Capturing Stories, Capturing Lives: An Introduction to Digital Storytelling

David S. Jakes   Joe Brennan
Instructional Technology Coordinator   Visual Literacy Facilitator
Community High School District 99   Niles Township High Schools
Downers Grove, Illinois   Skokie, Illinois
djakes@csd99.org   joebre@niles-hs.k12.il.us

Imagine a learning experience, supported and extended by the application of technology, that empowers students to create and contribute, all within the context of what they are expected to know and be able to do in the 21st Century. Imagine that this learning experience provides students with a compelling and competitive voice and enlarges the boundaries of their ability to communicate, potentially to a worldwide audience. That learning experience is digital storytelling.

Everyone has stories, including our students. Stories come from a variety of places, from a person's past to their imagination. Some can be funny, some can be painful, but all are personal. Digital storytelling is the process of writing about that story, and adding the multimedia elements of voice, imagery, and music to create a visual story.

In this paper, we will talk about how the process of digital storytelling works, what students learn, and how to build a digital storytelling program in your school.

How does the process work?

The process of digital storytelling can be broken into a series of steps. Following these steps will help ensure that a successful experience will be provided. The end goal of this process is to complete a digital story between 2-3 minutes in length that is composed of about 20-25 images and has a script length of about one page, double-spaced. Steps 1-3 are done in the classroom before a student even uses a computer, steps 4 and 5 are done in a computer lab, and step 6 can occur back in the classroom or any other venue, including online.

Step 1: Writing. Digital storytelling first begins with writing (Figure 1). Students write, rewrite, and continue the writing process through multiple drafts. In most cases, this writing takes the form of a personal narrative about a particular story from a student's life, although the rules and applications of digital storytelling to curriculum are certainly open-ended. It is important to note that the most effective digital stories have their genesis in sound writing, so it is important to emphasize the value of multiple drafts. Within the writing, it is important that the story have a central theme, such as loss, or accomplishment, among others. The importance of this theme is for the viewer of the story; even though the story

is about another's experience, the viewer relates to the story because they have experienced similar types of events in their lives.

Step 2: Script. After the narrative is completed, students develop a script. This script is usually a distillation of the essential components of the narrative story. As the digital story is created, the script forms the foundation, and the inclusion of the various multimedia elements serve to rebuild the story. For example, the narrative may be between three or four typed pages. The script resulting from this narrative may be about a page in length. Producing the digital story from the script ensures that the multimedia elements convey and contribute meaning to the story, rather than being included to make the story more "interesting."

Step 3: The Storyboard. In this step, students are required to complete a storyboard to organize the flow of their movie. The storyboard includes a place for the student to associate their script with a visual (still frame or video). At this point, students still have not searched for visuals, however, the storyboarding process permits students to determine or draw the type of imagery that will be associated with a particular portion of the script. This is an essential management tool; when this is done correctly, students (in the next step) will be much more effective in locating their multimedia elements because they have a clear vision of what they are looking for. It is the step most students dislike the most, and that most teachers do not do, but it is essential!

Step 4: Locating Multimedia. In this step, students use search tools such as Google (http://www.google.com), Mamma (http://www.mamma.com), Altavista (http://www.altavista.com), alltheweb (http://www.alltheweb.com) and Singingfish (http://www.singingfish.com) to locate still-frame imagery or video. Students may also scan images from photographs from personal collections at this point. It is important to note, depending on the topic of the digital story that students will indeed bring in personal photos; it is important that the computer lab have sufficient scanning capability.

In Community High School District 99 in Downers Grove, Illinois, we have had excellent success with digital stories that range between 20-25 images in length. We have discouraged the inclusion of video as video adds another layer of complexity to the process, both in the rendering process (making the final movie) and memory storage requirements on our network. Also, we have found that students can create very compelling stories by using still frame imagery. These generally are JPEG images and this number can easily be stored in student's personal storage space on the District 99 network without any memory space issues. We have also found that digital stories above this number of images begin to lose their effectiveness, as the visuals carry less meaning and are included in the projects simply because students can.

Step 5: Creating the digital story: In this step, students create their story using the software available to them.

On Macintosh platforms, this would be iMovie HD. On PC platforms, this might be MovieMaker 2 (available as a free download from Microsoft for XP operating systems), Photostory 3 (also available as a free download from Microsoft and appropriate for younger students), or Pinnacle Studio 9. In District 99, we support Pinnacle Studio 9 and have had very good success with the product.

To learn the software, the teacher (or in some cases, a librarian) will give a demonstration which takes about 40 minutes-after this, the students are very competent on the software. We suggest that the students be supported with printed tutorials and even a digital storytelling Web site. In District 99, this is facilitated through our Blackboard Learning Management System. This site also includes a discussion board to ask questions of their teachers. Interestingly, many of their classmates end up answering their questions!

Generally, it takes about 4-5 class periods (50 minutes each) to complete the movie. The most difficult component is recording the voice (called the voice-over) from the script. Students, like most people, do not like how they sound when recorded. After a few trials however, most students resolve this issue and push on. We have found that recording their voice-overs in 2-3 sentence "chunks" is most effective; if students make a mistake they do not have to record the entire voice-over, just a small portion of it. To facilitate the recording of voice-overs in a noisy lab, we suggest using Sennheiser PC-130 noise canceling microphones that allow students who are side by side to record without interfering with each other.

