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Standards, Firewalls, and General Classroom Mayhem: Implementing Student-Centered Technology Projects in the Elementary Classroom

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If integrating technology means nothing more than enhancing the traditional delivery system of social studies content, where laptops replace notebooks, where PowerPoint slides replace handwritten overheads, where e-textbooks replace hard copy textbooks, then we will be no closer to the NCSS vision of transformative, powerful social studies instruction. (Doolittle & Hicks, 2003, p.75)

Educators are simultaneously bombarded with both calls to integrate technology in meaningful ways into their teaching and to promote more student-centered activities which combine both content learning and higher-order thinking (Diem, 2000; Doolittle & Hicks, 2003; Mason, Berson, Diem, Hicks, Lee, & Dralle, 2000; Martorella, 1997). This is no small task given the range of student abilities and interests, the increasing emphasis on state standards and testing, and the persistent challenges regarding reliability and ubiquitous access to the necessary technologies in the classroom. Doolittle and Hicks (2003) are correct to point out that using emerging technologies in similar ways to existing practice (e.g., from overhead projectors to *PowerPoint*™) does not move educators away from the traditional, teacher-centered model of instruction.

At the same time, however, we must acknowledge that we are asking many teachers to make two substantial and simultaneous leaps in their practice: to embrace a student-centered curricular mindset and to face the challenges (crashing computers, keeping students on task, unpredictable Internet access) inevitable in technology integration. Through 2005, there is little research focused on implementing technology in the K-12 social studies classroom (Swan & Hofer, in press), yet many authors advocate that teachers need to explore this frontier without models of classroom success, examples of "tried and true" curricula, and evidence of increased student learning.

In this study, we attempt to fill this gap in the literature and work towards a research based model to connect student-centered technology pedagogy that teachers can effectively replicate in the classroom. We came to this project as educational technologists hoping to find success in leading fifth-grade students to create short, historical, documentary films using the critical eye of a researcher attuned to the classroom teacher perspective. As the title of this article suggests, we encountered formidable challenges at nearly every step of the process. The purpose of this article is to honestly document the promising outcomes of an historical documentary project, highlight the challenges encountered, and provide suggestions for future implementation. Specifically, we sought answers to the following research questions:

1. To what degree does this historical documentary project support the existing standards-based curriculum?
2. From the teacher's perspective, to what extent do the technologies employed both support and hinder the educational goals of the project?
3. In what ways does this type of student-centered historical documentary project complement or contradict the teacher's predominant pedagogy?

Theoretical Framework

Researchers in history education advocate instructional approaches that engage students in the processes of learning history, including building historical knowledge through the use of primary sources, conducting historical inquiry, and encouraging students to think historically (Kobrin, 1996; Levstik & Barton, 2001; VanSledright, 2002; Wineburg, 1991). Support for this approach to history education can be found in the benchmarks and standards of the American Historical Association, the National Center for History in the Schools (NCHS), and the National Council for the Social Studies. These historical processes are formalized and further delineated by the National Center for History in the Schools (1996) which characterize a set of five core skills under the broad concept of historical thinking. Using these NCHS standards (NCHS, 1996, pp. 14-24) as a framework, we constructed this historical documentary research project by embedding specific historical thinking skills outlined below:

• Standard 1: Chronological Thinking C. Establish temporal order in constructing historical narratives of their own

• Standard 2 : Historical Comprehension G. Draw upon visual, literary, and musical sources

• Standard 3 : Historical Analysis and Interpretation C. Differentiate between historical facts and historical interpretations H. Hold interpretations of history as tentative.

• Standard 4 : Historical Research Capabilities C. Interrogate historical data.

• Standard 5 : Historical Issues-Analysis and Decision-Making E. Formulate a position or course of action on an issue

The process of creating historical documentaries requires students to engage in these skills and, at the same time, utilize digital media to dynamically illustrate their narrative. Universal Design for Learning (UDL) offers an approach for designing learning experiences using digital media to appeal to learners with diverse learning styles and preferences (Center for Applied Special Technology [CAST], n.d.). Rose, Meyer and Hitchcock (2005) identify three principles of UDL:

1. to support recognition learning, provide multiple, flexible methods of presentation;
2. to support strategic learning, provide multiple, flexible methods of expression and apprenticeship; and
3. to support affective learning, provide multiple, flexible options for engagement (p. 25).

