Storied and Informational Digital Texts as a Learning Tool in Your Classroom

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Abstract: *Although technology hardware and software have proliferated in classrooms across the United States in recent years, many teachers have had little experience using them in new and innovative ways. In this paper we outline three innovative techniques for teachers (pre-service, in-service, and teacher educators) to use in the classroom.*
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Although technology hardware and software have proliferated in classrooms across the United States in recent years, many teachers have had little experience using them in new and innovative ways (Carstens & Pelgrum, 2009; Czarnecki, 2009a; 2009b; 2009c; Perrotta, 2013; Wynn, 2009). Yet throughout our experiences as elementary, secondary, and post-secondary teachers, we have found digital texts (storytelling and informational genres) to be a learning tool that can be used to work toward a multimodal and complex conceptual understanding. Each of us has taken different approaches toward using this tool and teaching it to others. We believe sharing these approaches may be useful for classroom teachers (pre-service, in-service, and teacher educators) to promote higher-level thinking in motivating and engaging ways.

With this in mind, we aim to link research and practice by (a) reviewing relevant literature within informational technologies and digital text creation, (b) offering three creative techniques for teachers and university instructors to integrate the use of digital texts within their classrooms, and (c) discussing the importance this pedagogical tool offers for learning within K-12 classrooms and teacher education courses.

REVIEW OF RELEVANT LITERATURE

Oral storytelling and information sharing has been around for thousands of years as a way for people to make meaning, and digital texts are the natural progression with the world of technology today (Czarnecki, 2009a; Duveskog, Tedre, Sedano, & Sutinen, 2012; Malita & Martin, 2010; Sheneman, 2010; Xu, Park, & Baek, 2011). Current researchers' definitions of digital texts address modes and purposes of technology. With this in mind, we define digital texts as projects in which multimedia (e.g., photographs, video, audio, music) are used to link life experiences to new learning (Duveskog et al., 2012; Slouge & Rao, 2009).

In K-12 settings, and teacher education programs, authentic learning experiences have been highly effective, and there are a number of reasons digital texts may be an effective tool toward fostering such experiences (Alvermann, 2011; Kocyigit & Zembat, 2013). First, students often find working with new technological tools to be highly engaging (Alvermann & Heron, 2001). Second, students may enjoy using tools many of them use everyday (e.g., computers, smart phones, tablets) to create digital texts (Alvermann, 2011). Third, digital text creation may

help pre-service teachers move toward culturally relevant teaching in the classroom (Skouge & Rao, 2009). Fourth, the use of digital texts may prepare college students to use technology in more effective ways, which is a critical skill in a more global society (Condy, Chigona, Gachago, & Ivala, 2012). Finally, digital texts may also contribute to students' improved attitudes and motivation for learning, as well as increased problem-solving skills (Czarnecki, 2009b; Hung, Hwang, & Huang, 2012; Kocyigit & Zembat, 2013).

In spite of these numerous benefits to using digital texts, use of this innovative teaching tool remains underused in the classroom (Carstens & Pelgrum, 2009; Czarnecki, 2009c; Wynn, 2009). Carstens and Pelgrum (2009) reported hardware and software acquisition in educational environments increased between 2000 and 2005, while use of the technology remained comparatively low. Furthermore, when technology was used, it often leaned "towards the mundane and unimpressive end of the spectrum" (Perrotta, 2013, p. 322). Reasons behind this disparity vary. Some educators may consider the use of technology in the classroom as edutainment (Wynn, 2009). Teachers may also assume students already know how to use software (Sheneman, 2010; Xu et al., 2011; Yang & Wu, 2012), yet students may lack hands-on training on how to use technology in effective ways (Czarnecki, 2009c; Duveskog et al., 2012). These issues may make working with digital texts problematic for students who lack experience with, and access to such tools (Czarnecki, 2009c). Finally, teachers themselves may feel unprepared and uncomfortable in using the tools proficiently enough to teach students how to use them (DeGennaro, 2010).

Considering these issues, we believe it is critical for teachers to engage with current and emergent technological tools in order for their students to benefit from working with them on meaningful projects. With this in mind, we outline three approaches we have used in educational settings. Taken together these approaches combine traditional and innovative methods to move students toward content knowledge and critical thinking.

TECHNIQUES FOR INTEGRATING DIGITAL TEXTS IN THE CLASSROOM

In this section, each of us provides an overview for an approach in creating digital texts we have used or plan to use. Melanie presents the use of images as a starting place for creating informational digital texts. Jessica presents steps for creating digital stories to explore literacy identities. Finally, David presents steps for teachers to create a content-based digital story—an approach he has used with pre-service teachers in a technology-integration course.

A PICTURE IS WORTH A THOUSAND WORDS (MELANIE)

As an elementary teacher and university instructor, I have worked with students to create digital texts of varying genres (e.g., narrative, persuasive, and information/report). Recently, I had the opportunity to broaden my repertoire of techniques. As I embarked on a small interpretive research project, I searched for information and images online that connected with my topic to familiarize myself with key people and issues. I soon realized the images and the end product of a documentary film (informational digital text) influenced the research I undertook. Since I was actively seeking images, artifacts, and people connected to them within my chosen topic, my research expanded beyond the usual strategies of in-person interview, observation, and artifact collection to analyzing images, video, blog entries, and email communications and how all people engaged with these aspects within my topic of study.

