

Teaching Literary Analysis with Digital Storytelling: An Instructional Approach *RESEARCH*

Ellen Maddin, Northern Kentucky University

Abstract

This qualitative, single case study examined teacher practice using digital storytelling as an instructional approach to the Common Core State Standards in English Language Arts, following the work of two middle grades teachers over a six-week period through initial planning and implementation of student-created digital stories within a unit centered on S.E. Hinton's novel, *The Outsiders* (1967). The aim of the study was to work closely with the participants, allowing teaching and learning to unfold naturally, while providing opportunities for participants to describe their experiences and share their insights to reveal the essence of the phenomenon. Three-part interviews with teacher participants, field notes from nine classroom observations, a project wiki, teacher-created artifacts and student work samples captured insights at each phase of the project. Results support the viability of Wallace's (2004) theoretical framework for understanding teaching with the Internet, particularly in the areas of instructional planning and monitoring of student work. Implications for teacher practice include the value of co-teaching as a supportive condition for effective technology integration and the efficacy of a learner-centered environment, implemented alongside instructional strategies similar to those used to teach the writing process, to teach digital storytelling to middle-grade learners.

Keywords: teaching, literary analysis, digital storytelling, instructional approach

Introduction

To date, 45 states and three territories have adopted the Common Core State Standards in English Language Arts, and many have begun to implement them. The new standards present a challenging and rigorous roadmap for middle grade teachers and their students. They require that students in grade seven engage in literary analysis and compare written works to audio, filmed, staged, or multimedia versions. Students at this level are expected to be able to gather relevant information from multiple print and digital sources, evaluate the credibility of those sources, and present research findings. Although references to technology use are open to interpretation, it is clear that technology will play a critical role in implementation. The standards require learners to be both print and screen literate, to use technology to produce and publish writing, and to interact and collaborate with other writers using web-based mediums.

How to best address the academic rigor of the new standards and engage students in meaningful uses of instructional

technology is a topic of great interest to researchers and practitioners. Among those technologies with potential in the area of English language arts is digital storytelling. Students in the middle grades—whom Marc Prensky (2001) referred to as “digital natives”—are highly motivated by the prospect of designing digital products that integrate voice narration, text and images to communicate ideas (Gregory & Steelman, 2008; Sadik, 2008). Drawing on the work of Prensky (2010) and others, Dreon, Kerper, and Landis (2011) noted the cultural relevance of digital storytelling for the YouTube generation, further supporting its potential for connecting middle school students to the curriculum.

Robin (2011) defined digital storytelling simply as the “practice of using computer-based tools to tell stories.” Rule (2001) suggested that digital stories “derive their power by weaving images, music, narrative and voice together, thereby giving deep dimension and vivid color to characters, situations, experiences, and insights.” An emerging body of literature

supports students' use of digital storytelling to strengthen understanding of content and encourage reflection (Jenkins & Lonsdale, 2007; Genereux & Thompson, 2008; Ohler, 2008; Sandars & Murray, 2009). Others have observed the potential of digital storytelling to help students construct meaning during reading and interact more deeply with texts (Sylvester & Greenidge, 2010; Gregory & Steelman, 2008; Sadik, 2008; Kajder, 2004). Because the process of designing a digital story parallels the writing process, the medium has also emerged as a vehicle for helping students compose, organize and express ideas creatively (Fries-Gaither, 2010; Kulla-Abbott & Polman, 2008).

The purpose of this study was to examine teacher practice using digital storytelling as an instructional approach to the new English language arts standards. The researcher followed the work of two middle school language arts teachers over a six-week period through their initial planning and implementation of student-created digital stories within a unit centered on S.E. Hinton's novel, *The Outsiders* (1967). Students' work focused on analysis of theme, characterization, conflict or setting in the novel. The following research questions were investigated:

For a reading/writing unit that incorporates digital storytelling,

- 1) How do teachers approach instructional planning?
- 2) What instructional strategies to teachers use?
- 3) How do teachers help their students acquire the necessary technology skills?

Instructional Planning for Technology Integration

Effective planning includes identifying standards and learning outcomes

at the onset of lesson design (Wiggins & McTighe, 2005; Young & Bush, 2004; Pitler, Hubbell, Kuhn, & Malenoski, 2007, p. 15). Clear learning targets increase the likelihood that technology will be used to support students' acquisition of knowledge rather than becoming the focus of the lesson (Young & Bush, 2004; Chen, Callinger, Howard, & Oskorus, 2008). In digital storytelling, Ohler (2008) advised teachers to design instruction so that students would focus first on the elements of the story and secondly on the technology. Pitler et al. (2007, pp. 30-33) recommended the use of criterion-referenced rubrics to communicate learning goals and expectations with students at the beginning of a learning sequence and to maintain student focus on key content throughout the unit.