CAST specifically identifies digital media and technology construction tools as powerful means for students to express their understanding in creative, rich ways and actively engage in the learning process. The creation of historical documentary films provides opportunities to incorporate a variety of forms of media, including text, images, audio, and music into the narrative. This diversity of *raw material* combined with the open-ended nature of digital video creation software allows students to creatively share their unique voices, thereby engaging them in the learning process. Pairing historical thinking standards with UDL principles provided both the pedagogical approach employed and the theoretical framework for this research.

Methodology

Site Selection

In two fifth-grade social studies classrooms in Kentucky, students took part in a two week project to create three-five minute historical documentary films. The school at which the study took place services students from pre-Kindergarten to fifth grade from a residential area just outside of an urban area. The school has a stable population of 645 students in grades K-5. These classrooms all have integrated students with special needs, and roughly twenty percent of the total population identified as in need of special education with Individual Education Plans (IEPs). The students were evenly distributed in terms of gender with student ethnicity identified as Caucasian (77%), African American (11%), Asian (11%) and other (1%).

We selected the particular classrooms involved in the study based on our prior work with the classroom teacher. In the previous school year, we had conducted three exercises on historical thinking, using case-based exercises over a period of six months. Additionally, we piloted an earlier version of a similar historical documentary project (Swan, et al., 2006). These two different approaches to engaging students in historical thinking led the classroom teacher to request a follow-up intervention using documentaries during the next school year. It is important to note that the classroom teacher served solely as an observer in the prior year's work, and the students involved in this research had not been engaged in any prior activities centered on historical thinking. In the current study, the teacher assumed almost all instructional responsibilities. Additionally, we worked closely with the teacher as a collaborator in the instructional design process to ensure that the content of the project was in line with the required instructional content and revised the project based on her suggestions and feedback.

Instructional Context

Similar to other states, Kentucky follows a set of content and technology standards which guide classroom instruction. In this fifth-grade classroom, students are tested near the end of the year on their understanding of American history, economic, and geographic benchmarks (Kentucky Department of Education, 1999). The test itself is comprised of multiple-choice questions as well as open response, which include short-answer questions. The standards are comprehensive in nature and necessitate a fast-paced approach to content coverage. In this particular school district, administrators have mapped out curriculum for teachers, including a scope and sequence which ties directly to the content standards. For example, the American Revolution (including precipitating factors, the war itself, and the aftermath) as well as the forming of the United States government including the Constitution is expected to be fully covered in weeks 12-14 of the school year (Fayette County Public Schools, 2004). While students are not similarly tested on technology standards, teachers are required to integrate technology into their teaching according to the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Teachers (cite NETS-T). Specifically, in standard ten of the Kentucky Teacher Standards, teachers are asked to demonstrate the implementation of technology, including using technology to support instruction and for student access and manipulation of data (Kentucky Department of Education, 2005).

Jenny, the partner teacher for this project, has taught for a total of eight years: five as a special educator and three as a general classroom teacher. She regularly supervises student teachers and is widely regarded by the county and university as a dynamic, conscientious, and supportive social studies educator. Jenny holds an elementary education certificate and a Masters' degree in deaf education. None of this preparation included significant technology training. While she utilizes the computer for typical productivity tasks (word processing, e-mail, etc.), Jenny has limited skills, confidence, and interest in infusing technology into her teaching. She reported having created only one *PowerPoint* presentation and does not join the students for the one-hour technology class they attend once a week. When questioned about rating Jenny's engagement with technology relative to the other teachers in the building, the librarian responded, "On a scale of 1 to 5, I would give her a 2." She went on to say that, "I think it's a lot to coordinate... computers, schedules, etc.... you really have to plan ahead to get a projector for instance. Younger teachers, right out of their teacher education programs, are much more apt to use technology...Jenny is much more reluctant."

She could be described as occupying *Stage 2: Learning the Process* of Christenson's Teachers Stages of Adoption of Technology (Knezek & Christensen, 1999). Teachers at this stage are characterized as learning the basics, feeling frustration, and lacking

confidence with using technology. For Jenny, technology may be used to spark student interest and motivate them for learning, but it does not often *support* learning; she notes, "Technology can be as much as a distraction as it can be leverage." Although she sees the value of student exposure to technology, she remarked, "I really let my student teachers do most of the technology. I have at least one a semester, and I make that their thing. And really, the [weekly, one-hour] technology class takes care of most of this now." This view of technology persisted even after the successful implementation of a substantial technology project conducted by the researchers in her class the prior school year (Swan, et al., 2006). Even with her trepidation regarding the technology, she initiated this project and, surprisingly, agreed to be more directly responsible and integral in the implementation. Because she volunteered, we knew her classroom would represent a *typical* environment to explore how a student-centered historical documentary project might unfold.

