Literature Review Digital Storytelling

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In its basic arrangement, a digital story is a multimedia story told through the use of still images or film with a voice-over providing narration. Daniel Meadows, the creative director of the BBC's *Capture Wales* series, described digital stories as "multimedia narratives" that are "250 words, a dozen or so pictures, and two minutes" (Meadows, n.d., para. 1). However, as the use of digital storytelling has spread, the term 'digital story' has taken on a much wider meaning (Robin, 2008).

Digital storytelling, as originally developed by the Center for Digital Storytelling, with its first person narrative and emphasis on the conflict resolution story arc (Lambert, 2009a), is now seen in more varied ways. The classic form of digital stories as developed by the Center for Digital Storytelling was a short, personal story told in the first person, usually created in a workshop under the advice of a facilitator, using nonprofessional tools (for use of the term 'classic', see Snelson & Sheffield, 2009 and Qiongli, 2009). According to the Center for Digital Storytelling, the stories that were created allowed ordinary people to create media in their own voice, and share their story with a wider audience. The emphasis was always on the story and on using the technology to enhance and distribute the narrative. As digital storytelling became more popular it was used for many purposes, some of which were beyond what the originators of the craft anticipated (Lambert, 2009b). Now, in its general term, 'digital story' has been used to refer to user created content such as YouTube videos, computer games, and narrated stories. The website Mashable has even used the term 'digital stories' to describe highly interactive National Film Board of Canada projects such as *Bear 71* and *Welcome to Pine Point* (Revis, 2012). These professionally developed, institutionally created and supported projects are quite different from

the original digital stories, but fit into the development of digital storytelling as part of a broader cultural shift (Hartley & McWilliam, 2009).

In recent years, our society has become much more digital in that much of how we communicate with each other, participate in society and construct our identity is through a digital medium. Blogs and other user or consumer generated media have replaced the traditional top down method of media creation. The Internet has become an audiovisual medium (Hartley & McWilliams, 2009) and as Knut Lundby (2009) rightly pointed out, blogs, home web pages and Facebook pages are forms of self-representational digital storytelling. Digital storytelling has become a mature form of expression, with a connection to traditional oral storytelling (Porter, n.d.), participatory public history (Burgess & Klaebe, 2009), 'vernacular creativity" (Burgess, 2006), community development programs, and participatory media. In the educational setting, it is a valuable tool for teaching digital literacy, media literacy, storytelling and writing. By looking at the history and development of digital storytelling, we can appreciate the attributes and unique challenges that implementing a digital storytelling program can bring.

Early Examples of 'Digital' Storytelling and Community Building

Up to last the decade, the tools used to create a digital story were characterized by three things: they were expensive, they required a great deal of technical know-how and they were only available to a select few who happened to work in the film or television industry. As a result, the craft of digital storytelling was not accessible to most people. Before the introduction of Digital Storytelling in the early 1990's, there were some attempts by academics to record and give voice to marginalized people. A Canadian example of this 'participatory media' was *Challenge for Change* in the 1960's and what became known as the Fogo Process from the National Film

Board of Canada (MacLeod, 2004). In this project, under the direction of Don Snowden from Memorial University, participants became involved in the creation of a series of short videos about life in the remote Newfoundland communities. These short films allowed the people who lived on Fogo Island to have their concerns expressed to the government in a more direct way. Another example of participatory filmmaking is Worth and Adair's work with the Navajo in the 1960's in which they created a series of short films entitled *Through Navajo Eyes* by providing cameras and basic film training to amateur Navajo filmmakers ("Navajo Film Themselves," n.d.). A more recent and notable example of a community based initiative is the Photovoice project (originally "photo novella") by Caroline Wang and Mary Anne Burris (Wang & Burris,1994). In this technique, participants take photos and build a narrative to go along with them in order to voice their opinion and become recognised by the greater community. The common thread connecting these examples is that the participation of the community led to a greater sharing and awareness of each community's story.

From this perspective, the current employment of digital storytelling fits within a larger tradition of community engagement and participation. However, early attempts were generally isolated examples. Although they shared similar ideas with many of today's examples of digital storytelling, they were quite different for several reasons. Due to the cost, technical requirements and level of institutional control and support, most aspects of these stories were decided from a top down perspective. Unlike digital storytelling today, once the camera crews left, the people in the story could not make, edit, or distribute a new story on their own.