Wallace (2004) found that "pre-active phase of teaching," where instructors locate and select materials for students to use, required greater amounts of effort and time when teachers were planning for the use of Internet than when they were using more traditional materials, such as textbooks. Unlike district-adopted curriculum materials, which provide intellectual and physical boundaries, the Internet is "a door virtually open to a boundless space" providing "neither physical nor intellectual boundaries." Wallace noted that while this feature is typically promoted in a positive light, focusing on the "exciting possibilities" for learning, the reality is that the Internet, in all of its "boundlessness," can pose genuine problems for educators who are attempting to organize instruction according to a state-mandated course of study.

Instructional Strategies for Digital Storytelling

The Common Core State Standards in English Language Arts require that

students make connections between communication processes in five strands: reading, writing, speaking, listening, and language (p. 4). Students are expected to be able to write about what they read—for example, by analyzing how the setting shapes the development of characters or plot in a story (p. 36). Adapting the work of Lambert (Center for Digital Storytelling) to educational settings, Robin and Pierson (2005) identified ten elements of a digital story:

1. The Overall Purpose of the Story
2. The Narrator's Point of View
3. A Dramatic Question or Questions
4. The Choice of Content
5. Clarity of Voice
6. Pacing of the Narrative
7. Use of a Meaningful Audio Soundtrack
8. Quality of the Images
9. Economy of the Story Detail
10. Good Grammar and Language Usage

Robin and Pierson's elements of digital storytelling are harmonious with the integrated model of literacy presented in the standards. By attending to the ten elements of the digital story, students communicate a concise and meaningful message through the integration of text, voice narration, images and music. Ohler (2008) also recognized digital storytelling as an integrative medium, describing the story construction process as a blending of oral, written, art, and digital skills that improve literacy and expression in all areas.

Fries-Gaither (2010) found parallels between the creation of a digital story and the writing process. In both, composition was more manageable for learners when it was broken down into incremental steps. Digital storytelling instruction began with a

prewriting phase in which students brainstormed ideas for the stories they wanted to develop. Next, students worked on drafts of their digital story scripts. Peer review and feedback were important components during this phase. In addition to the creation of a story script, the digital storytelling composition process included the creation of a storyboard that captured images and music selected to complement the content and tone of the stories. Conferencing with peers and the teacher allowed students to revise and rearrange their work before going into the production phase of the project.

Using images to represent ideas and emotions—both symbolically and literally—is an important element of digital storytelling (Ohler, 2008). Also known as nonlinguistic representation, the selection of story images to represent and elaborate on knowledge is a strategy that increases reflection and recall (Pitler et al., 2007, p. 86). Marzano, Pickering, and Pollock (in Pitler et al., 2007, pp. 6-8) identified non-linguistic representation as one of nine categories of instructional strategies that significantly affect student achievement. Pitler et al. (2007) described nonlinguistic representation as a way to help students activate background knowledge and connect new information to what they already know (p. 71). Stressing that students are motivated by the challenge, creativity and opportunity to collaborate with peers, Pitler, et al. recognized movie-making (a term that precedes digital storytelling) as a means of incorporating the strategy of nonlinguistic representation into instruction.

Study Method

This investigation employed a qualitative case study approach for two reasons: 1) contextual conditions were relevant to the phenomenon under study,

and 2) the focus of the study was to answer “how” and “why” questions (Yin, 2003). The aim of the study was to work closely with the participants, allowing teaching and learning to unfold naturally, while providing opportunities for participants to describe their experiences and share their insights to reveal the essence of the phenomenon. After several observations, it became apparent that the study participants intended to combine their classes and co-teach the digital storytelling unit. As a result, the research became a single case study. Using Yin’s (2003) approach, the unit of analysis was the process of planning and implementing the digital storytelling literary analysis project.

Qualitative data were collected over a period of six weeks. Data sources included three-part semi-structured interviews, conducted separately with each teacher participant. The interviews took place during the planning and implementation phases of the project. Researcher field notes were recorded on a classroom observation guide during nine classroom observations. Notes from informal conversations with teachers during non-teaching time were kept in a journal. Additionally, the researcher had access to teacher-created artifacts, relevant correspondence between the teachers, student work in progress, a project wiki, an online peer review environment, and students’ final digital stories.

Data were analyzed using an iterative process. Initially, the data from each source were organized by research question. To place feasible limits on the study, data were further examined against propositions from relevant literature. Linking the data to propositions enabled the researcher to describe and explain the phenomena of teacher practice in terms of existing theoretical frameworks (Yin, 2003).

Analysis of the study data was linked to the following propositions:

- 1) Teachers approach planning differently when they are integrating technology. Even with extensive planning and preparation, teachers face many “unknowns” when teaching with the Internet (Wallace, 2004).
- 2) Use of the Internet for pedagogical support poses unique challenges as teachers anticipate, monitor and assess student learning (Wallace, 2004).

