

Digital Storytelling

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Abstract

This entry provides an overview of digital storytelling, the practice of using computer-based tools to create short stories that can be shared online. A brief history of digital storytelling and some of the key concepts and practices of this technology method are described. One of the most common uses of digital storytelling is in education, because of its ability to serve as both a powerful tool for educators and students. Benefits of digital storytelling among students includes the acquisition of 21st century literacy skills, which have been cited as a critical need for learning, working and advancing in today's technology-intensive world. A multi-step process for creating digital stories is presented along with information about hardware and software that is needed for digital storytelling.

Keywords: computer, digital, storytelling, multimedia

Digital storytelling is the practice of creating a short movie by combining digital artifacts such as images, text, video clips, animation, and music using a computer-based program. Digital stories typically have narration in the form of recorded audio that provides an emotional element to the story. The digital story is saved in a digital format that can be viewed on a computer or other device capable of playing video files. Digital stories are usually uploaded to the web where they may be viewed through any popular web browser. As is the case with traditional storytelling, digital stories revolve around a chosen theme, often contain a particular viewpoint, and are typically just a few minutes long.

Despite its emphasis on computer technology, digital storytelling is not a new practice. One of the field's most noted pioneers is Joe Lambert, the co-founder of the Center for Digital Storytelling (CDS) now called StoryCenter, a nonprofit, community arts organization in Berkeley, California. The CDS has been assisting young people and adults in the creation and sharing of personal narratives through the combination of thoughtful writing and digital media tools since the early 1990's. Another pioneer in the field, British photographer, author, and educator Daniel Meadows has called digital stories "short, personal multimedia tales told from the heart." The beauty of this form of digital expression, he maintains, is that these stories can be created by people everywhere, on any subject, and shared electronically all over the world.

Many practitioners of digital storytelling believe that digital stories are distinct from, although often related to other types of videos, such as interactive stories, narrative computer games, slideshows with

images and short narrated films. Although, there may be diverse opinions on what constitutes a digital story, and there is no one perfect definition that fits all stories and all people, it is ultimately up to individual viewers to determine what they consider a digital story to be or not be.

Basic Elements of Digital Storytelling

Joe Lambert is known for disseminating the Seven Elements of Digital Storytelling (2003), which was first proposed in the early 1990s and is still cited as a useful starting point to begin working with digital stories. The seven elements are: 1) Point of view (of the author), 2) a dramatic question, 3) emotional content, 4) the gift of your voice (narration), 5) the power of the soundtrack (to support the storyline), 6) economy (of length), and 7) pacing of the story. Lambert (2010) later updated the Seven Elements to the Seven Steps of Digital Storytelling as shown in Table 1.

Table 1
The Seven Steps of Digital Storytelling

1. Owning your Insight	finding your story
2. Owning your Emotions	identifying and conveying personal content
3. Finding the Moment	identifying the moment of change in your story
4. Seeing your Story	visualizing, locating and understanding the images
5. Hearing your Story	adding your voice, music, sound effects
6. Assembling your Story	using structure, pacing, and economy
7. Sharing your Story	presenting your story to an audience

Categories of Digital Stories

Digital Stories typically fall into three categories: personal narratives, historical documentaries, or stories that inform or instruct. Personal narratives usually revolve around a significant event in the creator's life and may include stories that honor the memory of specific people and places, deal with life's adventures, or share accomplishments, challenges, and recovery. Personal narratives have multiple benefits in an educational setting. Students who view the story learn about people from diverse backgrounds other than their own, and they can gain an appreciation of the types of hardships faced by others. Personal narratives can be used to facilitate discussions about current issues such as race, multiculturalism and the globalization and can be a positive way of dealing with emotional issues.

Digital stories can also be used to recount dramatic historical events that help viewers understand the past. In a classroom environment, students might use historical photographs, newspaper headlines, speeches, and other available materials to craft a story that adds depth and meaning to events from the past. Perhaps the most common use of digital stories is to inform or instruct. Teachers can use

this type of digital story to present information to their students on subjects ranging from math and science, to art, technology, and medical education.