The accessibility of digital storytelling changed as a result of the increase in home electronics and computing power which has occurred over the last 15 years. Now, most home computers are capable of running the required software (video editors like Movie Maker for Windows and

iMovie for Apple are included free of charge), and digital cameras are cheap and plentiful.

Against this background of technological advancement, the Center for Digital Storytelling in

Berkeley California began hosting workshops to help people create digital stories. This emerging

art of digital storytelling, with its combination of narrative, technological skills, and critical

thinking skills made digital storytelling instantly appealing for education.

Original Incentives

Much of the documentation on digital storytelling and education focuses on one or two aspects,

either the technical requirements (the how to), or the level with which the learners embrace the

project (Iannotti, 2005). While these pedagogical concerns are important, the focus on these

items leaves out one important piece of information in the creation of the digital storytelling. As

practised by the Center for Digital Storytelling, the stories themselves were not designed as

pedagogical activities or technology workshops. Joe Lambert, one of the founders of the Center

for Digital Storytelling and the current director, has written extensively abut the original spark

for the creation of the digital storytelling center. In the late 1980's, Lambert's San Francisco

based theatre company, Life on the Water, showcased community based artists and, in the words

of Lambert (2009b), "made approachable, entertaining work as well as presented artists that were

experimenting with forms that challenged their audiences" (p.81). One artist interested in Life on

the Water was the late Dana Atchley. Prior to working with Joe Lambert, Atchley had spent 20

years travelling around America recording interviews with "off-beat Americans" as an "artistic

practice" (Lambert, 2009b, p.6). Atchley put together a stage show entitled *Next Exit*, where he

sat around a large digital campfire, using video clips to tell stories from his life experience.

Atchley's show inspired a request by the American Film Institute for a workshop on how to

produce similar videos. From this collaborative beginning, Joe Lambert and Dana Atchley began developing workshops focusing on how to create digital stories using the new technologies that were being developed in the San Francisco area in the early 1990's (Lambert, 2009b).

Focused far more on the story than the digital aspect of them, their creation was a tool to help people reclaim "the lost art of storytelling." For Lambert and others, digital stories were both the "democratization" of storytelling in that the tools for production had become accessible by everyone, and a means "to have people consider their stories as fundamental acts of self discovery." Indeed, to Lambert, to move digital stories "outside a social change framework...is to miss the point, almost entirely" (2009b,p.82).

He reminds readers that the structure of the digital stories produced by the Centre for Digital Storytelling was not designed to "imitate the content and milquetoast perspectives, the empty headed bling of commercial television" (p. 82). Comparing what the 20th century had done to the environment, Lambert commented that the same effect was found on our culture. In his words, "I felt that the culture of the 20th century had done something very similar to what it had done to our forests, around our stories. It had removed our ability to tell our own stories, to own our stories in different ways" (2011). Against this background of activism for social justice and community arts engagement, The Center for Digital Storytelling developed a framework for a workshop-based process to create digital stories. As Lambert has noted, in the early 1990's San Francisco was rich in technology companies and by combining technology and performance art he hoped that "if the 20th century took away our stories because of the screen, the 21st century would give them back because of the screen" (2011).

Lambert has reflected on the popularity and diversity that digital stories now enjoy, but it is worth noting that most digital stories rely on the elements of digital storytelling that were developed as a framework by the Center for Digital Storytelling. The 'classic' digital story produced by the Center for Digital Storytelling has remained very true to its original form since the establishment of the Center (Dush, 2009).

Emphasis on Storytelling, not Technology

The seven elements that the Center for Digital Storytelling developed are an excellent place to begin with any introduction to digital stories. The Center has published a cookbook of ideas, along with other books that go into great detail on how to produce a digital story. Their work has been cited extensively (see: Ohler 2005, Robin 2008, Bull and Kajder, 2004 and Lundby, 2009). As well, several websites about digital storytelling use them as a starting point to in their 'how to' guides (see the University of Houston at http://digitalstorytelling.coe.uh.edu/index.html as an example). The seven elements provide an excellent starting point, and true to the goals of the Center, they are used as a tool in teaching. The overall theme is to concentrate on the *story* (see Ohler, 2005). As Ohler points out, learners need to know how to use the technology to enhance the story. If not, the "students are engaging the medium at (the) expense of the message, producing a technical event instead of a message" (Ohler, 2005 p. 45). Too much attention to the technology will result in a weaker story, and learners need to learn to tell their story effectively before they can produce a digital story. Ohler illustrates this point when he states "Committing a bad story to digital media is like giving a bad guitar player a bigger amplifier"(Ohler, 2012,para.1). Banaszweski (2005) further adds to this by arguing that the character-conflict-resolution narrative is the best way to represent a student's voice. Banaszweski sees digital

stories as a means to enhance the learner's ability to tell an effective narrative and a way to promote digital literacy and media literacy. His goal is an actual story, with a "synthesis of the information with knowledge of themselves and the world," not a narrated slideshow or multimedia production that fails to address what the production means to the learner (Banaszweski, 2005).

