both the enormous potential of digital storytelling in the classroom and the persistent challenges that emerge in these projects. Given the current standards-based environment, it is important for educators to be honest and carefully consider how digital storytelling projects can be effectively implemented in the classroom to support student learning. The intent of this paper is not to present formal research findings or offer rigid guidelines for creating and implementing digital storytelling projects in the classroom. Rather, our hope is to identify common promising and challenging aspects of digital storytelling and suggest considerations for moving forward in this fluid, evolving approach to student use of technology to support teaching and learning.

Digital Storytelling in the Classroom

The Digital Storytelling Association (2002) defines digital storytelling as:

“the modern expression of the ancient art of storytelling. Digital Storytelling uses digital media to create media-rich stories to tell, to share, and to preserve.”
Digital storytelling is a potentially powerful means to operationalize what Reeves (1998) refers to as students “learning with” technology. In contrast to using technology as a tutor or practice partner, digital storytelling utilizes technology as a means for students to demonstrate and share their understanding, empowering learners in engaging and authentic ways. The creation of digital stories can give students voice in ways that are not possible without the technology. Rather than limiting students to static expression of understanding, the creation of digital stories provides students with opportunities to leverage the use of images, music, video, and perhaps most importantly, their own voice through narration to tell their story. Students and teachers from the Scott County Public Schools in Kentucky have created a number of different digital storytelling projects, challenging students to share their unique voice in a variety of ways (http://www.scott.k12.ky.us/technology/digitalstorytelling/ds.html). Elementary to high school students created digital poems, personal memoirs, and personal visual essays on topics ranging from courage to family to the September 11 terrorist attacks. A quick review of the students’ projects posted online reveals a variety of rich, engaging student voices.

We attempted to engender this same type of creativity and student voice in a cross-disciplinary project in an undergraduate instructional technology course. In this project, students were challenged to pick up the story of Frank McCourt’s life where he left off in his best-selling memoir, Angela’s Ashes, in the form of a three-five minute digital diary. Students were challenged to research the time period and the Irish immigrant experience in America and collect media that would help them tell their story. At this point, students developed a storyboard of their digital diary, including all the visual, textual, and auditory elements incorporated. Students were encouraged to be creative and take the story in different directions. Some students created a humorous account, while others exhibited a flair for the dramatic. In all cases, however, the students created digital diaries that were creative, true to the time period and context, and rich and engaging through the use of text, images, music, narration, and in some cases, short video clips. A description of the project and student examples can be found online (http://www.ddguild.org/examples/digital_diary.html).

Digital storytelling can also be used in the classroom as an open-ended, divergent means for students to share their understanding of course content. In a fifth grade classroom, students were challenged to create short digital documentaries from one of three periods in American history including the Great Depression, World War II, and the Civil Rights Movement (Swan & Hofer, 2005). After forming groups and selecting a topic, students were guided through researching their topics, collecting appropriate primary and secondary source historical documents, drafting the storyboard for their documentaries, and finally creating a three to five minute movie using Windows Moviemaker. A second iteration of the project with a different group of fifth grade students encouraged them to develop similar documentaries in a new way (Hofer & Swan, in press-b). Rather than reporting on information (akin to a digital encyclopedia entry), students were challenged to “debunk” a myth surrounding an historical figure or event (e.g., George Washington wore wooden teeth, Rosa Parks didn’t know what she was doing by refusing to give up her seat on the bus, etc.). This inquiry-based approach challenged students to explore their topic in greater depth, almost as a detective might. In their research, students collected useful and illustrative text, images, video clips, etc. to help them tell their story. The students then began with the myth as a starting off point and then proceeded to reveal the truth behind the myth, conveying their understanding in a three to five minute video.

In the midst of the 2004 U.S. Presidential campaign, students in an undergraduate instructional technology course recognized the powerful impact of images and media as means of propaganda. This led to a discussion and exploration of digital image and video manipulation to advance a particular point of view. Initial exploration and discussion focused on how easily images could be edited and even fabricated using basic digital imaging software (Hofer & Swan, 2005). The classroom inquiry then shifted to focus on how, through careful selection and framing, even untouched images can be used in persuasive, if not manipulative, ways. In an effort to shift the students from consumers to producers of media, we challenged the students to develop a 45-second public service announcement relating to an important issue in the election. In creating their commercials on issues ranging from opening the Alaskan Wildlife Refuge to gay marriage to the Patriot Act, students incorporated images, titles, narration, and music to make a compelling case for their point of view. Students reported feeling both more cynical of the media but also more empowered to recognize the fluidity and malleability of digital media (Hofer & Swan, in press-a).