Study Context

Setting. This study took place in a suburban middle school in southwestern Ohio serving approximately 1,300 students in grades seven and eight. On the website, the first of the school’s core values underscored the importance of decision-making based on students’ needs: “School is organized around students and how they will be inspired or impacted.” The use of technology for teaching and learning was also a high priority in the school. The website boasted, “Technology is integrated into everything we do.”

Teacher teams were empowered to make decisions about how they used time and physical spaces within the building. This flexibility allowed the participants in this study to negotiate within their teams for extra project work time and the use of a multi-media center in the building. Using a flexible block schedule, the participants in this study typically met with their English language arts students for 50 minutes four days of the week and for 90 minutes one day of the week.

Participants. The participants in this study were two grade seven English language arts teachers who worked together on an interdisciplinary team. Pseudonyms

have been used to protect the anonymity of the study participants and the school. Monica had thirty-one years of teaching experience; eleven of those years were at Maple Middle School. Monica was an avid user of technology who actively sought out new applications for her students. Bethany had been teaching for nearly six years, all at Maple Middle School. While a competent user of technology, Bethany was less confident in her technology skills than Monica. She was willing to integrate technology into her lessons, but she frequently deferred to Monica when planning for its use. Together, the teachers were responsible for 240 students, whom they co-taught in groups of approximately 60.

The study participants had access to a double classroom, with a room divider that they could open or close based on need. This classroom contained desks and six large tables for students, along with two teacher work areas. In addition to the double classroom, the teachers had access to an area called the Learning Commons. This area was used more frequently than the double classroom during the six weeks of the study. Formerly a media center, the Learning Commons had been renovated with input from students. A key factor in the redesign was ergonomics; the space had to be physically comfortable and well-equipped for teaching and learning. The facility provided ample seating for sixty students and their computing devices.

Each school day began with a ten-minute Advisory meeting, which was followed by four hours of “core” classes and a lunch period. During this four-hour period, the study participants co-taught English language arts to four groups of grade seven students. The last part of the day was designated for elective “encore” classes. During the elective periods, the study

participants were available for teamwork and planning.

Procedures and Data Sources

Prior to conducting classroom observations, the researcher met with both teachers during their shared planning time. The study participants explained their instructional goals and described their initial plans for integrating technology. They were preparing to teach the novel *The Outsiders*, and they intended to launch a complementary technology project within the first week of the unit. Both teachers had used a variety of technology applications; however, neither had worked specifically with digital storytelling. The researcher and the participants established dates for classroom observations and interviews. It was also decided that a project wiki would be established to provide a common work area for teacher planning and for sharing instructional resources with students.

Project Wiki. The researcher created a password-protected wiki for the digital storytelling project. Only the teacher participants, their students, and the researcher had access to the collaborative work area. Initially, the teachers in the study used the wiki to share learning resources with students, such as Internet links to literary terms, examples of literary elements and models of digital stories. As the unit progressed, the use of the wiki evolved to include students’ digital story planning artifacts and their completed digital stories

Classroom Observation Guide.

During each of the nine classroom observations, the researcher used a classroom observation guide which had three sections: 1) description of the physical environment, 2) description of instructional activities and learning arrangements, and 3) description of the teacher role(s) and interactions with students. After each

classroom observation, the researcher met with the study participants to verify the accuracy of the observation and to ask clarifying questions.

Interview Guides. The researcher interviewed the study participants separately—using the same question sets—during the planning, implementation, and assessment phases of the project. Separate interviews provided ample time for elaboration, circumvented the possibility of interview sessions being dominated by either of the participants, and provided

opportunities to compare perspectives and further examine each teacher’s unique contribution to the collaborative effort. Each interview was recorded using a digital voice recorder to ensure accuracy during transcription. Audio recordings were immediately transcribed following each interview, allowing the researcher to clarify the transcriptions with the study participants, if necessary, during subsequent site visits. The interview protocol is presented in Table 1.

Table 1. Teacher interview guides

Project Phase	Research Question	Interview Questions
Planning	How do teachers approach instructional planning for a reading/writing unit that incorporates digital storytelling?	<ol style="list-style-type: none"> 1. What are the learning objectives for the unit you are currently designing? 2. What are some of the things you must consider when you are planning a new unit in which technology will be integrated? 3. What made digital storytelling an appealing component in this unit? (What makes this assignment a “good fit”?) 4. Were there any special skills you had to learn to prepare for this unit? If so, please explain.
Implementation	What instructional strategies do teachers use in a reading/writing unit that incorporates digital storytelling?	<ol style="list-style-type: none"> 1. How do you help students get ready for digital storytelling? <ul style="list-style-type: none"> - Before reading - During reading - After reading 2. What instructional materials do you use to help students plan their digital stories? 3. What resources do you provide to students while they are working on their digital stories? 4. Describe the learning arrangements/grouping you use while students are working on literary analysis. 5. Describe the learning arrangements/grouping you use while students are working on technical aspects of digital storytelling.
	How do teachers help students acquire the technology skills needed to produce a digital story?	<ol style="list-style-type: none"> 1. What kinds of help do your students need when they are using technology to create a digital story? 2. What strategies/techniques have you found to be most successful in providing the help and support that your students need?