Additionally, the first person conflict-resolution story arc has been summarized by Daniel Weinshenker of the Denver Center as one of two types. Either a stranger comes to town, or you go on a vacation. As this was paraphrased by Joe Lambert, "in other words, change came to you, or you went towards change" (Lambert, 2009). This personal, symbolic narrative of journey is at the heart of the Center for Digital Storytelling approach.

The Center for Digital Storytelling's seven elements are point of view, dramatic question, emotional content, the gift of your voice, the power of the soundtrack, economy, and pacing (see Table 1 for more information). The goal of these stories is not to create short versions of MTV videos or become distracted by the technology, but to use the technology to create and share personal narratives. In the workshops, learners' communication skills and critical thinking are developed by having the learners consider the effect of images, audio and narration on their stories.

Table 1

Center for Digital Storytelling's Seven Elements of Digital Storytelling

1. Point of View	What is the main point of the story and what is the perspective of the author?
2. A Dramatic Question	A key question that keeps the viewer's attention and will be answered by the end of the story.
3. Emotional Content	Issue that comes alive in a personal and powerful way and connects the story to the audience.
4. The Gift of Your Voice	A way to personalize the story and help the audience understand the content.
5. The Power of Soundtrack	Music or other sounds that support and embellish the storyline.
6. Economy	Using just enough content to tell the story without overloading the viewer.
7. Pacing	The rhythm of the story and how slowly or quickly it progresses.

(From University of Houston, The Seven Elements of Storytelling)

The first step in the workshop is to focus on writing the story. For this, the recommendation is to keep it short. Once the story is written, the learners then create the storyboard. By first storyboarding their ideas (The Centre for Digital Storytelling Cookbook recommends only 4 pictures at first to get to the most critical points), then choosing or creating the pictures, learners are enhancing their visual literacy skills.

After the pictures are selected or created, the voice-over and music is chosen. This can be a very time consuming process if not organized. It is recommended that after collecting the pictures and audio material, that people revisit their storyboards before starting to combine all the elements into a story. The Cookbook asks people to consider what the addition of the images and music bring to the story and what can be said just by using images and music.

The final stage is the mixing of the audio and visual elements to assemble the story. As the Cookbook states, this is a time consuming process. This process should involve several edits, reflection and tinkering before it is complete. It is in this stage that the structure of the story becomes very important. Participants find that the timing and the pacing of the story may change from what they originally intended. It is at this stage that the rhythm of the story is finalized. Participants will usually go through several edits before deciding that their story is complete.

The final part of the process is sharing. At this stage, the story is assembled. What the participants have to decide is how to present the story. They need to determine who their audience is and what the audience needs to know to put the story in the proper context. The Center for Digital Storytelling also encourages participants to reflect on how they changed as individuals as a result of telling the story. Throughout this whole process, there is an emphasis on group participation and sharing stories.

The workshop approach developed by the Center for Digital Storytelling also contains some other important points. In addition to the seven elements of the story, the Center for Digital Storytelling has recommended different types of stories to concentrate on. They include memorials, events in your life, accomplishments, places in your life, what you do, and stories of discovery. These stories are personal, reflective and can be quite inspiring.

In the latest version of the Cookbook, the Center for Digital Storytelling has reworked the seven 'elements' into the seven 'steps'. These changes were made as the Center for Digital Storytelling learned more about digital storytelling and reflected on what they had learned and how digital storytelling had evolved. The revised steps are:

- Owning your insights

- Owning your emotions

- Finding the moment

- Seeing the story

- Hearing the story

- Assembling your story

- Sharing your story

According to the Cookbook, the biggest change is that "we are helping storytellers fully visualize their story as a finished piece before they begin to write their script" (Lambert, 2010, p.9). Storytellers are encouraged to think about the change in their story and "how the audience will see and hear their story in the form of a digital story" (Lambert, 2010, p.9).