Benefits of Digital Storytelling in Education, Business, Communities, and Health Sciences

Digital storytelling is currently being used in diverse ways around the world - in education and training; in business marketing; in organizations and non-profits such as libraries, community centers, and museums; and in health science education. In education and training, digital stories are used to present new material, facilitate discussion, and make abstract or conceptual content more understandable. Research has shown that teachers' use of multimedia helps students retain new information as well as aids in the comprehension of difficult material. Students who create digital stories learn to organize their ideas, ask questions, express opinions, construct narratives, and present their ideas and knowledge in an individual and meaningful way (Ohler, 2007). In addition, when digital stories are published online, students have the opportunity to share their work with their peers and gain valuable experience in critiquing their own and other students' work, which can promote gains in emotional intelligence and social learning.

In business, digital stories are most often used in marketing to create connections between products and the audience on a deep emotional level and encourage a particular action. Nike's inspiring digital stories that began in 1974 with the theme, "Just do it," is a good example. These stories continue to engage viewers because these emotional and innovative stories communicate across all generations and sports in a way a print advertisement cannot.

For community organizations and non-profits, digital storytelling can be an effective way to engage audiences or gain support for a cause. Because digital storytelling is a universal way of communicating, museums can inspire visitors to connect with the artifacts and their own experiences and history. A 2014 report by the Rockefeller Foundation, *Digital Storytelling for Social Impact*, described how digital storytelling can help social impact organizations advance their missions and provided recommendations for skills, technologies and metrics to evaluate the effectiveness of digital storytelling.

In health sciences, digital storytelling can be a tool for patients and health science professionals to share experiences, cope with illnesses, and add a human element to health problems. For example, community digital storytelling workshops can empower cancer survivors to create digital stories that reflect on their experiences as well as provide an authentic way for others to learn about the disease. Projects such as *Health Equity Change Makers*, share personal stories about health disparities and *We Are Healers* provides stories and discussion resources about American Indian people who have become health providers.

Challenges of Digital Storytelling

Creating an effective and engaging digital story is a challenging task. Creators must grapple with writing an effective script, respecting copyright for the multimedia elements included in the story, recording narration that communicates the story, choosing music that enhances but doesn't overpower the narration, and using feedback to improve the story. Teachers must find ways to guide the creative

process, assess the stories, and model intellectual property use as well as protect students' safety when using online resources.

Some teachers may be reluctant to use digital storytelling in their classrooms because they do not know how to assess their students' work in a meaningful and practical way. Assessment of student-created digital stories can take place during the design process, during the development process, and after the digital story is completed. Each of these categories can be divided into self-assessment by the student who created the story, peer-assessment by fellow classmates, and educational assessment by the teacher. Story Circles allow students to share the rough drafts of their scripts in order to get peer feedback about their initial efforts at writing down their ideas. Story Circles can be a vital and integral part of story development in which a teacher can observe the interactions and also ask students to reflect about what they changed in their script after this peer feedback process. Story Screenings allow students to receive feedback from peers when a digital version of the story has been created. Other common assessment tools include checklists and rubrics, although more innovative approaches such as using a digital story as a reflective e-portfolio can be used for students to provide evidence of their learning.

The Digital Storytelling Process

The design and development of a digital story is a multi-step process that begins with the selection of the topic for the story and ends with the publishing of the completed digital file, with a number of steps in between. A 12-step process that is used in digital storytelling courses and workshops is presented in Table 2.