Drawing on this experience, I asked pre-service teachers in an elementary literacy methods course to create digital texts based on an educational theorist. I modeled how to use technology (e.g., *Skitch* and *iMovie*) and the following workflow: a) search for and save images

from the Internet or books to your computer (see David's section for copyright information), b) organize images into categories appropriate for your topic (e.g., personal background of the theorist, key concepts, application to learning), c) insert images into *iMovie* and add thematic title slides or text slides, and d) record and insert narration and music as appropriate (see Appendix A for a more detailed list of procedures). Pre-service teachers reported they had put just as much or more time into the creation of these digital texts as they would have in writing a traditional essay. I also observed they had deepened their understanding of the particular theorist of focus and how he/she had influenced teaching/learning, and they enjoyed the process!

IDENTITY FORMATION THROUGH DIGITAL STORYTELLING (JESSICA)

During my work as a graduate student and university instructor, I have found digital stories to be a great addition to my courses. I also used a digital story during my master's thesis defense, in which I explained my passion for culturally relevant pedagogy in the classroom, specifically reflecting upon my own literacy identity. Based on this reflexive activity, I decided to pursue critical literacy identity formation for my dissertation research. My goal is to guide adults who are English language learners through digital story creation with the specific focus of how they see themselves as literate members of society. This study is important, because people from diverse backgrounds may struggle to live in a way that embraces their culture over the dominant culture (Eagleton, 2008). By using digital storytelling, individuals who are English language learners can begin to make sense of how they perceive their roles as literate members of society (Skinner & Hagood, 2008).

When creating a digital story to explore identity, I will first ask participants to locate, or take, pictures that represent literacy moments in their lives. Second, they will create reflective journal entries to explore what each picture represents in relation to their identities as literate members of society. Third, they will use the journal entries and pictures to create a storyboard of their imagined digital story. Fourth, they will upload and organize images into a digital text tool (e.g., *Windows Movie Maker* or *iMovie*), as well as create necessary transitions. Finally, they will add music and/or narration, and title, credit, and transition slides. Ultimately, my goal is for the participants to feel a sense of pride and accomplishment in a literacy event, and in so doing, have a better sense of their literate identities.

DIGITAL STORYTELLING IN THE CLASSROOM (DAVID)

As a university instructor for a technology-integration course for pre-service teachers, I have worked with students on the development of content-based digital storytelling. As part of their course requirements, students develop a digital story plan working from a state content standard and a technology standard based on the International Society for Technology Education (ISTE, 2012). In the plan, students create storyboard slides (see Appendix B) in a linear fashion to outline a three to five minute digital story. Each storyboard slide includes necessary narratives, music, sound effects, visual images, and/or text. I encourage students to use their own media (images, video, music, sound effects), which makes the project more of an authentic learning experience for students. However, I also instruct them how to use media under creative commons license, to avoid legal copyright issues in case they wish to post their digital story on YouTube or other public viewing tools online. Finally, I also inform students how to gain permission from owners of copyrighted media, how to provide proper credit, and how material may be used under *fair use* laws for educational purposes (Fair Use, 2012). In this regard, I require students to include a credits screen at the end of their digital story to give

proper credit and attribution to visuals and any other media materials, including their original work.

After students develop their digital story plan, I introduce students to common movie making software, such as *iMovie* for Macintosh computers and *Windows Movie Maker* for PC computers. *iMovie* comes installed on most Macintosh computers and *Windows Movie Maker* is a free download for PC users (Get Movie Maker, 2013). Depending on student preference, I work with them on how to use the software of their choice. However, I have found most of my students choose to use *iMovie* due to its intuitive nature. I have included a list of web resources and best practice tips for creating a digital story in Appendix C.

IMPORTANCE TO EDUCATION

Change in any social practice can be complex and influenced by a number of forces (Serrat, 2013), and the slow adoption of digital texts as a learning tool in teaching/learning environments mirrors this aspect of humanity. Yet we know that students in K-12 settings who have worked with digital texts have had increased content knowledge, motivation and engagement, and problem-solving skills (Alvermann, 2011; Czarnecki, 2009b; Hung et al., 2012; Kocyigit & Zembat, 2013; Skouge & Rao, 2009). Furthermore, pre-service teachers' engagement with technology during their programs, may increase the probability they will use it in their own classrooms (DeGennaro, 2010). It may also provide them an opportunity to reflect on their own learning experiences and identify their possible hidden prejudices in order to become a culturally responsive teacher (Condy et al., 2012). Given these findings, we invite teachers in any context to consider digital texts as an important learning tool for their students.

