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Engaging Learners for Cognitive and Affective Gains

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COMMON GROUND

Storytelling in the Digital Age: Engaging Learners for Cognitive and Affective Gains

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Abstract: This paper examines digital storytelling within the context of IWitness, a new online application developed by the USC Shoah Foundation Institute that engages secondary school students in viewing and interacting with video testimony from Holocaust survivors and other witnesses. After participating in IWitness pilot projects in classroom and professional development settings, high school students and educators respectively shared reflections on their educational trajectories, reported on their own learning, and offered observations about the changes they noticed among themselves and their peers. These data suggest that, as a digital storytelling vehicle, IWitness facilitates cognitive and affective growth, as well as prepares learners for the challenges of 21st century engagement.

Keywords: Visual History, Testimonies, 21st Century Literacies, Storytelling, Digital Storytelling

S torytelling has long played an integral part in education; at one time, it served as students' primary means for learning about history, morality, and human nature. In the words of philosopher David Abram (1997), "Stories hold, in their narrative layers, the sedimented knowledge accumulated by our progenitors" (p. 181). Said another way, "It is only in the narrative mode that one can construct an identity and find a place in one's culture. Schools must cultivate it, nurture it, and cease taking it for granted" (Bruner, 1996, p. 2). As the educational landscape becomes increasingly digital, there is some concern that the centrality of storytelling in education might become displaced. It appears, however, that this is hardly the case. Boisterous family gatherings, noisy restaurants, and packed houses of worship all suggest that traditional storytelling is far from a lost art or a relic of the past. Simultaneously, digital storytelling has made an important impact on education. Rather than engaging less frequently with storytelling, contemporary students appear to be engaging more frequently and, arguably, more meaningfully with storytelling. This delivers an exciting opportunity for optimizing and enriching student learning.

Storytelling in Education

Storytelling serves many functions. Some scholars maintain that stories and storytelling define our humanity. Rhetorician Walter Fisher (1987) described people as "storytelling animals." Declared essayist Robert Stone (1988) in his short treatise on narrative, "Storytelling is not a luxury to humanity. It's almost as necessary as bread. We cannot imagine ourselves without it because each self is a story" (p. 75). Futurists Mathews and Wacker (2008) postulated: "Throughout the course of human history, stories have been used for every imaginable social function, from framing the social order and law, inspiring the creative, fueling the romantic, to justifying wars and explaining away unpopular peaces."

Significantly, Mathews and Wacker also alluded to what makes storytelling succeed–relevance. Contemporary students often wonder whether any of what they learn in school really matters. Their skepticism is not unwarranted–as the worlds that students negotiate transform before

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their very eyes, many of yesterday's lessons are becoming less applicable to today's and tomorrow's contexts. Effective educators recognize that students' engagement depends on their perceptions of relevance (Reilly, Vartabedian, Felt, & Jenkins, in press). These educators find ways to draw vital connections between classroom curricula and real world impact. Storytelling is an effective means to do exactly this. "In the end, storytelling comes down to two things: connection and engagement" (Mathews and Wacker).

Traditionally, the convention of educational storytelling involved the student primarily as recipient—a listener in a fixed place in close proximity to the educator-as-storyteller. Contemporary *participatory culture* (Jenkins, Purushotma, Clinton, Weigel, & Robison, 2006) blurs the lines between educator and learner, and between storyteller and audience. According to Jenkins and colleagues (2006),

> A participatory culture is a culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one's creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (p. 3).

Managing cultural shifts can feel disorienting, and demystifying new practices and products can take time and energy. But educators' embrace of participatory culture can facilitate students' social and emotional growth (Felt, Vartabedian, Literat, & Mehta, 2012). Increased access to tools and opportunities for interactivity and co-construction also means increased generativity, i.e., more capturing, crafting, telling, retelling, editing, publishing, processing, and meaning-making. These are the activities upon which literacy in general, and digital literacy in particular, depends.