Artifacts of Teaching and Learning. Throughout the study, the researcher had access to teacher-prepared materials. These included step-by-step instructions for using technology applications, models and examples, templates and graphic organizers. Most of the instructional materials were presented to students in a digital format. The researcher was also able to view the work of individual students and small groups as the unit of study progressed. Student work included brainstorming and planning documents, storyboard scripts, digital stories in progress, and final “published” digital stories.

Researcher Journal and Email Correspondence. The researcher kept a journal during the study to record notes from informal conversations. This helped to clarify what had been observed and to increase the accuracy of the field notes. Additionally, the researcher was included as a recipient on relevant email correspondence between the study participants. Communication through email was an important data element in this study as it served to chronicle the collaboration between the study participants and helped the researcher to connect what was happening in the classroom to the teachers’ intended instructional design.

Data Analysis

Multiple data sources were used to enhance data credibility in this study (Yin, 2003). The researcher first examined each data set independently against the research questions and secondly against the propositions from relevant literature. In the final phase of analysis, data sets were converged, organized into research question categories, and linked to the propositions.

Findings

Results for the second and third research questions—which address instructional strategies and technology support for students during the implementation of the instructional unit—have been combined into one section. The data revealed overarching themes connected to the study propositions. These themes have been interwoven into the results for each of the research questions.

How do teachers approach instructional planning for a reading/writing unit that incorporates digital storytelling? The participants in this study began the process of planning by identifying the skills and concepts they expected students to learn. Monica explained,

Most of the learning objectives are ones that deal with literary elements. We want students to look at theme, be able to think symbolically, and apply deep thinking strategies to a text, and also think of ways that they could share those ideas with other people We’ll talk about conflict, characterization—how the author makes the characters come alive.

Bethany’s expectations for the unit also focused on specific learning outcomes; however, she alluded to a desire to give students an opportunity for creative expression in another medium, building on what they had done previously:

We want the kids to be able to make inferences based on the text and draw conclusions—with explicit evidence from the text—and do that in a way that is

creative. This whole year we've been focusing on writing and how we can make a piece informative or persuasive—and this [digital story] could be a way to share your feelings about the theme or the characters in *The Outsiders* and present it in a way that is more creative and unique.

Beyond identifying *what* students should learn, the teachers had a multitude of considerations regarding *how* the learning would take place. Each group of 30 students included 5-6 students with special needs. Creating an environment where all students had the supports they needed and the right level of challenge was a key consideration in the planning process. Monica and Bethany found that careful grouping of students could mitigate some of challenges of mixed ability levels within their large classes. Bethany described the process in this manner:

Depending on the purpose, we have different ways we group students. We use a lot of data to formulate our groups. So we usually look at the data first – who are the highest readers and the lowest readers – and we use this information to put students in heterogeneous groups or homogenous groups, depending on what we want them to do. And we can override the data based on how well we know the students at this point—if we know that the scores reflect more of the work ethic than what the student can do.

Thinking about learning arrangements with regard to the use of computers was a key consideration from Monica's point of view. "You have to do a lot of planning ahead and thinking about how the kids are going to work. Are they going to work by themselves or together in partners? How many computers are we talking about and what physical space are we working with?" Both teachers indicated that they considered what they wanted students to practice or learn before they chose a technology application for the task. If it made more sense to complete an activity without computer technology, they reverted to more traditional tools such as paper and pencil or poster boards and markers.

The study participants relied on their past experiences to develop a timeline for their study of *The Outsiders*. In the initial planning meeting with the researcher, they approximated how long it would take for students to complete assigned readings, engage in class discussions, and apply their understanding of literary elements to an analysis of the novel. They explained that student learning had formerly been measured through periodic quizzes, an end-of-unit test, and a paper of literary analysis on some element of the novel, such as theme, conflict characterization or setting. There was some uncertainty about how much time would be needed to integrate digital storytelling in place of the formal writing assignment, but both teachers were enthusiastic about modifying the unit to accommodate a technology project. In the past, the teachers had introduced the culminating activity, i.e., the paper, as they neared the end of the unit. For this project, they decided to introduce the concept of digital storytelling at the onset of the novel study in order to give students time for ideas to "percolate."

Another important piece in the planning puzzle was the necessity of having a back-up plan in the event that the network wasn't available or the applications the students were supposed to use weren't working properly. Of the two teachers, Bethany expressed a greater level of concern in this area:

Looking at all the different facets, you need to be thinking, "How is this going to work, and is it going to work in such a large group setting?" You have to be able to monitor and make sure [students] are on track and doing what they are supposed to be doing. And you have to be predicting or anticipating what might go wrong and having ideas in the back of your mind for how you're going to fix things so that class time isn't wasted . . . especially in the planning stages of the project.