Overview of Intervention

The historical documentary project was designed to encompass ten one-hour instructional sessions which spanned two weeks. The documentary project was co-designed by one of the principal investigators and the classroom teacher. It involved several planning sessions in which the pair determined the content of the documentaries, the scope and sequence of instruction, the development of the student materials, and the organization and management of the technology required. In all, the designing stage of the project took approximately six hours. It is important to note that the teacher continued her *regular* social studies instruction throughout the project. This required that her not only extending the typical social studies block of thirty-five minutes to encompass the project but also her scheduling the additional time to keep pace with the county curriculum map.

We designed the historical documentary project to accomplish two parallel goals: expanding students' understanding of how history is constructed as well as engaging them deeply in the process of research and development of a digital narrative on a chosen historical figure. In prior work, we implemented a similar project and realized that the students' research needed to be focused on a particular historical question rather than a biopic approach (Swan, et al., 2006). In response, we developed an overarching theme of *myth-busting* in which students were given a prevailing narrative or misconception perpetuated by the textbook about the historical figure. Students could choose from eight different historical figures, including Christopher Columbus, Pocahontas, George Washington, Betsy Ross, Chief Seattle, Helen Keller, Jackie Robinson, and Rosa Parks. Once the students chose a figure, the teacher grouped them accordingly in clusters of two or three, giving each class ten to eleven groups. At this point, the groups were given the myths (e.g., *Rosa Parks was tired and had no idea she was about to do something important*) and provided with a collection of primary and secondary historical sources, historical scholarship, images, etc., focusing on the myth.

Prior to beginning their research, students were encouraged to collectively brainstorm what they already knew about their figure and to do some initial exploration using their textbook. For three class periods, students worked through the materials provided and identified ten new pieces of information concerning their figure (see appendix A). One of the three class research periods was devoted to finding relevant online images for their projects. Prior to beginning the project, we identified a targeted list of websites to assist students in this process. Unfortunately, most of these were inaccessible for students due to county-wide Internet filtering. This was also true when students attempted to find images through popular search engines including *Google*™ and *Altavista*™. As a result,

we developed an archive of images and music files for students to access locally on the computers.

Over the next two days, students were given a graphic organizer to begin constructing an historical argument that challenged or upheld the myth they had been given surrounding their historical figure. In our prior research, we noted that students required significant *hard scaffolding* (Brush & Saye, 2001) or organization which enabled them to develop a cohesive narrative. Otherwise, the narratives sounded more like encyclopedia entries rather than an historical argument (Swan, et al., 2006). The *hard scaffolding* and writing prompts included a storyboard overview (appendix B) in which students were challenged to identify the following:

- The setting: What and when is the setting? Who is the character defining moment: What was a key moment in your character's life?
- Events: What events led to this defining moment? What were the complications or obstacles? What were the turning points?
- Resolution: What happened? How was the situation resolved?
- Conclusion: So what? What was the impact of this character's resolution? Why is it still important to remember this today?

This overview provided the framework for the comprehensive documentary storyboard (see appendix C) in which students began scripting the narration for their films. Once the script was developed, students selected and placed relevant images on the storyboard. A completed storyboard contained all the visual and audio elements to be included in the documentary. The teacher stressed to the students that the storyboard was an organic document which would change during the development and editing process.

Beginning the sixth day of the project, students began to construct their documentaries on the school's set of laptop computers using Windows *MovieMaker*™ software. For the next five days, students were given a specific task for each day:

- Day six: introducing the software and placing images on the project timeline
- Day seven: incorporating titles, credits, and transitions between images
- Days eight and nine: recording narration and adding period music
- Day ten: saving and exporting movie files

The project culminated in a one-hour "film festival" attended by parents, fourth grade students, and the directors themselves.

Data Collection and Analysis

For this research study, we employed a case study approach (Stake, 1995) using the constant comparative method for data analysis (Glaser and Strauss, 1967). This approach to framing the study, data collection and analysis, and presentation of findings allowed us to closely examine the context and dynamics of the intervention (Darke, Shanks, & Broadbent, 1998).