Barabara R. Jones-Kavalier and Sauzanne L. Flannigan argued that "prior to the 21st century, *literate* defined a person's ability to read and write, separating the educated from the uneducated. With the advent of a new millennium and the rapidity with which technology has changed society, the concept of literacy has assumed new meanings" (1). Digital and visual literacies are key elements of the new understanding of literacy. Today's students are mobile and connected–to each other and to their technology. Whether for social, recreational, or educational purposes, they are deeply engaged with visual and digital media. Today's 21st century students need to be literate in digital, visual, and media literacies; they have to know how to understand the value of what they find whether in digital, visual, or textual form. They also need to understand the meaning of what they have found in the context of their world and the world around them, and be capable of action based on that comprehension. As Sonya Livingstone has suggested, "the emphasis on critical literacy must be broadened to include information searching, navigation, sorting, assessing relevance, evaluating sources, judging reliability and identifying bias" (108).

This paper explores the tremendous potential of digital media as a vehicle for student-centered learning through storytelling, from both a receptive and expressive perspective. Because digital storytelling incorporates technology into the creation and dissemination of content, it offers a broad reach. According to Anderson, "A digital story allows people to connect socially beyond their communities with a diverse and vast audience. Vastly different from the early scholars' ideas of traditional storytelling, digital storytelling provides a new dimension to the study of storytelling" (2010). This new dimension includes increased opportunities for capturing, telling, retelling, editing, and sharing, as well as for watching and making meaning. It allows anyone with the necessary tools to serve as storyteller, giving voice to all who choose to share.

Networked technology can facilitate these digitized stories' spread near and far. In a 2007 survey of American teens, 57 percent indicated that they watch content from video sharing sites such as YouTube (Lenhart, 2007). Librarian and social media expert Katie E. Anderson (2010)

believes this has important social implications. "A digital story allows people to connect socially beyond their communities with a diverse and vast audience… Storytelling itself builds on its past while embracing technologies of the future. Specifically with the community-driven and social technologies, storytelling will be shared, created, and enjoyed by broader audiences than ever before." Digital storytelling, therefore, harnesses engaging and relevant ways to explore worldviews. It also gives students the opportunity to incorporate their own personal stories and firsthand experiences into the tales that they study. "Integrating visual images with written text both enhances and accelerates student comprehension, and digital storytelling is an especially good technology tool for collecting, creating analyzing and combining visual images with written text" (Robin, 2008). This inspires our current investigation, which is focused on how digital media works to facilitate student's storytelling skills and in turn impacts cognitive and conative learning. Providing students an environment within which to engage with stories and to create their own stories, with proper scaffolding, develops in students not only the abilities to deepen understanding of foundational knowledge, but also the capacity to value, appreciate, decide, act and commit (Lombardi, p. 8).

IWitness

The USC Shoah Foundation Institute was founded in 1994 by Steven Spielberg and became part of the University of Southern California Dornsife College in 2006. The Institute's Visual History Archive includes nearly 52,000 interviews with survivors and witnesses of the Holocaust speaking in 34 languages from 57 countries, amounting to over twelve running years of testimony. It is the largest audio-visual history collection on a single subject in the world. IWitness, a new online application developed by the Institute, gives secondary school students and teachers access to search, watch, and interact with more than 1,000 video testimonies of Holocaust survivors and other witnesses. Students interact directly with life stories–listening, watching and reflecting-in the online platform provided by IWitness.

For the Institute, evaluation is an evidence-based activity directed at collecting, analyzing, and communicating information on the workings and effectiveness of IWitness as an educational product. The approach is based on a social science model and is focused on measuring affective, cognitive, and behavioral factors through appropriate research design, including objective and subjective measures. The Institute works closely with an external, independent evaluation consultant to develop the survey/research instruments and report templates, which balances external oversight with internal administration. Data and qualitative feedback was systematically collected from 136 high school students[1] in classroom tests,[2] and from 75 educators and educational partners in individual in-depth interviews.[3] Findings provided a wealth of detailed feedback and recommendations that continue to inform and influence the refinement of IWitness (IWitness Usability Evaluation Report, 2012).