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APPENDIX A

Steps to Creating a Digital Text Beginning with Images
(using a Macintosh computer and *iMovie* as the project creation tool)

1. Determine a topic.
2. Search for images connected with your topic: Conduct a search for images (still/video) that you like or that you think are interesting using *Google Images*, books, or magazines (if using books/magazines, scan images and save to your computer).
3. Save images/videos to your computer.*
   a. For still images found online, use "Skitch," an image capture program that is a free download at this site: http://evernote.com/skitch/. The nice thing about this program is you can capture the image exactly as you want (as little or as much) and you can mark it up (add text, symbols, shapes) to emphasize things you think are important. There are quite a few tutorial videos you can access for

how to use this program, such as this one:
http://www.youtube.com/watch?v=NzrCgvX4-Ok. However, here I list the
basic steps to capturing and saving an image from your screen to your computer:

    i. Click the Skitch icon.
    ii. In the upper left corner click "Snap." Crosshairs will appear.
    iii. Place the intersection of the crosshairs on the left corner of the image where you would like it to start, then click/drag to the bottom right corner and lift your finger. Skitch will automatically "snap" a picture.
    iv. Make any markups you want to make to the image (circles, arrows, text, etc.)
    v. In the left corner of the window, click the down arrow near the gear icon. A menu of options appears. Click "export."
    vi. In the window that pops up, name your image in the blank space next to "Export As" and choose a place to save it on your computer. The default export format will most likely be "jpg." However, if you click that option, more options will appear.
    vii. Now your image is saved with markups in a folder on your computer. You can decide how to organize your images as you go or just save them all in one folder and organize them later.
    viii. Continue to save images until you think you may have enough or you have exhausted the search.

  b. Saving videos may be a bit more involved. Since I completed the projects above, the program I used for saving a video found online is obsolete. However, here is a link to several other options. Most will have good tutorials to show you how to download the software and use them: http://www.makeuseof.com/tag/18-free-ways-to-download-any-video-off-the-internet/ and http://www.real.com/realdownloader.

4. Creating Topic Categories: Once you have many images saved, print them out (for videos you can open them, pause them, then use Skitch to make a still image) or search through them on your computer to determine what category each image may fit into regarding your topic. For example, if you are creating a digital texts about theorists, you may have images for what they looked like, where they lived, where they went to school, and/or to illustrate key concepts they put forth (e.g., pictures, diagrams, concept maps, clips of experts talking about their work).

5. As you organize your images, make note of any categories you believe might be absent or in need of additional images and locate images to fill in the gaps.

6. Once you believe you have enough images saved and organized, create a Word document to record information about your topic (some prefer different documents for each category).

7. Begin to search for information. As most researchers do, this may include a number of different sources (articles, web sites, videos, books). Depending on your topic and your method of searching for information, you may want to work on one category at a time or multiple categories at the same time.

8. Use a system you are comfortable with to collect information so you can synthesize it for the digital text you will create. This part will be individualized for the person creating the texts. If you are working with students who are creating texts, you may model different strategies for recording information, including instructions on citation of sources.

9. For each category, write the narration you, or someone of your choosing, will record for your digital text.
10. Record your narration. It is up to you to determine the size of chunks of text you want to record on one audio file. There are a few options I have used for this step:
    a. Use a digital voice recorder. Following the directions that come with your recorder, download the audio files to your computer. You may want to Google "What types of audio files are supported by iMovie (year)?" to be sure, but I have never had a problem with MP3s.
    b. Or, use iMovie's voice recording function (this can only be used once you have put your images into iMovie). Click the clip you want to "voiceover," then click the microphone icon and record after the countdown. It is important here that the image(s) you choose be long enough for recording your audio. Although I won't be giving you step-by-step instructions for using iMovie, there a number of great tutorials online on how to use that program, such as: http://www.bgsu.edu/downloads/cio/file85783.pdf and http://video.about.com/desktopvideo/Slideshow-in-iMovie.htm.
11. Determine the flow of your digital text. Here you may want to use a storyboarding technique or simply write down the order of the categories.
12. Create an iMovie (following tutorials/instructions based on the year of your program). Things you may want to consider include creating title slides for the beginning and end as well as between sections, using transitions, and importing music and the audio files you created for narration.

*Note on Copyright: Since you are capturing images that often fall under copyright laws, be sure not to overstep the "fair use" practices, which can be found here: http://www.copyright.gov/fls/fl102.html.

APPENDIX B

Storyboard Slide

Slide #_____

Narration:	Media:
Transitions	Estimated Timing:

APPENDIX C

Copyright and Creative Commons:
- Copyright FAQ: http://www.copyright.gov/help/faq/
- Fair Use: http://www.usg.edu/copyright/the_fair_use_exception/
- Creative Commons: http://creativecommons.org/licenses/

Creative Commons Images for Educational Use:
- http://www.phillipmartin.com/

Copyright Free Images:
- http://www.freepixels.com/
- http://www.publicdomainpictures.net/

iMovie Resources:
- http://www.apple.com/support/mac-apps/imovie/
- iMovie is installed on most Macintosh computers

Digital Stories & Storyboard Ideas:
- http://storycenter.org/
- http://digitalstorytelling.coe.uh.edu/

Best Practices:
- If you use images from Google or other search engines be mindful of copyright issues
- Do not post your movie online for public viewing if you use copyright images for educational purposes according to fair use guidelines
- Get permissions from copyright owners to use their images without worrying about copyright violations