Data were collected in the spring of 2006. Jenny, the partner teacher, was interviewed multiple times during the project, including during the development, implementation, and evaluation stages. The teacher also kept a daily journal about her reactions to the project, changes she made in the instructional process, and personal assessment of the overall project. Daily audio recordings of the instruction supplemented classroom

observation notes. Teaching materials and student products also were collected at each stage of the process, including the guiding research question for the students, research materials, research organizers, and storyboard templates. Additional data included the Kentucky Core Content Standards, Kentucky Teacher Standards (including technology), the county-wide curriculum map, sample year-end student tests, and representative lesson plans from the classroom teacher from work prior to this project.

During data collection, we identified potential themes and categories for analysis and recorded theme in analytic memos. This process enabled us to refine our focus of the study and data collection and to *try out* initial themes we saw unfolding (Merriam, 1998). The development of these initial categories were informed through our previous findings in implementing this type of project (Swan, et al., 2006), challenges inherent in technology integration in general (Bauer & Kenton, 2005; Byrom, 1998; Norum, Grabinger, & Duffield, 1999), as well as the specific challenge of developing student historical thinking with technology (Brush & Saye, 2001). We used these broad issues and themes to develop an initial set of categories for the data. A focused coding approach (Glaser, 1978) was used in coding the classroom observations, comments from the teacher interviews and daily reflections, content from the collected instructional materials, and notes from research memos through a method of constant comparison (Glaser & Strauss, 1967). The initial categories were refined and developed as necessary according to the data. This process resulted in the development of three key categories: (a) aligning the project with the larger curriculum, (b) navigating technology issues and challenges, and (c) planning for and managing instruction. We then individually coded all the relevant data into these categories, discussing any discrepancies or revisions to the categories to reach consensus. A subsequent analysis of the categories yielded three corresponding themes reported in the findings: standards, firewalls, and mayhem.

While we recognize that the results of this study cannot be generalized beyond our sample, our attempt was to provide a rich discussion of the instructional context and intervention to allow the reader to determine the degree to which they are applicable in a new setting (Lincoln & Guba, 1985).

Findings

As stated earlier, the purpose of this study was to document the outcomes of the historical documentary project, highlight the challenges encountered, and provide suggestions for future implementation. We found that while the teacher was pleased with the students' work during and at the conclusion of the project, we identified formidable challenges in making time *for* and connecting the content of the project *with* the local curriculum standards, navigating the challenges encountered with the technology involved, and managing the instructional components of the project in the classroom. Each theme is explored in detail below.

Standards

It was clear from the data that the teacher implemented this project *in spite of* the county curriculum map and corresponding state standards. The project was conducted over a two-week period in January when the students were in the midst of studying the American Revolutionary War and the formation of the Constitution (Fayette County Public Schools, 2004). Rather than taking the place of the typical social studies curriculum, this project was an *add-on* for the teacher, requiring significant realignment of instructional time for work that would not directly prepare students for the state assessment. In addition to her normal 40-minute social studies block, Jenny worked with other teachers to adjust the schedule so that she would have an additional hour with the

students for social studies each day which amounted to more than one quarter of the entire school day and, according to Jenny, required a *huge modification*.

Because of these changes to the schedule, the rest of the curriculum was significantly impacted. She states:

> Well, we shortened math, but I don't think it hurt that. It was touch and go. Language Arts we lessened to forty minutes and took twenty minutes out of the morning work to do some things. And science then too, she had to do a lot of fabricating, because she also had the kids for an hour and twenty minutes now. So she tried to pick up the math and other things.

Yet, despite these complicated negotiations to the curriculum, this project was tangential to the existing curriculum according to Jenny. The content covered in the project spanned the scope of the curriculum map as noted, Christopher Columbus to Rosa Parks. While all of the figures explored in the projects were encompassed in the state content standards, none of them were studied during week 23 of the curriculum map. As a result, when the researcher asked, "Do you expect students to be better or worse, or the same, for the testing in April?" The teacher responded, "The same. I feel that my curriculum (the *History Alive!* curriculum) is the one that teaches history the best."

