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Digital Storytelling: A Tool for Teaching and Learning in the YouTube Generation

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*This We Believe Characteristics

- Meaningful Learning
- Challenging Curriculum
- Multiple Learning Approaches

*Denotes the corresponding characteristics from NMSA's position paper, *This We Believe*, for this article.

Oliver Dreon, Richard M. Kerper, & Jon Landis

Say the phrase "Charlie bit my finger," and just about every human being with Internet access visualizes the viral video clip of baby Charlie precociously biting the finger of his brother. With almost 200 million views, this video represents just one of thousands of viral videos that form a core component of modern entertainment, news, and advertising (Purcell, 2010). These snippets that people e-mail, post, and pass on to one another faster than the common cold have rapidly moved from the fringe of youth culture to the mainstream.

What if teachers could capitalize on student interest in these quick and quirky video clips as a way to help students connect with curriculum? That is exactly what Tyler Binkley, a first-year teacher and member of the YouTube generation, has set out to do in his middle school math class. Tyler creates online math video vignettes that teach critical math skills (Binkley, 2010), and his unique approach has been featured on television and in other news outlets (e.g., Miller, 2010). His students report going to Tyler's YouTube channel whenever they struggle with a current math task; and with thousands of views, Tyler's videos are a viral hit in Palmyra (PA) Middle School.

In this article, Oliver Dreon and Jon Landis, educational technology professors, and Richard Kerper, a children's and young adolescent literature professor, explain the emergence of Tyler's use of digital storytelling in his middle school classroom. The article outlines how instructional technology and content-specific courses in the teacher education program work in tandem to develop beginning teachers' understanding of digital storytelling as an educational tool. This coordination of efforts offers a framework for incorporating digital storytelling in the middle grades classroom and can also help practicing teachers understand the educational importance and cultural value of the digital storytelling medium.

The importance of digital storytelling

Growing up with unprecedented access to technology has changed the way young people, "digital natives," communicate, interact, process information, and learn (Oblinger & Oblinger, 2005; Prensky, 2001a, 2001b). Thus, many new teachers entering 21st century classrooms are digital natives teaching digital natives (Prensky, 2001a). Lei's (2009) study of a group of digital native preservice teachers suggests that, although future teachers may hold strong positive beliefs about technology and may be proficient with a variety of software

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applications, they may be unable to translate this knowledge to their teaching. "Digital natives," Lei argued, "need to develop a systematic understanding of the technology, subject matter, pedagogy, and how these aspects work together" (p. 93).

Tyler's YouTube math videos make evident that he has been able to incorporate technology effectively in his classroom (Binkley, 2010). While the videos are instructional in nature, each video also tells a humorous story that involves a host of characters and has a distinct plot. Although Tyler's online videos focus on teaching important math concepts, the stories are what ultimately engage his students.

Digital storytelling is the art of combining narrative with digital media such as images, sound, and video to create a short story (Robin, 2008). More than just a simple slideshow of photos set to music, digital stories interweave different media to support the art of telling a tale. In the *Digital Storytelling Cookbook*, Lambert (2006) identifies seven elements that are critical components of effective digital stories (see Figure 1). While these elements outline the nature of effective digital stories, the process of creating a digital story involves leveraging a wide variety of skills, including researching topics, writing scripts, storyboarding, and assembling the final product using video editing software (Ohler, 2006).

Figure 1
The seven elements of digital storytelling

1. **Point of view:** Outlines the point of the story and the perspective from which the story is told.
2. **A dramatic question:** Sets the tension of the story by identifying issues to be resolved.
3. **Emotional content:** Engages the audience through common emotions and themes (love, pain, humor).
4. **The gift of your voice:** Helps the audience make meaning of images.
5. **The power of the soundtrack:** Sets the mood of the story.
6. **Economy:** Balances the auditory and visual tracks of meaning.
7. **Pacing:** Sustains the attention of the audience by establishing and modifying the rhythm of the story.

Adapted from Lambert (2006)

The medium of digital storytelling offers tremendous opportunities for teachers to engage and assess students. By integrating visual images with written text, digital stories can be used to enhance and accelerate student comprehension (Burmark, 2004; Robin, 2008). For example, when using digital storytelling with middle and high school students, Kajder and Swenson (2004) found that digital stories helped struggling readers envision text and offered a platform for visually communicating meaning. When creating their own digital stories, students encounter an integrated instructional activity that requires them to leverage a host of cognitive, interpersonal, organizational and technical skills (National Middle School Association [NMSA], 2010; Robin, 2008).

Tyler's journey to using digital storytelling as a means of improving instruction, however, was not a voyage he took accidentally. It represents a culmination of coordinated experiences at Millersville University intended to prepare educators to teach in a connected classroom. These experiences are designed to help teacher candidates recognize technology, pedagogy, content, and context as interdependent aspects of teaching content-based curricula effectively with educational technologies (Harris, Mishra, & Koehler, 2009).