Digital Storytelling in Canada and Alberta

Across Canada, there has been a wide range of adaption of digital storytelling. Various groups, from large charities such as The United Way to many smaller regional agencies, have incorporated digital stories into their programs. Several universities have used digital storytelling as part of their course work (see Walsh, Shier, Sitter, Sieppert, 2010) and have run courses dedicated to digital storytelling. Concordia University has even set up the *Centre for Oral History and Digital Storytelling (*http://storytelling.concordia.ca/oralhistory/*).* Generally, these groups have used digital storytelling in a way that is consistent with the original purposes established by the Center for Digital Storytelling. The stories are centered on sharing, and are used as a means to reach a greater audience. Not surprisingly, many of the digital storytelling projects involve groups of participants who are outside of mainstream Canadian society. This includes inner city youth, seniors and marginalized people.

One example is the *Mapping Memories* project created through the Canadian Council for Refugees and Montreal Life Stories. In this project, immigrant youth in Montreal used various forms of technology to record and share stories from their lives. Mapping Memories is an ambitious project. It includes a Youth Speaking Tour that has participants in the Mapping Memories program visit local schools to present stories. The program has been well received by participants (http://storytelling.concordia.ca/refugeeyouth/).

In a 2010 report, Rose and Granger used a series of digital storytelling workshops with immigrant women in the Toronto area as means to look at the challenges faced by immigrant women in accessing community based activities and educational opportunities. Also in Ontario, the Ontario Women's Health Network has used a digital storytelling workshop with women who have been incarcerated as means of recording the experience of incarceration and "as a catalyst or personal starting point to tell their own stories" (Rahim, 2011).

Additionally, in Alberta, a partnership between the University of Calgary and the United Way produced a series of digital stories in which youth in the community told stories based on their experience. The *Youth by Youth: A Digital Storytelling Project* produced several stories reflecting on the challenges that youth face in Calgary. This project ran in 2011 and again 2012.

The theatre company Ground Zero Productions in Edmonton has begun a series of digital storytelling workshops organized with the University of Alberta based around documenting Alberta's history (http://www.gzpedmonton.org/about-gzp/digital-storytelling). Also in the Alberta context is the use of digital stories by the Alberta Riparian Habitat Management Society (Cows and Fish) to advocate for the conservation of Alberta habitat (http://www.cowsandfish.org/photos/digital.html). Similar to the other projects presented here,

Cows and Fish use digital stories to present the life experience and insights from a small group of people who are a minority, (in this case, ranchers and organic producers), to a larger audience.

Educational Settings

In educational settings, digital storytelling has been enthusiastically embraced by many educators. The University of Houston site (http://digitalstorytelling.coe.uh.edu/index.html) has listed many applications in various academic disciplines. From history to engineering and nursing, advocates for digital storytelling have envisioned a multitude of uses and designs for digital storytelling. Using digital storytelling in educational programs is a way to "capture student interests like never before" (Lowenthal, 2009), "to allow students to discover digital literacy and media literacy" (Banaszweski, 2005) and to "engage students in the language of their generation" (Hofer & Swan, 2006). In ESL instruction, justification for using stories in the ESL classroom is established (see Abbot, Nicholas, Rossiter, 2011). Language instructors using digital stories feel that the combination of storytelling and technology offers a valuable opportunity for learners to acquire digital skills in addition to the language learning.

Certain applications of digital storytelling are especially beneficial in language learning: pronunciation, writing an effective narrative, and sharing stories all build language skills. Learners who create digital stories also build skills in organizing audio and visual material using different computer applications. As Robin (2006) and Sylvester and Greenidge (2009) have noted, many of the skills involved in the creation of a digital story are consistent with new literacies. Walsh (2008) pointed out that:

As important as effective reading and writing are, it is no longer realistic to talk about 'reading' and 'writing' as discrete skills needed for the future workplace. Reading and writing rarely occur in isolation for today's students whose environment is filled with visual, electronic and digital texts that offer facilities for reading, writing, viewing, listening and responding simultaneously (p.101).

The multimodal aspect of digital storytelling allows learners to express themselves with different modalities and to engage multiliteracies during the process of creating a digital story.