The Promise of Digital Storytelling

These projects, while challenging for students and teachers alike, offered many benefits to the students personally and academically. Perhaps the clearest and most tangible benefit of undertaking a digital storytelling project is in terms of student engagement. In both elementary and college classrooms, students enthusiastically surpassed the teachers’ expectations. Even undergraduates in the technology course spent considerably more time
than required outside of class to work on their story, the effects, and the overall aesthetic. One student in particular spent hours during the hectic end of the semester period recording the narration for his digital diary in many different voices to tell a rich story that was triple the required length.

A similar benefit observed in all these projects was the student engagement with not only the moviemaking process, but the course content itself. The classroom teachers all reported that students did more detailed, broad research for these projects than for other course assignments. Even our undergraduate students did extensive research for their movies even though they were created in the context of a technology course in which the technology skills were emphasized to a greater degree than the content. Perhaps most importantly, when framed in an engaging question, students went far beyond the textbook in both researching and telling their stories. In the first fifth grade project, even with encyclopedia-like products, the students incorporated far more content in their movies than they were typically required to learn in the class. In the fifth grade mythbusting example, students ventured even further beyond the textbook, incorporating a variety of information sources in building their storyboards. The important thing to recognize is that the students in these projects went beyond the textbooks not only because they were encouraged to do so by the classroom teacher, but because they were invested in the project in ways that surprised the classroom teachers.

Another benefit of digital storytelling projects in the classroom is the creativity they engender in students. Unlike many other student-centered projects (with or without the use of technology), students are not limited to static products that typically incorporate mainly text and images. Rather, digital stories offer a multi-modal, open-ended forum for students to present their understanding. Just as in a well-crafted film, student digital storytelling products are far more than the sum of their parts. The choices students employ create a synergistic effect in which the multiple forms of media amplify the message and leverage the dual coding nature of how people learn (Clark & Pavio, 1991).

**Pedagogical Challenges**

While the potential benefits of digital storytelling are substantial, it is equally important to recognize, acknowledge and consider the challenges presented as well – both in terms of the pedagogy and the technology employed. In our experience and in talking with classroom teachers, the pedagogical challenges have the greatest impact in determining the success of a project. As discussed above, the way a digital storytelling project is framed will help determine the quality, focus and direction of student products. It is essential, given the divergent and open-ended nature of digital storytelling, that the teacher carefully frame the activity and explicitly tie the project to the core content and process goals encompassed in the curriculum. In these kinds of projects, there is wide latitude for students to go off on tangents and stray from the purpose of the project. The challenge is for teachers to frame the exercise in an engaging way that leads (although not necessarily in a lock-step approach) to the kinds of knowledge, understanding, and experiences desired.

Even with this focus on content identified, articulated, and incorporated into a project, the teacher must also carefully consider how to support the students along the way. Oftentimes digital storytelling projects encompass a range of skills, processes, and content goals. In the digital diary project discussed above, students had to undertake research, engage in creative writing, editing and revision, and consider the potential and impact of images, music, and narration on the mood and tone of their story. And this all had to take place before ever actually sitting down at the computer to create their digital diaries. Ohler (2005), Paul & Fiebach (2005) and others provide a variety of pedagogical scaffolds to assist students in this multi-faceted endeavor. Assessment of student learning must also be carefully considered and planned for. While rubric creation tools like Rubistar (http://rubistar.4teachers.org/) offer assistance in the actual creation of an assessment instrument, Baker (1994) writes extensively about the importance and challenge of creating effective performance-based assessments.

The constraints of the K-12 classroom today must also be considered in implementing a digital storytelling project. In an era of standards-based assessment, the pressure to “cover” course content and ensure student mastery of course material, teachers must align their classroom work with standards. Time is at a premium for classroom teachers and extended projects are difficult to work in to the unit plan. While a teacher might choose to assign portions of the project for homework, pre-select websites for student research or even provide an archive of media for the students to use in creating their stories, these kinds of projects certainly require more class time than a more teacher-directed approach like lecture and demonstration. Even if the time factor can be overcome, many state standards don’t necessarily lend themselves to this kind of learning. It is important therefore, to design digital storytelling projects in such a way that aligns closely with state standards and encourages student mastery of the
standards in a reasonable time frame. While not necessarily incompatible (see Harris, 2000), these constraints certainly pose a challenge to classroom teachers.