Selecting technology tools that complement learning activities and fit well with students' computing skills was another aspect of the planning process. The students in this study had previously used a variety of programs to complete their work in school. The teachers were able to capitalize on this prior experience and to more accurately predict how long it would take students to

learn a new application, in this case Photo Story 3. Table 2 is a display of the technology applications used by students in this study.

The teachers continued their planning efforts throughout the unit. They used their common planning time, as well as their lunch periods, to debrief on the success or challenges of their instruction that day, plan for the next day, and prepare materials for student use. Since both had previously taught *The Outsiders*, they were able to mine resources that had been developed in prior years. Nevertheless, new materials had to be developed to accommodate digital storytelling. The study participants used word processing, spreadsheet and presentation tools in Google Apps for Education to create and share materials with students. They prepared a rubric and a storyboard template based on models available on Robin's (University of Houston) Digital Storytelling website. They collected links to literary terms and models of digital stories and posted them on the project wiki. Student requests for resources—such as a "how-to" guide for using Zotero to prepare a bibliography or links to copyright-free media—were another factor in planning. Bethany and Monica approached instructional planning as an ongoing and fluid activity, responding to students' direct requests, or what they thought students needed, on a daily basis.

Table 2. Technology applications

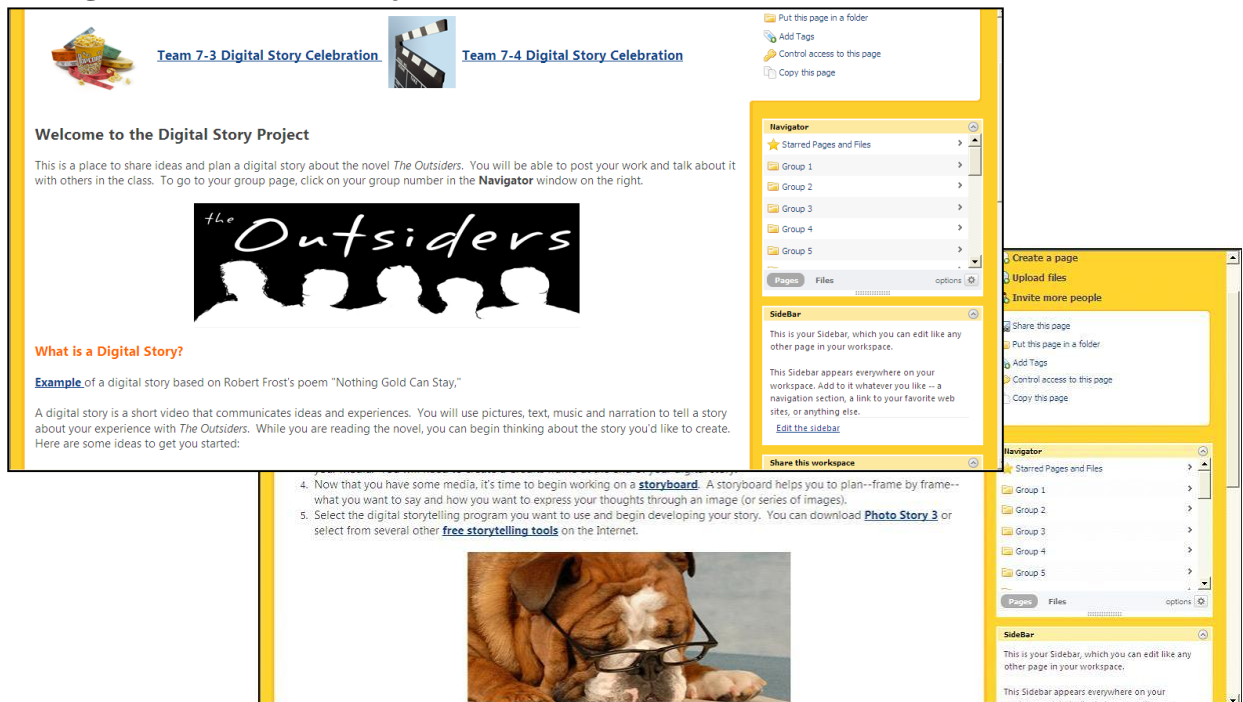
Technology Tool	Instructional Use(s)	Learning Arrangement(s)	Student Prior Experience?
Photo Story 3	<ul style="list-style-type: none"> Digital story production 	<ul style="list-style-type: none"> Independent Pairs 	No
Google Docs/ Google Apps for Education	<ul style="list-style-type: none"> Brainstorming story ideas Literature response Pre-writing/drafting story script Story board Conferencing Peer review 	<ul style="list-style-type: none"> Small group Pairs Independent 	Yes
Schoology	<ul style="list-style-type: none"> Learning management environment Communication Document sharing Discussion 	<ul style="list-style-type: none"> Whole group Independent Pairs 	Yes
Zotero	<ul style="list-style-type: none"> Organizing image and audio files Citing image/audio sources 	<ul style="list-style-type: none"> Independent Pairs 	Yes
Symbaloo	<ul style="list-style-type: none"> Organizing and sharing Internet resources 	<ul style="list-style-type: none"> Whole group Independent 	Yes
Internet Explorer/ Google Chrome	<ul style="list-style-type: none"> Researching literary terms Locating copyright-free images Locating music tracks with creative commons licensing 	<ul style="list-style-type: none"> Independent Pairs 	Yes
PB Works Wiki	<ul style="list-style-type: none"> Viewing digital story examples and planning models Templates for planning and storyboarding Links to resources for literary analysis Links to copyright free media resources (images, music) Digital story publishing 	<ul style="list-style-type: none"> Whole group Independent Pairs Small group 	No
TodaysMeet	<ul style="list-style-type: none"> Online meeting room for peer review feedback 	<ul style="list-style-type: none"> Small group 	Yes