Multiliteracies were discussed by many educational scholars with the New London Group's publication of *A Pedagogy of Multiliteracies: Designing Social Futures* in the Harvard Educational Review in 1996. In this article, it was argued that the increase in cultural and language diversity and the increase in the channels of communication have changed the social environment for learners. The New London Group felt that the traditional language based approach to literacy needed to be expanded to include new means of communication and to include the diverse cultures that were intersecting in globalized cities. The members of the New London Group came from English speaking countries which had diverse, multicultural populations of immigrants. They felt that the future of literacy learning had to include two goals: "creating access to the evolving language of work, power, and community, and fostering the critical engagement necessary for them (the learners)to design their social futures and achieve success through fulfilling employment" (p.60).

The New London Group felt that the emerging technologies had made design a critical part of literacy. As New London Group member Paul Gee reflected in 2009, "At the New London meetings, we stressed the notion of design as an active process in which people invented, re-

invented and put to use the grammatical and discourse resources of their language(s) and other sign systems to make meaning"(p.197). In their literacy framework, the New London Group wrote that "The key concept we introduce is that of Design, in which we are both inheritors of patterns and conventions of meaning and at the same time active designers of meaning" (p.64). According to Cope and Kalantzis, instructors should use multimodes of digital communication in the class because "Meaning is made in ways that are increasingly multimodal—in which written-linguistic modes of meaning interface with oral, visual, audio, gestural, tactile and spatial patterns of meaning"(2012, para. 4). Digital storytelling, through its multimodal expression, situates itself very firmly in the multiliteracies pedagogy.

Placed in the context of the multiliteracies framework, the multimodal aspects of digital storytelling enable language learners to create meaning through the manipulation of many different modes. Throughout the process of creating a digital story, the learners have the opportunity to use text, images, graphics, symbols and audio to share and create meaning around their diverse life experiences. As Ajayi (2009) has noted, "multimodal/multiliteracies pedagogy has the potential to provide opportunities for ESL students to learn about different text types in ways that enhance the expansion of the interpretation of texts. Multimodal pedagogy goes beyond language to promote alternative ways of reading, interpreting, and text composition." (p. 587). For ESL learners, digital storytelling offers a multimodal approach to creating their own narrative that moves well beyond just writing.

Considerations and Recommendations

One of the most often repeated ideas found in writing about digital stories is that now, with today's technology, "anyone can do it." While it may be true that anyone can make a digital story, it is another matter to turn them into effective, compelling and polished stories. Several institutions have found it difficult to sustain a digital storytelling program (Dush, 2009). Digital storytelling has been described as 'deceptively complicated" due to the combination of skills needed to produce one. It is worthwhile to note that the length of Center for Digital Storytelling workshops has continued to grow, from three day workshops to one week workshops and even to the point of offering a certificate program ("Certificate Program", n.d.). The technology has always been used to support the story, but to produce a strong digital story, one needs to have a good understanding of narrative, how to use your voice in the oral tradition of story telling, how to use images and sound to maximise effect, and how to put all the elements together and distribute the story. Dush has commented on the amount of institutional support necessary and the required skill set of the facilitator (Dush 2009). As Dush notes, Daniel Meadow's team for the BBC's Capture Wales project had a project manager, script expert, video expert, IT support, support director and Welsh speaking assistants. It is unlikely that most educational institutions will have this level of support (Meadows, 2003).

When beginning a digital storytelling project, there are several necessary considerations. Iannotti warns repeatedly about allowing for enough time to complete the project. As she points out, one hour a week in a lab is not enough (Iannotti, 2006). Learners need a considerable amount of time to write, storyboard, record and edit their work. As well, learners need access to computers to finish their work. The Center for Digital Storytelling, with their experienced staff and technical know how, typically spend three, eight hour days (24 hours in total) in a workshop to have

participants produce one digital story. As reported by McGeoch, a five week timeframe, with five point five hours per week, was required to produce a digital story with ESL learners (McGeoch, 2009).

Another fairly substantial consideration is cost. To have the minimum hardware requirements, institutions should expect to buy at least one scanner, one digital camera with video functions, audio microphones, a printer, audio and video mixing software and a laptop or desktop computer with speakers. To run a digital storytelling program, each learner will need access to one computer or laptop. As well, multiple cameras should be purchased, along with proper recording equipment. Because of their ease of use, a condenser microphone with a USB plug is recommended. The microphone on a digital camera will not produce satisfactory sound for a digital story and although most laptops have built in microphones, the sound quality is generally very poor.