Once the components of the digital story are assembled, students then produce the final movie, a process called *rendering*. We have students render their movies as a Windows Media Player file (we are a PC district) in low quality (160 X 120 pixels) just to determine if the movie is what the student had intended. Once satisfied, we re-render the Pinnacle Studio file into a new Windows Media file of high quality (720 X 480 pixels) for their final product. Students then add the completed movie (turn the movie in) to a shared directory that can be accessed by the teacher so that evaluation can occur. The advantage of the Windows Media file is that it can be played on any PC.

Step 6: Share. This is a critical step. Students are generally intensely proud of their creations. Showing their movies in class has a tremendous effect on classroom relationships-they get insights into their fellow students that they would have never known had they not seen their digital stories. Showing the digital stories help students understand each other as human beings, and it helps kids to understand that they all share common experiences, and that the person with the blue hair across the room is not that different from them.

Additionally, students have the opportunity to share their stories with a global audience by uploading their products to DigitalStories.org,

(http://www.digitalstories.org) produced by Niles Township High School District 219.

At this point it is important to point out that only steps 4-5 are done in a computer lab. Much of the work required to complete an effective digital storytelling experience can be done in a traditional classroom environment.

What do students learn?

The process of digital storytelling provides a high-quality learning experience because the learning experience honors the writing process first. The inclusion of the technology into the process represents a "value-added" approach where the inclusion of the technology extends the learning experience beyond what could be accomplished without technology.

- Digital storytelling develops visual and multimedia literacy in students. Digital storytelling addresses the development of the interpretation of digital media and the application of that interpretation to a personal message or story.

- Digital storytelling provides students with a competitive and compelling voice by enlarging the boundaries of who students can communicate with and by increasing the depth and power of that communication.

- Digital storytelling permits students to recapture creativity, develop it and intensify it, apply it, extend it…

- Digital storytelling helps students write more effectively by permitting the visualization of the writing, resulting in an additional level of perception that extends the writing process to a place seldom reached.

- Digital storytelling provides an authentic personal learning experience- as such; student investment is greatly increased resulting in greatly improved motivation and end product.

- Digital storytelling teaches elements of technology and information literacy-students use many different computer applications and must be conversant about locating and managing visuals and video, as well as being able to do so in the context of copyright and fair use.

Building your own digital storytelling program

Building a digital storytelling program involves a careful and thoughtful plan built with all stakeholders in mind. The following are suggestions for beginning:

- **Begin with a staff development program** where program participants build their own story. Include support personnel in the storytelling staff development. Teachers must be active participants in the construction of digital stories; they MUST have the capability to answer software related questions.

- **Begin with a small pilot program**. The process of digital storytelling is support-intensive and system intensive. To produce a digital story requires a great deal of student support as well as a stable technology infrastructure. Test both by running several small projects first and get the "bugs" worked out. Test, test, and more testing of the technology, hardware, software and network.

- **Place software in an area where all teachers/students have access**. Many students will want to, and need to, work before and after school, and during free periods.

- **Build administrative support for digital storytelling.** Be ready to defend the process-what do students really learn. Our current reality includes high stakes testing and school curriculums packed with content.

- **Focus on the writing process first and foremost.** Successful stories begin first with quality writing.

- **Require storyboard-do as much "outside the technology" as possible.** Make use of computer time wisely. Require students to complete the project on their own time.

- **Begin building a library of best practice examples.** This is NOT PowerPoint. Digital storytelling should not be used for traditional reports.

- **Clearly identify all support needs and responsibilities.** This includes human support as well as tutorials/documentation for students.

- **Initially, avoid the inclusion of video.**

- **Work very hard with students on the use of transitions**. Students have PTS (PowerPoint Transition Syndrome); they'll want to use every transition known to mankind-even though it completely distracts or ruins their story.

- **Be sure to carefully consider all copyright issues.** Use digital storytelling as a "teachable" moment to address copyright and fair-use.

- **Avoid cooperative projects.** Storytelling is an intensely personal process; because of the personal nature of the story, students are thoroughly engaged and product quality goes way up.

Conclusion

Digital storytelling provides a truly engaging learning experience which blends writing, technology and emotion to create a compelling product of value. This process is one that students can use throughout their entire lives to tell their stories. Many Web sites are now beginning to accept video submissions; will our students in second grade eventually be submitting digital letters to the editor? Time will tell, but in the meantime, the process of digital storytelling provides one of the best learning experiences available to students.

Figure 1: The Digital Storytelling Process.

```
        ┌─────────────────────────────┐
    ┌───│      Step 1: Write          │
    │   └─────────────────────────────┘
    │                 │
    │                 ▼
    │   ┌─────────────────────────────┐
    ├───│   Step 2: Develop Script    │
    │   └─────────────────────────────┘
    │                 │
    │                 ▼
    │   ┌─────────────────────────────┐
    ├───│     Step 3: Storyboard      │
    │   └─────────────────────────────┘
Done in Class        │
    │                 ▼
    │   ┌─────────────────────────────┐
    │   │  Step 4: Locate Resources   │───┐
    │   └─────────────────────────────┘   │
    │                 │              Done in
    │                 ▼              Computer
    │   ┌─────────────────────────────┐   Lab
    │   │      Step 5: Create         │───┘
    │   └─────────────────────────────┘
    │                 │
    │                 ▼
    │   ┌─────────────────────────────┐
    └───│      Step 6: Share          │
        └─────────────────────────────┘
```