What instructional strategies do teachers use in a reading/writing unit that incorporates digital storytelling, and how do they support students' concurrent use of technology? The teachers in this study co-taught each class session observed by the researcher. A typical class period began with direct instruction by one or both of the teachers. This segment generally lasted 10 to 15 minutes and served to establish the learning goals and project expectations for the class period. The whole group introduction might be followed by a small group activity or an opportunity for students to work with an editing partner. In four of the nine classroom observations, students were given facilitated project work time. In these sessions, one teacher conducted conferences with students, calling upon them individually or in pairs to show their work and talk about their progress, while the other teacher walked around the Learning Commons, stopping at tables to answer

questions or provide assistance. A dry-erase board near the entrance of the room contained a list of the tasks students should complete during the session.

Students were assigned one to two chapters of reading as homework three to four days a week. The study participants used journal writing to encourage students to interact personally with the text and to help them apply their emerging understanding of literary elements to the novel. Journal prompts were posted as assignments in Schoology, the district online learning management system (LMS). Reminders of assignments and due dates, suggestions and project tips were also posted for students in Schoology. The project wiki served a somewhat different purpose. Whereas Schoology provided a learning environment for all subjects and assignments, postings to the project wiki were specific to the study of *The Outsiders* and digital storytelling. Figure 1 depicts pages in the project wiki.

Figure 1. PB Works Project Wiki.



Bethany described the value of the wiki in this manner:

We used the wiki to organize [the project] and to give kids a central location where they could always go to for any materials they would need. We wanted the kids to get used to going to a certain place where everything is located. They could always go there for anything they might need or forget or lose. So, I think having the wiki as the organizational tool for the class was hugely important.

During the first week of the unit, students examined “Nothing Gold Can Stay,” a poem by Robert Frost quoted in *The Outsiders*. The researcher took notes as students discussed the theme of the poem. Together, the researcher and the study

participants created a model digital story to share with students. Using ideas from students’ discussion in the story script, the teachers selected images to portray the passing of time and the change of seasons. They added instrumental music—a piece described as “bittersweet” in the catalogue—to capture the mood of the poem. The study participants used the model to introduce the concept of digital storytelling, emphasizing the potential of the medium to use images, narration, text, music and special effects to carry a message. The teachers explained that students could demonstrate their understanding of literary elements in the novel through a digital story or through an essay. They presented a rubric (Figure 2) to guide students’ understanding of the project components and expectations. All of the 240 students in this study chose to complete a digital story.