To do the voice-over, the storyteller will require a quiet room, with no background noise or distractions. This includes fans, air conditioning, sounds from outside and even internal computer parts. It will require practice to get the right narrative quality and relaxed sound to a person's voice. Additionally, with ESL learners, it is a good idea to use a pop shield with the microphone to cut down on the 'p' and 'b' sounds.

There are several options for suitable software. As mentioned before, both Microsoft and Apple include video editing software with their operating systems. The program Photo Story is also available as a free download from Microsoft for use in a PC. For sound mixing, Audacity is an open source program that is also free. It can be used to record the narrative, and mixed with either Movie Maker or Photo Story. However, if the budget allows for it, there are several

programs that could be used to produce very sophisticated looking and sounding digital stories. Programs such as Sony Vegas Pro or Adobe Premier Pro are very powerful tools for PCs and Final Cut Express or Final Cut Pro offer the same capabilities for Apple computers. While these programs offer more options than the free software, they are far more difficult to use, expensive and require more time to learn than Movie Maker. These programs also require a computer with enough memory to run. Most computers purchased since January 2012 would have enough memory, but older ones may not.

Ethical Considerations

Writing a story in the first person narrative can be a complicated style for people with difficult or disturbing memories. Any project involving refugees or people with difficult stories should have additional resources in place in case the individuals feel they need help. Organizers of the *Mapping Memories: Experiences of Immigrant Youth* project from Concordia University have suggested that facilitators should respect the privacy of the individuals, and explain to them before they start that the storytelling process can trigger difficult memories. The *Mapping Memories* project also cautions against publishing any story without legal advice if the storytellers are involved in the refugee application process (n.d., p.11).

The Center for Digital Storytelling has also addressed the emotional impact involved in digital storytelling and has pointed out the responsibilities of facilitators to respect the privacy of workshop participants. The Center for Digital Storytelling presents a set of roles and responsibilities that put the emotional well being of participants at the top of its priorities. It explicitly states that "the digital storytelling process is not appropriate for individuals currently experiencing strong symptoms of Post Traumatic Stress Disorder." ("Core Principles," n.d., para.

2) It is recommended that institutions which have a large population of learners who have experienced trauma have support services in place. Also included in the Core Principles is the Digital Storyteller's Bill of Rights that emphasis transparency in how the stories will be used and the rights of the participants to control the production and distribution of their own stories. Key to this document is the idea of the creator's control over the digital story throughout the creation and sharing of the story. Learners should only include in their story what they feel comfortable sharing with a larger audience. In the educational setting, it is important to remember that copyright law also impacts how the stories are shared and for what purpose. All future and potential uses of the finished stories should be clearly articulated to learners by the program coordinator or instructor prior to running a digital storytelling workshop.

Conclusion

Digital storytelling has proven to be a powerful form of storytelling and the constant growth over the last few years suggest that digital storytelling will continue to be popular. The multimodal and multimedia aspects of digital story creation are a draw for technically minded instructors and learners while the storytelling and the narrative skills central to the story have a wider appeal. The higher order thinking skills associated with producing a multimedia narrative provide a strong justification for digital storytelling's inclusion in the classroom. As well, the 21st century skills required and engaged by digital storytelling are worth developing. For the ESL learner, the communication and pronunciation strategies that are developed make digital storytelling an appropriate programming option.

Another benefit of a digital storytelling program in an educational setting derives from two separate but related effects on the learners. In the first effect, the learners involved in the process

realize that their stories, that is the expression of the experiences and insights that they have discovered in their lives are worth telling. Second, learners realize that the same holds true for everyone else and it is worth listening carefully to other people's stories. Although participating in a digital storytelling workshop transfers many technical and narrative skills to storytellers, it is the sharing of stories and the understanding afforded by hearing, seeing and experiencing another person's life that leaves the strongest impression.

As much of our society becomes digitized, it is reasonable to expect the same for our colleges and schools. Digital storytelling offers an effective vehicle for adding digital skills to the curriculum and for the inclusion of and addressing multimodal literacies. The visual literacy, media literacy and digital literacy skills required to create a digital story are very quickly becoming required skills for navigating post secondary institutions. Multimedia expression is becoming as important as basic writing and reading skills. In this context, the benefits of a digital storytelling experience become very appreciable for learners.