While she noted that it was "really, really good" for the students to engage with the technology in light of the state technology standards, "I also want to say that the technology part is something that I really wouldn't have done and so that's nice. It's just, are they tested on CATS new technology [standards]? [Pause] No." The teacher also stated that it was only because of commitment through prior work with the researchers that she initiated this project. Moreover, she indicated that only the collaboration with university faculty justified the rearrangement of the schedules, reserving the necessary equipment, etc.:

> I think I justified throwing everybody off because of you. And I think, this is okay--getting the computers, signing up for computers, running around and asking my librarians to help--throwing them off completely. Saying I need a computer, you know, running around the building, asking the librarians for help. They went out of their way for me because I needed a computer. You know I'd feel like it was just a little ostentatious if it were just for me, but when it's for you, I feel okay about asking for so much.

This viewpoint seems to indicate the need for a catalyst to deviate from the curriculum in the mind of the teacher. According to the school library/media specialist, other teachers in the school regularly utilize technology in their teaching, and it became apparent that Jenny's perception of inconveniencing her colleagues and being *ostentatious* was not viewed in the same way by others in the school. The librarian noted that she is routinely called upon by other teachers to perform this role and accommodate normal technology requests. Regardless, Jenny was adamant that she was "throwing everyone off," and it was only because of the researchers that she was willing to ask her colleagues for all these modifications.

Firewalls

While the technology employed in this project did not pose any insurmountable obstacles (students losing their work, etc.), significant challenges arose. Specifically, the teacher was challenged by the technical skill-set needed to implement the project; there were

limitations with the school's Internet access, and the nature of the implementation was *exhausting*. As described above, Jenny does not have extensive technology skills. On a skills pre-assessment instrument, she reported very little confidence in some of the fundamental skills required to create a digital movie, including saving images from the web to the computer and cropping and increasing the brightness/contrast of images (see Table 1).

Table 1
*Technology Skills Pre (*x*) Post (*y*) Assessment*

	Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
1. I can use a search engine (Yahoo, Google, etc.) to find needed information on the web. (4)		xy			
2. I can find information I need in an online database. (5)		y	x		
3. I can judge the quality of information I find on the web. (6)		xy			
4. I can copy text from the web and paste it into a word processing program. (4)		y	x		
5. I can save images from the web to my computer. (4)		y	x		
6. I can save files in different places (on my computer, on a disc, etc.). (1)		xy			
7. I can move files from one place to another on a computer, from a disc, etc. (1)		xy			
8. I can crop an image. (3, 4)			y	x	
9. I can increase the brightness/ contrast of an image. (3, 4)		y		x	
10. I can create a presentation on a computer that uses images and other kinds of media. (4, 5)		y	x		
11. I can create a movie to share w others. (4, 5) y x 12. I can explain when it is and is not okay to copy things (text, pictures, music, etc.) from the web. (2)		y		x	
12. I can explain when it is and is not okay to coyp things (text, pictures, music, etc.) from the web. (2)		xy			

While Jenny reported confidence in skills such as saving files, moving files, and downloading images, it became apparent during classroom observations that even these skills required instruction and continued practice with the guidance of the researchers throughout the course of the project. Still, regarding her technology skills, Jenny stated, "I'm a lot better than last year. Last year, I didn't put my hands on the computer very much because I had you and whomever else. This year, working with you, I have a lot more confidence. This year, when it was just you and me, I learned a lot and thought, Aha! I can do this." Following this response, she was asked if she could do this project on her own in subsequent years, she responded, "I would have had a hard time. Even if you let me do it for one more year, I couldn't handle the technology alone. The information I can handle. That's not the problem. It's the technology that I'm still a little shady on. But I'm a lot better." She finished by saying, "I didn't know how to take out my Internet port. I never had to do it. I mean easy stuff, but I never had to do it." Jenny seemed to believe that with support, she could develop the necessary skills in regard to the technology. However, despite her growing confidence, it was apparent through classroom observations that she would need additional training with the technology and increased confidence to undertake a similar project on her own.

Technical challenges surfaced during the project. As discussed earlier, students utilized a set of wireless laptop computers to create their projects. This setup enabled Jenny to bring the technology into her classroom and allowed her to group the students as needed. However, the slow speed of the wireless Internet connection, coupled with a relatively slow wired Internet connection, resulted in agonizingly slow downloading of images and information during the research and collection phases of the project. For example, several groups of students, who were quite comfortable finding and selecting images, were unable to download any of the image files in a forty-five minute time span. Compounding this speed issue was the fact that the school's firewall prohibited students from accessing a variety of websites pre-selected by the teacher and researchers to facilitate the research phase of the project. Even when Jenny encouraged students to find materials on their own using image search engines like *Google* and *Altavista*, they were blocked entirely. Jenny voiced mixed feelings regarding this Internet filtering, "While out Internet access is very slow at school and protected with firewalls, I feel that you've gotta have protections. It's common sense. You know parents give their kids computers without Internet all the time because they don't want them on the Internet, so it's okay, but it's a pitfall. We were slow."