Figure 2. Digital Story Rubric

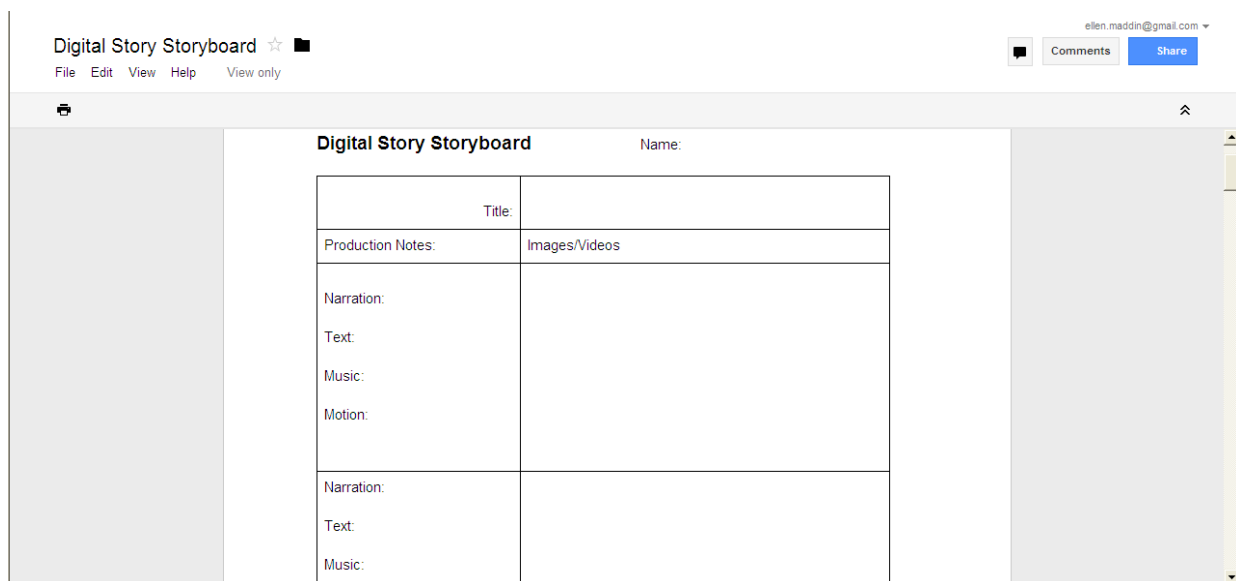
CATEGORY	4 - Accomplished	3 - Commendable	2 - Developing	1 - Beginning
Purpose	Establishes a clear purpose early on and maintains a clear focus throughout.	Establishes a purpose early on and maintains focus for most of the presentation.	There are a few lapses in focus, but the purpose is fairly clear.	It is difficult to figure out the purpose of the presentation.
Awareness of Audience	Strong awareness of audience in the design. Students can clearly explain why they felt the vocabulary, audio and graphics chosen fit the target audience.	Some awareness of audience in the design. Students can partially explain why they felt the vocabulary, audio and graphics chosen fit the target audience.	Some awareness of audience in the design. Students find it difficult to explain how the vocabulary, audio and graphics chosen fit the target audience.	Limited awareness of the needs and interests of the target audience.
Musical Selection	Music stirs a rich emotional response that matches the story line well.	Music stirs a rich emotional response that somewhat matches the story line.	Music is not distracting, but it does not add much to the story.	Music is distracting, inappropriate, OR was not used.
Image Selection	Images create a distinct atmosphere or mood that matches different parts of the story. The images communicate through symbolism and/or metaphors.	Images create a mood in some parts of the story. A few of the images communicate symbolism and/or metaphors.	An attempt was made to use images to create an atmosphere/mood this area needed more work. Image choice is logical.	Little or no attempt to use images to create an appropriate atmosphere/ tone.
Narration	Voice quality is clear and consistently audible throughout the presentation.	Voice quality is clear and consistently audible throughout the majority (85-95%) of the presentation.	Voice quality is clear and consistently audible through some (70-84%) of the presentation.	Voice quality needs more attention.
Accuracy and Detail	The story is told in a meaningful way -- with exactly the right amount of detail throughout. Care is taken to present information accurately. The story is neither too short nor too long.	The story composition is typically good, though it seems to drag somewhat OR need slightly more detail in one or two sections.	The story seems to need more editing. It is noticeably too long or too short in more than one section.	The story needs extensive editing. It is too long or too short to be informative or compelling.
Citation of Sources	Information, music, photos and/or video clips are properly cited in a Credits frame at the end of the story.	Most of the information, music, photos and/or video clips are properly cited in a Credits frame at the end of the story.	Some of the information, music, photos and/or video clips are properly cited in a Credits frame at the end of the story.	The Credits frame is missing from the digital story.

Bethany and Monica used technology to support small group cooperative and collaborative work throughout their implementation of the literature unit. A key tool for this purpose was the word processing application in Google Apps for Education, which permitted multiple students to write concurrently to a single file. In one of the observed activities, students gathered in table teams to brainstorm ideas about theme, characterization, conflict and setting. Each group used a unique text color to identify its contributions to bank of ideas. The files were shared with consecutive class periods, allowing students to add their ideas to the collection. As the day progressed, the challenge of adding original ideas increased. By the fourth class period, students went beyond idea generation; their work was focused on finding text evidence to support the suppositions of the earlier groups. As students began planning their digital stories, they returned to the group brainstorming document for ideas. Bethany explained,

“The collaborative brainstorming activity allowed the kids as a group to focus on the big literary elements of the story Then they could pinpoint what they felt most passionate about.”

Students worked independently or in pairs on their digital stories. Prior to composing the storyboard, students wrote proposals for their intended topics and participated in conferences with the teachers. The storyboard template—a table for organizing the story script, images, and notes about special effects or transitions between frames—was presented to students as a shared Google document with “read-only” rights. Students copied and renamed the file to begin their digital story planning. Figure 3 depicts the storyboard template. The study participants shared Robin’s (2011) 70/30 rule explicitly with students: Seventy percent of students’ time would be spent in pre-production work (planning, storyboarding, and collecting media); thirty percent of their time would be spent producing the digital story video.