Reference List

Ajayi, L. (2009). English as a second language learners' exploration of multimodal texts in a junior high school. *Journal of Adolescents and Adult Literacy*, *52*(7), 585-595. doi:10.1598/JAAL.52.7.4

Banaszewski, T. (2005). Digital storytelling, supporting digital literacy in grades 4-12. A thesis presented to the academic Faculty, Georgia Institute of Technology. Retrieved from http://hdl.handle.net/1853/6966.

Burgess, J. (2006). Hearing ordinary voices: Cultural studies, vernacular creativity and digital storytelling. *Continuum: Journal of Media and Cultural Studies*, *20*(2), 201-214. Retrieved from http://eprints.qut.edu.au

Burgess, J., & Klaebe, H. (2009). Digital storytelling as participatory public history in Australia. In J. Hartley & K. McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp. 155-166). Singapore: Wiley-Blackwell.

Bull, G., & Kajder, S. (2004). Digital storytelling in the language arts classroom. *Learning and Leading with Technology*, *32*(4), 46-49. Retrieved February 26, 2012, from http://www.digitalstoryteller.org/docs/DigitalStorytelling.pdf

Core principles for ethical practice in digital storytelling. (n.d.). In *Center for Digital Storytelling*. Retrieved November 18, 2012, from http://www.storycenter.org/ethical-practice

Certificate program in digital storytelling. (n.d.). In *Center for Digital Storytelling*. Retrieved November 18, 2012, from http://www.storycenter.org/certificate-program/

Dush, L. (2009). Digital storytelling in organizations: Syntax and skills. In J. Hartley & K. McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp. 260-268). Singapore: Wiley-Blackwell.

Gee, J. P. (2009). Reflections on the reading Cope and Kalantzis' "multiliteracies": New

literacies, new learning [Electronic version]. *Pedagogies: An International Journal*, *4*,

    196-204. doi:10.1080/15544800903076077

Hartley, J., & McWilliam, K. (2009). Computational power meets human contact. In J. Hartley

    & K. McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp. 3-15).

    Singapore: Wiley-Blackwell.

Hofer, M. & Swan, K. (2006). Digital Storytelling: Moving from Promise to Practice. In C.

    Crawford et al. (Eds.), *Proceedings of Society for Information Technology & Teacher*

    Education International Conference 2006 (pp. 679-684). Chesapeake, VA: AACE.

    Retrieved from
http://www.umbc.edu/oit/newmedia/studio/digitalstories/documents/Dig_Story_Promise_
to_Practice.pdf

Iannotti, E. (2005). How to make crab soup: Digital storytelling projects for ESL students. *In*

    Transit, 10-12. Retrieved February 15, 2012, from

    http://ctl.laguardia.edu/journal/pdf/InTransit_v1n1_DigitalStorytellingESL.pdf

Kalantzis, M., & Cope, B. (2012). Expanding the Scope of Literacy Pedagogy. In *New Learning*

    Online. Retrieved 2012, from http://newlearningonline.com/multiliteracies/

Lambert, J. (2009a). *Digital Storytelling: Capturing Lives, Creating Community* (3rd ed.).

    Berkeley: Digital Diner Press.

Lambert, J. (2009b). Where it all started: The center for digital storytelling in California. In J.

    Hartley & K. McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp.

    79-90). Singapore: Wiley-Blackwell.

Lambert, J. (2010). *Digital Storytelling Cookbook*. Berkeley, CA: Digital Diner Press.

Lambert, J. (2011, July 2). Putting purpose to pixels. [Video file]. Retrieved from

    http://www.youtube.com/watch?v=SHRuAi-Z3oY

Lowenthal, P. (2009). Digital storytelling in education: An emerging institutional technology? In

    J. Hartley & K. McWilliam (Eds.), *Story circle: Digital storytelling around the*

    world (pp. 252-269). Singapore: Wiley-Blackwell.

Lundby, K. (2009). The matrices of digital storytelling: Examples from Scandinavia. In J

. Hartley & K. McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp. 176-187). Singapore: Wiley-Blackwell.

McGeoch, K. (2010). Digital stories. *International House Journal*. Retrieved February 16, 2012, from http;//ihjournal.com/digital-stories

MacLeod, Paul. (2004)"Participatory Filmmaking and Video-building on the legacy of the Fogo Process." *The Don Snowdon Program*. University of Guelph, Retrieved Web. 28 Nov. 2012. <http://www.uoguelph.ca/snowden/fogo.html>.