One way in which the researchers and classroom teacher dealt with the Internet obstacles was by creating archives of materials (images, music, etc.) for each historical figure on CDROMs for the students to use. This significantly increased the efficiency for students in the research and collection process but removed additional opportunities for students to find materials on their own. Again, Jenny reported mixed feelings about this approach, "I think they like it... [But] I don't think they find anything that is novel." She suggested that in future revisions of the project, while students could begin with archival materials, it might be helpful to add one day into the project during the latter stages so that students who were farther along could *beef up* their research using the web.

There also were challenges relating to students saving their projects and misplacing image and music files. For example, if a student's narration file was inadvertently saved outside the project folder, the narration would appear as a red X in the project timeline. This red X issue occurred in more than half of the groups. Although these problems were relatively easy to solve, they did require troubleshooting. The researchers had to model the process of locating files for the students repeatedly before Jenny was able to do this

on her own with the students. This process, however, did help her develop greater skills by the conclusion of the project. While none of the technical challenges was insurmountable, given Jenny's lack of skill and trepidation towards technology, it is not difficult to imagine that without assistance of the researchers, the project may have stalled.

Each phase of the project (introduction, research, collection, and creation) posed challenges for the teacher and required substantial facilitation. The only part of the process that Jenny found "exhausting" was related to the technology. The most frequent and strongest concern voiced by Jenny during the follow-up interview regarding the technology portion of the project was how tiring it was. This exhaustion resulted from the time and energy required to collect, setup, and then "tear down" the computers, as well as to monitor and assist the students.

Curiously, most of the logistics of collecting and setting up was handled by the researchers. Because time and scheduling was so tight, we arrived 25 minutes before class and were in charge of moving and dismantling the overhead projector at the front of the room, retrieving the laptop cart from the media center (about 200 yards from the classroom), and unpacking and setting up a projector and laptop to project on the pull down screen in the front of classroom. In order to connect to the Internet, a wireless hub was connected using the teacher's network connection. After the two, one-hour class blocks, we also were in charge of dismantling the set up, retrieving the laptops from students, and returning all equipment to the Media Center. Once class ended to transition the students to recess time, the teacher only had a minute for which she was responsible for supervising. In all, the time to set up the computer equipment and to take it down required 35 to 45 minutes a day. When asked whether the teacher would be willing to try this type of project solo, she emphatically said, "I think not." When asked what kind of support she would need to replicate the project, she indicated that she would "need somebody to do the technology for me" and somebody to work in tandem.

What was interesting was her insistence that the addition of the technology was exhausting. She explains:

> I think the pitfall (of the experience) is the exhaustion. I have never felt so tired like on that Friday when you and I were running around, and we were trying to get everything for class, and we were trying to manage them and make them feel successful and at the same time get the projects finished....You know I just felt exhausted. The idea of wheeling the laptop cart down the hall again was literally exhausting.

Yet, the work resulting in this exhaustion was significantly mitigated by the work of the researchers.

What became apparent in the last week of the project is the introduction and facilitation of technology, just from a pragmatic stance, was time intensive and arguably unrealistic for this teacher. Add to this the fact there is no technology resource teacher in the building to assist Jenny in this way, and it becomes increasingly clear that any future implementation of a similar project is highly unlikely.

Classroom Mayhem

Based on our prior work in Jenny's classroom (Swan, et al., in press), as a team, we were able to identify some potential problem areas in implementing a historical documentary

project in an elementary classroom. While there were some minor *hiccups* in the implementation (e.g., running short of time one day and forgetting to assign a nightly homework assignment), past lessons effectively informed this process. Much attention was given to streamlining the research and creative processes for students so that the project could fit into the tight two week time allotted. Even so, this type of project went far outside the chronological, chapter by chapter approach outlined in the textbook and strictly followed by Jenny. Jenny is a *History Alive* enthusiast and tightly follows the readings and activities in the adopted text. In one of the planning sessions, she relates the following: "*History Alive* is written out in very clear ways. It's very logical, very friendly...especially activities like the journal entries. The way that company has worked it out is just very, very good. Because history is so complex and requires higher order thinking skills, I need a text that will help me go from B.C. to the Industrial Revolution."