Connecting theory and practice with instructional technology

As an undergraduate elementary education major, Tyler enrolled in a course called Instructional Technology in Elementary Education. While the course is designed to instruct teacher candidates about technology integration, the course is not "technocentric" (Papert, 1987). Instead of focusing on specific technologies, it examines how technology can be integrated in different content areas using sound pedagogical approaches. Ultimately, the course helps to develop preservice teachers'

technological pedagogical knowledge, which involves an understanding of the effect on teaching and learning when educators incorporate different technologies into lessons (Harris, Mishra, & Koehler, 2009). Each activity in the instructional technology course focuses on pedagogical aspects of technology and how they promote student learning. Teacher candidates do not just complete generic technology projects but develop lessons that incorporate technology into classroom settings.

Digital storytelling is one activity introduced in the instructional technology course. While a more technocentric instructional technology course would focus solely on movie editing software, this class examined digital storytelling as an instructional medium and how it could be used in the teacher candidates' future classrooms. Using the *Digital Storytelling Cookbook* (Lambert, 2006) as a guide, Dreon and the class discussed different storytelling elements such as point of view and emotional content. They also discussed the potential benefits and challenges of using digital storytelling in classroom settings. For the culminating activity of the digital storytelling unit, each preservice teacher developed a story that could be used in a lesson. For his digital storytelling project, Tyler detailed the Hindenburg crash and told the story from the point of view of a reporter on the scene. He expertly integrated actual footage of the crash and emotionally described the horror of the accident as if he was witnessing it himself.

Application in the teacher education program

While the instructional technology course helps teacher candidates develop technological skills and an understanding of technology integration, other classes help model sound technology integration in content areas. These courses demonstrate that technology is a tool for instruction and assessment. For instance, later in his program, Tyler enrolled in the required course Literature for Children and Young Adolescents, taught by Kerper. This course focused on literary genres, aesthetic response to student-selected and professor-selected exemplars in literature (Pradl, 1984; Rosenblatt, 1986), and techniques for sharing literature with children (Kiefer & Tyson, 2009). One technique emphasized in the course was storytelling (MacDonald, 1993), and the primacy of story was foundational to the course (Hardy, 1977; Wenner, 2004; Willingham, 2004). Kerper taught preservice teacher candidates to view narratives as symbolic words having sequence and meaning for those who live, create, or interpret them (Fisher, 1987).

During the semester, preservice teacher candidates read and discussed books in small literary communities, as recommended by Daniels (2002). In previous years, students in the course learned the face-to-face literature sharing technique known as a booktalk (Bodart, 1985). They delivered one booktalk in class, and many continued using the technique once they began teaching in a school. The year Tyler enrolled in the course, Kerper introduced a digital version of the booktalk project.

For the digital booktalk (Gunter & Kenny, 2008; Kenny & Gunter, 2010), preservice teachers worked with tools such as iMovie or Movie Maker to create two-minute trailers for the books they read, similar to movie trailers seen at the cinema (Woods & Beach, 2008). These digital creations communicated aspects of theme, plot, character, and setting to tempt the viewer to read the book on which it was based. Moreover, they represented manifestations of the preservice teachers' aesthetic responses to the literature (Connell, 2000; Rosenblatt, 1986). The digital booktalks provided reading motivation material that preservice teachers could one day share with their students and a model they could use to produce additional motivational pieces in the future.

Once teams had read the pieces of literature they selected, they began creating storyboards, just as the creators of the picture books and other graphic media they read had done (Marcus, 2008; Shulevitz, 1985;

Thompson, 2007). They began by thinking about their responses to themes, the protagonist's conflict, and the complications the characters faced. They also began to consider the impact that their visual perspective would have on their viewers' responses. Thus, they were responding to the literature while simultaneously processing their responses metacognitively (Lesley, Watson, & Elliot, 2007).

Applying ideas discussed in the coverage of picture books, teacher candidates decided whether to use a bird's-eye, a worm's-eye, or a head-on view in filming scenes as they reflected on the difference in impact on the viewer. Following this planning, they gathered and took photographs, filmed live action using Flip Video cameras as they performed or directed others, selected segments of music and sound effects, created voice-overs, and inserted titles and other brief text (Grayson, 2010). Then, they faced the challenge of using the software to blend these elements together and made decisions about fade-outs, dissolves, cuts, and other movie-making techniques. Once again, they considered the impact that each would have on the communication. As draft videos were prepared, many teacher candidates used the support services provided by the on-campus digital learning studio that employs tech-savvy students who have been trained to assist them in achieving their goals.

While this work was being completed, Kerper issued each student an invitation to Ning, a social networking tool, as recommended by Duffy (2008). Once draft videos were finished, the teacher candidates uploaded them and the fun began. These novice video makers enjoyed viewing one another's creations and writing viewer comments that let the creators know what had made sense to them in the communication and where they had experienced uncertainty (Yang, Yeh, & Wong, 2010). Using these comments, and stimulated by what they had seen and heard in others' videos, each creative team revised its video—sometimes re-filming, sometimes changing voice-overs, sometimes adjusting volume. The types of revisions were many, and the transformation of the videos was quite apparent.