Mapping Memories. (n.d.). Mapping memories: Participatory media, place-based stories and refugee youth. In *Mapping Memories*. Retrieved from http://storytelling.concordia.ca/refugeeyouth/book

Meadows, D. (2003). Digital storytelling: Research-based practice in new media [Electronic version]. *Visual Communication*, *2*(189), 189-193. doi:10.1177/1470357203002002004

Meadows, D. (n.d.). Digital Storytelling. In *Photobus*. Retrieved February 27, 2013, from http://www.photobus.co.uk/?id=534

Navajo Film Themselves. (n.d.). In *Penn Museum*. Retrieved November 29, 2012, from http://www.penn.museum/sites/navajofilmthemselves/

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60-93. Retrieved from http://www.hepg.org/her/abstract/290

Nicholas, B. J., Rossiter, M. J., & Abbot, M. L. (2011). The power of story in the esl classroom. *The Canadian Modern Language Review*, *67*(2), 247-268. doi: 10.3138/cmlr.67.2.247

Ohler, J. (2005). The world of digital storytelling. *Educational Leadership*, *63*(4), 44-47. Retrieved February 16, 2012

Ohler, J. (2012.). Different story kinds. In *Storytelling and New Media Narrative*. Retrieved from http://www.jasonohler.com/storytelling/storyeducation.cfm#Different_stories

Porter, Bernajean. *The Art of Digital Storytelling*. Creative Educator, n.d. Web. Retrieved 28

Feb. 2012.

http://creativeeducator.tech4learning.com/v04/articles/The_Art_of_Digital_Storytelling.

Qiongli, W. (2009). Commercialization and digital storytelling in China. In J. Hartley & K.

McWilliam (Eds.), *Story circle: Digital storytelling around the world* (pp. 230-

244). Singapore: Wiley-Blackwell.

Rahim, C. (2011). Digital storytelling by post-incarcerated women: Collaborative inquiry for

health justice. In *Ontario Women's Health Network*. Retrieved February 21, 2012, from

http://www.owhn.on.ca/pdfs/Summer%20eBulletin%202011-Digital%20Storytelling.pdf

Revis, l. (2012, January 31). Four inspiring examples of digital storytelling. *Mashable*.

Retrieved November 28, 2012

Robin, B. R. (2006). The educational uses of digital storytelling. In C. Crawford et al. (Eds.),

Proceedings of Society for Information Technology and Teacher Education International

Conference 2006 (pp. 709-716). Chesapeake, VA: AACE. Retrieved from

http://faculty.coe.uh.edu/brobin/homepage/Educational-Uses-DS.pdf

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century

classroom [Electronic version].*Theory into Practice*, 220-228.

doi:10.1080/00405840802153916

Rose, C. B., & Granger, C. (2010). Digital stories of coming to learn: Experiences of access in a

community-based digital storytelling workshop for immigrant women. *Canadian Council

on Learning* Retrieved from http://www.ccl-
cca.ca/pdfs/FundedResearch/201009BrushwoodRoseGrangerFullReport.pdf

Snelson, C. & Sheffield, A. (2009). Digital storytelling in a web 2.0 world. In C. P. Ho (Ed.),

*The New Internet: Collaborative Learning, Social Networking, Technology Tools, and

Best Practices, TCC WorldWide Online Conference 2009* (pp. 159-167) Educational

Technology University of Hawaii at Manoa: Retrieved from

http://etec.hawaii.edu/proceedings/2009/

Sylvester, R., & Greenidge, W.(2009*). Digital Storytelling: Extending the Potential for

Struggling Writers. *The Reading Teacher,* 63(4), 284–295. Retrieved February 29, 2012,

http://www.readingrockets.org/article/40054/

Wang, C., & Burris, M. (1994). Empowerment through photo novella: Portraits of participation.

Health Education Quarterly, 21(2), 171.

Walsh, C.A., Shier, M.L., Sitter, K. C., & Sieppert, J. D. (2010) Applied methods of teaching

about oppression and diversity to graduate social work students: A case example of

digital stories. *The Canadian Journal for the Scholarship of Teaching and Learning*,
1(2) 1-15.

Walsh, M. (2008, July). Worlds have collided and modes have merged: Classroom evidence of

changed literacy practices. *Literacy*, *42*(2), 101-108.