Each classroom test had three phases of measurement–formative (before testing), process (during testing), and summative (after testing). Before each classroom test, students completed an anonymous online pretest survey. Students from the control groups completed the same

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[1] Represents 75 high school students in three geographically diverse locations who tested IWitness in their classrooms, and 61 similar high school students in the same locations who served as a control group. The control group completed an online survey (pretest) but was not exposed to IWitness.
[2] Students used a self-directed classroom activity to test IWitness, and searched a collection of over 1,000 video testimonies to construct a video project on the topic of resistance. Students participated in anonymous pretest and posttest online surveys.
[3] In-depth interviews were conducted using an application that allowed the external evaluator to observe each participant as they used IWitness on their own computers.

pretest survey separately and at a similar time.[4] During each classroom test, the external evaluator, along with Institute staff, observed students as they used IWitness. For consistency, the *Personal Strength to Survive* activity was used in all tests. This activity contextualized the topic of resistance, provided sample testimony clips, asked reflective questions, and prompted students to search for testimony clips to construct a topical video project. Specifics on the testimonies watched were tracked by system analytics. Finally, after the classroom test, students completed anonymous online posttest surveys (IWitness Usability Evaluation Report, 2012).

Our pilot research suggests that digital storytelling impacts students' critical thinking and analytical learning. Frequently, students interviewed indicated that digital stories in the form of eyewitness testimonies were more memorable, meaningful, engaging, and robust than other forms of learning. One high school student from Los Angeles described during a videotaped interview the impact of watching Holocaust testimony in IWitness. "In a book, like, it's just a story. You can learn about it, and learn all the details about it, but it never really seems like it actually happened, like this couldn't have actually happened to people. But when the people are sitting there, looking at you, telling you their story face to face, it's so much more interesting and engaging and you just feel more connected to it, and I just feel like I learned more that way than I ever could have reading like memoirs or in a textbook or anything like that." (personal interview, April 2010). Although more evaluation is required to compare the retention of information by students using texts as compared to those viewing testimony, anecdotal evidence such as this is plentiful. More than retention, watching testimonies heightens students' comprehension and internalization of the lessons as well.

In a separate videotaped interview, another high school student said, "I could read a transcript of what they said quite easily, there is a lot of text out there, but it is sort of like in their smiles or the twitch of their eye, or their facial express, their posture, that tells me more about their story than the story itself. And I think that it is important to take advantage of the technology we have in order to capture that in people… I feel so much closer to them in that sense." This student went on to remark that the sense of closeness she felt to those who gave testimony increased her likelihood for retention. She described it as learning that "takes hold" (personal interview, November 2010).

A 2011 evaluation report completed by an independent evaluator for The USC Shoah Foundation Institute found that watching testimonies in IWitness significantly increased students' interest and perceived knowledge about the Holocaust. When asked what they would remember most about the application, 85 percent of students who had completed learning activities within IWitness indicated they would remember the videos more than anything else. "Furthermore, 81 percent of the 75 students who tested the current version of IWitness say what they learned will influence how they perceive and treat others" (USC Shoah Foundation Institute, 2011).

Educators also reported the observable and measurable impact of IWitness' digital testimonies on learners. "Testimony is by far the most powerful teaching tool I have ever used," one teacher wrote in 2011. "It has a farther impact on students' lives than other lessons."

Another teacher who participated in a professional development workshop about teaching with testimony commented, "The depth and complexity that testimony adds to students' educational experience is invaluable in developing the capacity for academic rigor, critical thinking, and compassion in secondary students."