Technological Challenges

In addition to these pedagogical challenges, the use of the technology required to create a digital story layers on an additional set of challenges. While the necessary software is often bundled with both the Microsoft and Apple operating systems (Windows MovieMaker and Apple iMovie, respectively), the “high ceiling” or flexible and rich capabilities of the software can lead to a problem of excess. We have seen many cases in which students can easily get bogged down in exploring all fifty options for transitions from one image to another in MovieMaker or spend an hour in iMovie developing the perfect Ken Burns effect to zoom into an image in their movie. While the aesthetic value in both student and audience engagement cannot be disputed, there is a delicate balance between incorporating effects and elements that enhance a movie and those that either add no value or even distract from the story. Other types of software which are more streamlined do not always offer capabilities that can be very important in digital storytelling such as the ability to incorporate simultaneous narration and music. It is a challenge for the teacher to select the software to be used in the project to provide enough, but not too many, features for students to create their movies.

File storage and management is another persistent technical issue encountered in implementing a digital storytelling project. First, just managing the multitude of image and sound files (not to mention bookmarked websites, 3x5" notecards of excerpts from books, etc.) can be a daunting prospect. If the project will take place in a computer lab, files might be inadvertently deleted by another student, misfiled, or even erased by the computer lab technician. This often necessitates students either storing their files on personal disks, which can easily be lost, or the teacher backing up the necessary files on each computer. Once students begin developing their projects, the project files become quite large, often surpassing the storage capability of common personal storage devices. The time and space required to render and then save the completed movie files can also be daunting. For example, it is not unusual for a two minute movie exported as a Quicktime file from iMovie to be 25MB or more, even in relatively small format.

Finally, the most amorphous and ambiguous challenge relates to copyright and fair use of media found online. While it is commonly recognized that materials found on the web are subject to copyright laws, it is far less clear what might be considered “fair use” of materials for this type of project. Langran (2005) provides helpful guidance on when it is and is not appropriate to use copyrighted media in classroom projects, but the interpretation of fair use is widely varied and often debated. Until the provisions for educators’ fair use of materials are either broadened or at least clarified, it is important for teachers to proceed cautiously or have students create their own artwork as in the Scott County projects.

Future Directions

How then can the promise of digital storytelling be harnessed while simultaneously minimizing the challenges faced in planning and implementation? While digital storytelling is a widely divergent and rich instructional approach, we believe there are three common areas that merit increased attention and exploration.

1. It will be important for researchers and practitioners to systematic in developing an efficient, effective instructional model to implement digital storytelling projects in a range for settings for a range of purposes. In our experience, multiple implementations of similar projects have been invaluable in refining our approach. A design-based research approach, in which iterative formative evaluation helps to both improve an instructional approach and develop theory of teaching and learning, may be particularly effective in assisting this effort.
2. It is a challenge for the teacher to select the software to be used in the project to provide enough, but not too many, features for students to create their movies. While commercial products are powerful and generally effective, the development of an online digital storytelling software interface may help to minimize the technical challenges involved in implementing a project while simultaneously offering only those features that contribute to effective digital stories. The Digital Storyteller project at the University of Virginia is one promising approach.
3. The challenges noted above are not likely to be overcome by individual teachers or researchers. In a complex, multi-faceted endeavor like this, there is a need for collaboration in development, pooling of products and results, and means and protocols for replication of products.

If we, as educators, hope to move from promise to practice with digital storytelling, we must simultaneously proudly share the work of our students and continually improve upon how we support this work. Perhaps online digital storytelling communities such as the Digital Directors Guild (http://www.dgdguild.org) may assist in bringing together educators at all levels to explore these challenges collaboratively. Filmmaker George Lucas provides a compelling argument that this work is important for our students:

We must teach communication comprehensively, in all its forms. Today we work with the written or spoken word as the primary form of communication. But we also need to understand the importance of graphics, music, and cinema, which are just as powerful and in some ways more deeply intertwined with young people’s culture. We live and work in a visually sophisticated world, so we must be sophisticated in using all the forms of communication, not just the written word.

When people talk to me about the digital divide, I think of it not being so much about who has access to what technology as who knows how to create and express themselves in this new language of the screen. If students aren’t taught the language of sound and images, shouldn’t they be considered as illiterate as if they left college without being able to read or write? (Daly, 2004, p. 38)

References