While students are regularly engaged in a variety of student-centered tasks, the curriculum is prescribed, and Jenny admittedly struggles with deviating from the text. Observations of Jenny prior to this project revealed that a typical lesson included students reading *History Alive*, responding to questions in the text, and perhaps writing a journal entry from the perspective of a historical figure. Another lesson involved the students in a play acting out a scene from the American Revolution. In one interview, she said, "We model things out of clay; we make explorer stuff; we make maps, and everyone is a group." However, she went on to say that these types of projects mean nothing without the "content." She further elaborated, "Okay. For example, we do a play in the middle of a chapter, and the students don't know the information better because of the play. The reason why they know the information is because once they do the play, and I teach the concepts again, and I do make them recall, and I do additional text readings, they retain the information." (January 28, 2006).

Comments like these, in addition to classroom observations, allowed the researchers to gain insight into Jenny's beliefs about teaching and learning and her role in the process. She states in one interview, "Who is the core? The core is the teacher. Without the teacher, students become less passionate...the teacher is the core. If the teacher doesn't move the students around and take them to the time of the event, it really doesn't mean anything. And that's why I am good at this, because I know the information, and that's a big deal." Clearly, while she was intrigued by the documentary projects and the processes that were collaboratively planned, she struggled to reconcile the experience with her teaching philosophies. At the end of one day, she expressed the difficulty of sitting back and watching her students "do all the work." She explained, "You know what I am not very good at either? A lot of psychology is *just do it*. And I micromanage my room. And for this, just doing it kind of just rocked me around like I had a million other things to do, and it was hard for me to just sit back. Because I really want my hands in it, and so much of this was just letting students do it."

She also discussed this *micromanaging* tendency with editing students' narratives. She explains, "I say [to the students] you have to make your research better, and I didn't realize I'd get, 'Edit mine! Edit mine!' And I was like, 'No.' I'm almost glad that I kept saying, 'No! No!' It was so tough for me." And yet, editing narratives and providing suggestions seemed quite logical for a teacher facilitating this type of project. In Jenny's case, it seemed that she could envision herself in only two ways, as the *core* of the project or completely peripheral. In classroom observations, it was evident that she was uncomfortable with this dichotomy as well. When she was delivering instructions to the students, she seemed at ease, but as soon as students went to work independently, she would routinely come to us a bit frazzled, worried that students weren't totally engaged or

on task. As observers, these fears seemed unfounded as students worked diligently throughout the exercises and rarely was there misbehavior or disinterest on the part of the students.

While it is virtually impossible to completely characterize any teacher based on such limited experience, what became clear throughout the two-week experience is that Jenny did have a pedagogical comfort zone, and this historical documentary project took her outside of it. Although not exactly *classroom mayhem* from an outsider's perspective, certainly from the perspective of the teacher, this project wreaked havoc on the standards-driven, text-based, chronologically-sequenced curriculum on which Jenny had come to rely. When asked what changes she would make to the project if she chose to implement it again in subsequent years, she hesitated and reverted to a less thematic approach and announced:

> If I did do it, I might try to align it better. I would have students make George Washington films during the Revolutionary War, and maybe I'd do Rosa Parks films when we got to the 20th Century. And it would all be incorporated. You just have to, again, maybe not be as dynamic, as eight different people with eight different groups, but I would consider doing things like that. You could maybe get it done. You'd just have to be pretty darn energetic.

Discussion and Implications

We recognize that this study represents the viewpoint and instructional context of a single classroom teacher which cannot be generalized. However, in painting a vivid picture of a single experience, case studies help illuminate issues for further research and exploration in other settings. As we consider the findings of this study and the potential value of this type of project in the classroom, it is apparent that significant challenges must be negotiated. In our first research question we asked, "To what degree does this historical documentary project support the existing standards-based curriculum?" Although there was potential for alignment, it was clear that in Jenny's mind, this project was tangential to her goals for instruction and thus the larger curriculum. This finding was in line with much of the existing research which documents the narrowing of a teacher's educational purpose and instructional methodologies as a result of high-stakes testing (Corbett & Wilson, 1991; Koretz, 1995; LaMahieu, 1984; Romberg, Zarinnia, & Williams, 1989). However, Jenny could envision that this project could be reshaped to more closely align with the county curriculum map by focusing the content more closely on a particular person or time period.