Table 2

A 12-Step Process for Digital Storytelling

Step	Task	Recommendations
1	Choose a Topic	Begin by thinking of the purpose of the story and define the audience.
2	Conduct Research on the Topic	You can use online search engines, but don't forget that the library can also be a useful research tool.
3	Write the First Draft of the Script	This will serve as the audio narration for your story. Read aloud what you have written. Make sure that the purpose of the story is clearly articulated and includes an identifiable point of view.
	<i>Script Tip: Keep Your Script Small and Focused</i>	<i>You are writing a script for a digital story which is typically only a few minutes long. Focusing on a specific problem or topic will help you create a better digital story.</i>
	<i>Script Tip 2: Make it Personal</i>	<i>Your digital story is unique. It is your story, and the audience will want to hear it from your perspective. You may even need to reveal personal details in the story to reach an emotional depth, although it is up to you to decide what details you wish to share with others.</i>
	<i>Script Tip 3: Understand the Story Arc</i>	<i>Most stories consist of three parts: a beginning, middle, and end. The beginning is where you set the scene and begin the plot. The middle is where you provide more details about the topic or problem you are trying to explain. The story should be building towards a climax or resolution. The end is where the questions are</i>

		<i>resolved. Will new knowledge make you stronger? Will you now be able to accomplish greater things? What happens next in your life? These questions will be answered and new insight will be revealed. The conclusion of your story should connect back to the beginning to form a thematic arc.</i>
4	Receive Feedback on the Script	Share your script with others and ask them to give you feedback on what they thought might make your story clearer or more useful.
5	Revise the Script	Use the feedback you received to improve the next version of your script. Script writing is an iterative process and it takes several attempts to get good results.
6	Find, Create and Add Images	Use an online search tool specifically for images, such as Google Image Search . You can search for photographs, drawings, clip art, maps, charts, and more. Don't forget that you can use photos you take yourself with a digital camera.
7	Respect Copyrights	Look for material that is in the public domain or has a Creative Commons license.
8	Create a Storyboard	The storyboard is a written or a graphical overview of all of the elements you plan to include in the digital story. It serves as a blueprint or an advanced organizer as you plan to construct your digital story. Storyboards can help you visualize your story before it is created when it is easier to make changes or add new content.
9	Record Audio Narration and Add Background Music (optional)	Try to use a high-quality microphone or a voice recording app on a smartphone. Music that is appropriate to the theme of the story can add richness by complementing the narration. There are many great sites online that provide copyright-free music at no cost.
10	Build the Digital Story	Select the software tool you will use to create your digital story.
11	Give and Receive Feedback on the Digital Story	Participate in a Story Circle: Share your story with others and ask them to give you feedback on how to improve the digital version.
12	Publish the Digital Story	Share your digital story online at locations such as YouTube , Google Drive , Microsoft OneDrive , Dropbox , etc.

Hardware Needed for Creating Digital Stories

The basic hardware requirements for digital storytelling include a computing device to gather and assemble the media elements and a microphone to record audio narration. A digital camera, video camera and a scanner are useful pieces of hardware that can be used to create still images and video clips. When digital storytelling first began, a Windows or Macintosh desktop or laptop computer, usually connected to the internet, was needed. However, as computing devices have evolved, smartphones and tablet computers can now be used to download content from the web, take digital photos, record audio narration, and shoot full-motion video, all important tasks in creating a digital story.

Software Programs for Creating Digital Stories

Digital stories can be assembled with software installed on a desktop or laptop computer, with web-based tools, and with mobile apps for smartphones and tablets. The advantage of web-based software and mobile apps is that they employ simple, cross-platform interfaces and take advantage of cloud-based storage. Microsoft Movie Maker, Apple iMovie, and Adobe Premiere are examples of software programs that can be installed on a desktop or laptop computer. WeVideo is an example of digital storytelling software that can be used through a web-based interface. Smartphones and tablet apps that can be used for digital storytelling include Com-Phone Story Maker, Magisto, Splice and Storyrobe.

“Those who tell the stories rule the world.” Native American Proverb

To Learn More

The Educational Uses of Digital Storytelling website (<http://www.coe.uh.edu/digitalstorytelling/>), created by educators at the University Houston, serves as a comprehensive clearinghouse of information for those just starting to use digital storytelling as well as for those who want to deeply explore the many facets of this educational technology practice. The site contains example digital stories, tutorials, links to e-books, websites, articles and research studies about digital storytelling.

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