Figure 3. Digital Story Storyboard in Google Docs



Teaching students about copyright and fair use was an important consideration during the unit implementation. While students were reading the novel, they began collecting images to support the ideas they planned to develop in their digital stories. The study participants provided links to copyright free images and music; however, students could also search on their own for media available under creative commons licensing. Stressing the importance of attribution, the study participants insisted that students prepare citations and include them in a Credits frame at the end of their movies. Students had prior experience with Zotero, an Internet tool for organizing and citing research sources. For the digital story project, students were required to cite media sources, in addition to information sources. Zotero allowed students to collect citations while they planned their stories.

The study participants required students to complete their storyboards and have teacher approval before advancing to story production in Photo Story 3. During the production phase, the teachers encouraged students to rely on one another for assistance. They prepared step-by-step computer task instructions, which were posted on the digital story wiki and available in print in the classroom. If a student had exhausted her team resources and needed teacher assistance, the teachers asked the student to point to the last step she was able to complete. This not only helped the teachers to pinpoint the problem quickly, but also communicated the expectation to the student to “try it on your own first” before relying on a teacher to solve the problem. While the primary purpose of the strategy was to maximize students’ on-task time during class, it also benefited students who had missed class, allowing them to catch up more easily. Monica explained, “We are so virtual now. So when kids are absent, the

first thing they’re going to ask is ‘Where is it online?’”

Another benefit of encouraging students to become more self-reliant in their use of technology was that it allowed the study participants to use their class time with students differently. Bethany found that she could be more responsive to students’ interests and emotional needs:

One of my students was really focused on the theme of prejudice. She got very caught up in the time period of the 1960’s, so I gave her the book *Warriors Don’t Cry*. I’ve also shown kids movie clips—*Remember the Titans* and *The Blind Side*—to help them connect to that feeling of “What do you do when you don’t have anyone to count on but yourself?”

Both of the study participants observed that students appeared more willing to invest time in planning and producing their digital stories than they typically invested in composition assignments. Students were willing to search for the right image backdrop or to stage a photo with family and friends to depict a story idea. Monica described students’ use of additional (unassigned) programs to enhance the quality of their productions. “We’ve had kids staying after school to work on their digital stories or volunteering to stay after to help their friends. They’re using programs like Photoshop to edit and get the effect they want. Some of them are editing or remixing audio with Garage Band.” In addition to spending time outside of class on the creative/technical aspects of their stories, many students outperformed their teachers’ expectations for literary analysis. Bethany noted, “Some kids are doing text-to-text comparisons without

really knowing it. It's really cool. They're learning and they're doing all of this high-level thinking, and they don't even realize it."

Discussion and Implications for Practice

Through a literature unit using *The Outsiders* and digital storytelling, the teachers in this study were able to address several key objectives in the Common Core State Standards in English Language Arts:

- Use technology strategically when creating, refining, and collaborating on writing.
- Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
- Take advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

The study participants' approach to planning included not only *what* work students would complete but also *how* that work would be accomplished through learning arrangements such as independent, small group and paired activities. In order to plan successful lessons, the teachers used their knowledge of pedagogy and content, along with their knowledge of students' capabilities in reading, writing, and the use of technology tools. This observation supports a primary finding in Wallace (2004), namely that teaching with technology is a complex undertaking that requires educators to call upon multiple skill sets and experiences simultaneously. The teachers in this study possessed complementary skill sets that enabled them to anticipate students' learning needs and

respond to unforeseen challenges along the way. Another implication for teacher practice is that co-teaching may provide a mechanism of support for the integration of technology projects and rigorous content, especially in mixed-ability classroom settings.

The writing process, as described by Fries-Gaither (2010), was a well-known approach to writing instruction for the study participants and their students. Mirroring the writing process in the planning, implementation and assessment of students' digital stories provided the study participants with a familiar teaching path. Explicit instruction using Robin's (2011) 70/30 rule helped the study participants to maintain emphasis on the message of the digital story rather than the "bells and whistles" of the technology medium. The study participants also used Robin and Pierson's (2005) elements of the digital story to construct the evaluation rubric and guide their lesson content. Leveraging students' experiences with familiar instructional tasks may be another way to introduce technology without allowing it to overshadow learning goals.

Conclusion

As teachers endeavor to implement the Common Core State Standards in English Language Arts, further investigation into the conditions that best support their work are warranted. This study presents one example of how two middle grades teachers worked together to implement a literature unit that aspired to the challenge of new academic standards and incorporated the skills and dispositions associated with 21st century career and college readiness. The world outside of school will continue to press its case for high academic standards and 21st century skills, yet the paths for successful implementation of these

imperatives are just beginning to be forged. Though difficult to quantify, the journey is clearly worth taking. Perhaps a better appreciation of the complexities of teaching

and learning with technology in the age of new Common Core will emerge through the case stories we continue to share.

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Ellen Maddin is Assistant Professor, Northern Kentucky University.