When the teacher candidates submitted their logs of time worked and summaries of the impact that peers' comments had on the final product, the value of this learning was apparent. Some could see the importance to their future teaching, but many, like Tyler, discovered the power and potential of the tool in making certain that each child in their own classrooms was learning. Tyler's facility with the process of creating digital video may be related to his youth and his familiarity with technology as a digital native. To what extent can professional development play a role in moving digital storytelling across generations in a school faculty?

Implications for teachers in all content areas

Making content and connections relevant to students' lives helps bring meaning and purpose to instruction in all content areas. More than a century ago, Dewey (1902) challenged educators to meet students where they are. Digital storytelling connects students to content in ways that they are accustomed to consuming information. Students watch, share, and comment on snippets of videos from TV and movies. They make their own videos and post them to online forums. In fact, the video sharing site YouTube is now serving more than two billion videos per day (Chapman, 2010). The viral video is the cultural currency of today's youth.

The currency of digital video today
While Tyler's videos are entertaining and educational, the value of their currency derives primarily from the format (Binkley, 2010). His videos epitomize the style of the Internet video vignette with recurring characters, themes,

and jokes; thus, their exchange rate among students is high. Students can subscribe to them via a YouTube channel and post them to Facebook just like they have done with the "Charlie bit my finger" video. The videos communicate in the current dialect of the middle grades students Tyler is trying to teach. His development of these short instructional movies involves more than simply learning how to create a digital video; it requires an understanding of storytelling using the current cultural vernacular, and the ability to integrate the medium as an instructional tool to illuminate the content with a population of young adolescents. By creating digital stories that engage middle grades learners, Tyler demonstrates his understanding of the dynamics of the ever-changing youth culture (NMSA, 2010).

Learning to teach with digital videos
Following the model that Tyler provides, professional development of middle grades teachers across disciplines requires three interdependent foci—the mechanics of video editing, the techniques of modern storytelling, and the integration of the content and the medium. While learning to shoot and edit video is dependent on the availability of equipment and software, the logistics of doing so are straightforward. In contrast, the development of a curricular vision for technology integration requires that teachers see effective examples modeled and participate in collaborative communities that offer support and feedback. Lastly, working with modern storytelling involves a subtler understanding of current popular culture and media consumption, but a universal approach to the creation of a popular or viral video does not appear to exist. There are, however, common elements.

Of the all-time top ten videos viewed on YouTube, six are musical and four are humorous (YouTube, 2010). Thus, music and humor are standard elements of popular online videos. Perhaps as a consequence of YouTube's 10-minute limit to video uploads, digital stories tend to be short, delivered in neat little packages. Therefore, the modern storyteller often uses a framework of humor and music to craft stories that are clever, quick, and funny. The process for achieving this is varies, depending on the creativity of the storyteller and the whim of the viewers en masse. While Tyler's videos are not wildly funny, his subtle humor, clever editing, and storytelling set a context for the delivery of math information.

Through his online digital stories, Tyler creates a way for students to acquire math information in a manner that is palatable and entertaining. The format of these videos is also sensitive to young adolescents' need for social acceptance. Because the videos can be watched repeatedly in a private setting, Tyler's struggling students can view the digital stories without fear of being labeled by their peers.

Although Tyler's videos usually focus on mathematical concepts, digital storytelling can be used in all content areas. For instance, a middle school team could create a digital story to introduce an interdisciplinary project or to support a thematic unit. Teachers could also use digital storytelling as an alternative assessment technique with their students. By drawing on students' writing skills, organizational abilities, and creativity, digital storytelling is an ideal integrative activity that can be incorporated easily in a variety of middle grades settings (Hernandez & De La Paz, 2009; Kajder & Swansen, 2004).

Issues and challenges
While digital storytelling can be an engaging way to instruct and assess students, some challenges are associated with its implementation. Although our society has become increasingly connected digitally, educators using any web-based form of instruction must be concerned about equal access for all learners, taking into consideration an individual's socioeconomic background and learning needs. While there

are many different platforms for creating and sharing digital stories (e.g., iPod Touch, Animoto, ScribePics), teachers using digital storytelling for instruction must weigh the educational benefit for all students and ask themselves, "Would all of my students be able to access content online or benefit equally from its presentation?" While it may be valuable to offer digital stories that are culturally relevant to today's students, teachers need to ensure that all learners have equal access to the content.

Conclusion

How we speak to our students is as important as what we say. In today's culture, the noise of information can be deafening, and competing for students' attention can be a matter of broadcasting on the frequencies to which they are listening. The digital story, which dials into digital natives and connects them with the curriculum, represents one of our most powerful instructional tools today.

Extensions
How can your team incorporate digital storytelling into the instructional program? What areas of the curriculum could be most effectively taught through digital stories? What challenges would you face as you implement this instructional approach in your school?

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