Even with that change, the time and energy required to complete the project is a stretch for the fast-paced, broad coverage of content required by the state curriculum standards. In order to make this type of work more congruent with the realities of today's educational environment, we need to continue to refine and streamline the project so that we can cut or reduce the time required for each step. In this iteration of the project, we were informed by prior work (Swan, et al., in press) and subsequently made changes which reduced time in the research and collection phases by creating the archive of research and media materials for student use. Additionally, more careful sequencing and limiting of computer work increased the instructional efficiency of the process. In future implementations, we may be able to further truncate the time required of both the teacher and the students by importing all the media files into *MovieMaker* for the students in advance and by arranging for the project to take place in the computer lab rather than using the mobile laptop cart.

The second research question asked, "From the teacher's perspective, to what extent do the technologies employed both support and hinder the educational goals of the project?" In Jenny's eyes, the benefits resulting from the technology were higher student engagement and an enhancement of the student's technical skill set. This mirrors her general view of technology as an add-on and not directly linked to her core purpose of teaching to the curricular map. This attitude towards technology is common among teachers with a more traditional, teacher-directed approach and helps to explain why Jenny and other teachers do not more readily embrace technology as an instructional tool (Becker & Ravitz, 2001; Cuban, 2001). While she was pleased with the documentaries produced in both the both the pilot and current study, her larger instructional role in the current study clearly diminished her enthusiasm for future implementations. The lack of technical assistance and support available to her in the school and county will likely further impede similar undertakings in the future.

These challenges related to the technology have important implications for both preservice and in-service teachers' professional development for using technology. In order for teachers like Jenny to consistently provide experiences such as these in her curriculum, technology needs to be introduced, modeled, and implemented in a manner in tune with a more teacher-directed approach rather than as a perceived overhaul of her curricular orientation. In recent studies, researchers have begun to explore a new model of technology training in which pre-service teachers skilled in using technology are paired with veteran teachers in social studies classrooms as a way of providing technical support for in-service teachers as well as classroom experiences for pre-service teachers (Mason Bolick, 2002; Dawson & Nonis, 2000). This reciprocal mentoring model may also help counteract some of the fears and hesitation on the part of teachers similar to Jenny who would like to integrate technology but feel exhausted or overwhelmed by venturing solo.

The final research question asked, "In what ways does this type of student-centered historical documentary project complement or contradict the teacher's predominant pedagogy?" While the answer to this question may seem obvious in retrospect, it is important to note that Jenny initiated the project and helped craft its design. On the surface, it seemed that this type of project would fit nicely into a curriculum based on *History Alive!* However, the introduction of technology in combination with a thematic rather than a textbook-based approach proved contradictory to Jenny's pedagogical orientation. Additionally, the student-directed nature of the exercise contrasted with Jenny's perception of herself as the *core* of the teaching and learning process. For Jenny, and perhaps many other elementary social studies teachers, this vision of fusing technology with a more student-centered approach to teaching and learning may be incongruent both with the political demands of their jobs as well as with their usual pedagogy.

Conclusion

Margaret Crocco (2001) states:

> I believe the importance of technology lies in its ability to leverage studentcentered approaches in the teaching of social studies...The chief value of technology lies, therefore, in providing the leverage so urgently needed for moving social studies instruction away from passive, teacher-dominated approaches emphasizing recall and regurgitation toward active student-centered forms of learning demanding critical and conceptual thinking from all students at all levels.

This vision of technology as a revolutionary catalyst in the K-12 classroom is echoed by many researchers, including the authors of this study (Bull, Bull, Garafalo & Harris, 2002; Doolittle & Hicks, 2003; Hofer & Swan, 2005). While we concur with Crocco's vision, we realize that as methods faculty, we often are more ambitious than the realities of the classroom allow. Perhaps the findings of this study may serve as a cautionary tale, emphasizing that technology integration in this manner is more incremental than transformative. In the beginning, we chose Jenny because she was enthusiastic yet very typical of many classroom teachers who, for whatever reason (i.e., high-stakes testing, prescribed curriculum, reliance on textbook, etc.), are hesitant to adopt this transformative view of technology. Perhaps a first step is considering a teacher's pedagogical orientation or what Levstik and Barton (2004) refer to as *teacher purpose*. Complicating the integration of technology is a teacher's approach. Before we label an intervention as *best practice* in partnership with universities and classroom teachers, we need to honestly explore whether it is realistic practice.

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