Along with video testimonies, which bring the stories to the students, IWitness incorporates activities that allow the students to create and share stories of their own as well. Activities within IWitness scaffold the process of constructing multimedia projects. Within IWitness,

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[4] One of the testing classrooms profiled in this report did not include a student control group. Conducted in collaboration with the non-profit One Economy, and the Digital Connector after-school program, the test took place over a weekend when a similar group of students was not accessible.

teachers have the ability to require the learners to edit clips and construct videos or visual arguments, using a built-in video editor. Therefore, teachers are able to assess the way learners express their ideas and to observe how the opportunity to do so affects their learning experience.

"Many educators involved in multimedia projects with students would agree that some of the most significant gains pertain to higher-order thinking and problem-solving skills, including synthesizing, analyzing, evaluation, and presenting information" (Robin, 2008). Our initial evaluation of student work in IWitness confirms this, demonstrating social-emotional development and an impact on empathy and behavior. In the evaluation of IWitness during its closed beta period, a pilot study was conducted with students in a program called One Economy Digital Connectors[5] in Philadelphia. One Economy's program teaches inner-city teens and young adults from lower-income families about technology and how to use their digital skills in the community. Seventeen students participated in a two-day weekend Youth Institute. They spent five hours during a weekend in March 2011 watching, searching, and editing testimonies into a video containing their own original content, including photos, video and audio they constructed to incorporate their own reflections. Half of the students in the study had edited video before and 75 percent planned to attend four-year colleges after graduation. After watching testimonies and finishing their assignments, the number of students in the One Economy group who described themselves as "extremely interested" in the content increased by more than 250 percent.

Students from One Economy engaged with IWitness testimonies by focusing on the topic of Holocaust resistance. Post-project evaluation revealed significant increase in two social action measures–"speaking up" and "one person can make a difference." After testing IWitness, three out of four students agreed that speaking up against stereotyping is important and that one person can make a difference. In fact, there was a 30% increase in the strongest level of agreement ("strongly agree"). Furthermore, students who used IWitness are 35% more likely to agree that, "It is important that everyone challenge racism." When One Economy students were asked if their experience interacting with testimonies in IWitness would influence how they perceive and treat others from different backgrounds, 81 percent indicated that their behavior would change.

Plans are underway for more longitudinal studies on the cognitive and affective impact of watching and editing video testimony–an important form of digital storytelling–on IWitness users.

Implications

"Learning by doing is generally considered the most effective way to learn," (Lombardi, 2007). Evaluation of IWitness demonstrates that students benefit from a traditional role as the recipient of an elder's storytelling, as well as from the hands-on experience provided when they then interact with the digital testimony and use it to generate new, original representations of their learning. In this way, the educational value of IWitness extends far beyond the content value targeting a single curriculum, such as history or literature or Holocaust studies. Along with their curricular objectives, authentic learning takes place, as students don't just learn about storytelling, but become storytellers. "Learning to be a physicist, a chemist, or an historian is all about forging concrete connections–interpersonal connections between apprentices and mentors, intellectual connections between the familiar and the novel, personal connections between the learner's own goals and the broader concerns of the discipline" (Lombardi, p. 2). We see students thus empowered by authentic learning within IWitness, and we will continue to study how that empowerment leads to students as generators of social value.

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[5] One Economy is a global non-profit organization that leverages the power of technology and connects underserved people around the world to vital information that will improve their lives (www.one-economy.com).

Conclusion

"Telling and listening to stories bring a community together with a shared emotional event that helps them relate to each other and to the world around them. Along with the need to pass on vital cultural, historical, and moral information, there is an innate human need to provide explanations for things that are not understood… The function of storytelling has not changed but the means by which storytelling takes place has" (Anderson, 2010). Our work with IWitness demonstrates that digital storytelling takes all the educational value of traditional storytelling to the next level; IWitness engages learners in a way that fosters a sense of personal connection, and in turn that connection translates into cognitive gains, empathy, and potential for social action.

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The International Journal of Technology, Knowledge and Society explores innovative theories and practices relating technology to society. The journal is cross-disciplinary in its scope, offering a meeting point for technologists with a concern for the social and social scientists with a concern for the technological. The focus is primarily, but not exclusively, on information and communications technologies.

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