

Toward a Community of Learners: Integrating Desktop Documentary Making in a General Secondary History Classroom

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Desktop documentary making offers history teachers a new approach to empower students to create histories of their own. This case study explored one experienced teacher's intentions and practices with integrating desktop documentary making into a general secondary history classroom. The findings reveal that the teacher used desktop documentary making to improve students' research skills and to foster a culturally relevant classroom where students learned collectively. This study also revealed that the teacher managed much of the technological instruction for the students and incorporated the medium of desktop documentary making in incremental stages throughout his course. Implications of this study are discussed.

Keywords: desktop documentary making, general education, technological pedagogical content knowledge, technology integration, collaborative learning

INTRODUCTION

Desktop documentary making (DDM) is increasing in popularity among both history teachers and students (e.g., Fehn & Schul, 2011; Hammond & Manfra, 2009a; Hofer & Swan, 2008; Kearney & Schuck, 2005; Lee & Molebash, 2004; Schul, 2010a). Desktop documentary making, also called "digital moviemaking" (e.g., Swan, Hofer & Levstik, 2007), "digital narration" (e.g., Beck & Wyzard, 2011) or "digital storytelling" (e.g., Hammond & Ferster, 2009) takes various forms, but this article loosely defines it as the assemblage of images and audio into a short film of a particular historical topic, whether it be a person, event, or historical development. Due to the unique nature of DDM as a tool that allows students to create visual narratives with digital sources, its use in history classrooms is of particular interest to the research community.

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The research to date on DDM in history classrooms is promising in capturing best practices for teachers' integration into classroom instruction. For instance, Kearney and Schuck (2005) found that technological instruction dominated content instruction in a teacher's integration of DDM. Hofer and Swan (2008) concluded that discouragement with the nuances associated with digital technology is a common feature among teachers who first attempt to integrate DDM. Hofer and Owings-Swan (2005) asserted that technological instruction should occur in multiple stages in order to position students to succeed in producing documentaries.

Desktop documentary making has also been discovered to be an instructional approach well situated to further students' understanding of history making (Coventry, Felton, Jaffee, O'Leary, Weis, & McGowan, 2006). Swan, Hofer, and Swan (2011) concluded that fifth grade students who composed DDM as a part of a class project engaged in historical inquiry that led to their construction of historical knowledge. Additionally, Fehn's (2011) study of a pre-service teacher who composed a desktop documentary suggested that the inclusion of DDM into the preparation of history teachers refines their technological knowledge as well as the ways historians construct the past. What these studies have in common is that they focused on teachers who were at the beginning stages of integrating DDM into their instruction. While the research literature on DDM is emerging, few studies (e.g., Schul, 2010a) have investigated the instructional practices and pedagogical rationale of teachers experienced with integrating DDM into classroom instruction. It is important for researchers to know and understand the practices of teacher in all learning contexts who are experienced with integrating DDM into classroom instruction because the wisdom gleaned from multiple experiences is the essence of teacher knowledge (Shulman & Shulman, 2004) and improvement in the integration of DDM into classroom instruction rests upon the knowledge of the teacher.

In a research study published in an earlier volume of this journal (Schul, 2010a), I closely investigated an Advanced Placement teacher who was experienced with integrating DDM into his classroom. The study revealed that the teacher used DDM to foster historical thinking and heavily relied on students to solve one another's technologically-oriented problems. While this study revealed the intentions and practices of an experienced teacher when he assigned DDM into his Advanced Placement history class, there is currently no research on a teacher similarly experienced at the general education level. The purpose of the current study, therefore, is to continue the earlier study and, with the same research methods, investigate the pedagogical intentions and actions of another secondary history teacher, robustly experienced with integrating DDM, as he integrated DDM into his general-level history classroom. This current investigation was guided by two primary research questions, with a secondary question attached:

1. Why did the teacher integrate DDM into his classroom?
 - How, if at all, did students' practices fulfill the teacher's intent with DDM?
2. How did the teacher instruct the components of digital technology necessary for students to produce their assigned documentaries?

THEORETICAL FRAMEWORKS

Technological Pedagogical Content Knowledge (TPCK) (Koehler & Mishra, 2008; Mishra & Koehler, 2006) and Cultural Historical Activity Theory (CHAT) (Engeström, 1987, 1999) were used as frameworks in this study to analyze and describe the practices engaged by the teacher and his students because of their complicated design and flexibility (Schul, 2010b). Technological Pedagogical Content Knowledge, referred to by some as TPACK (e.g., Hammond & Manfra, 2009b; Marino, Sameshine, & Beecher, 2009; Niess, 2011) enable description of the teacher's instructional philosophy and

practices as it related to why and how he integrated DDM into his classroom, including his technological instruction and how he interwove its dynamics to benefit his curricular practices. Although TPCK is a relatively new framework, it is based largely on Shulman's (1986, 1987) conception of Pedagogical Content Knowledge (PCK) that asserts that teachers transform content through a unique pedagogical lens that constitutes the professional knowledge of the teacher. The pedagogical lenses of history teachers are typically colored by the practice of historical inquiry. Contemporary research on history teaching and learning (e.g., Barton & Levstik, 2004; Seixas, 1993; VanSledright, 2002; Yeager & Davis, 1996; Wineburg, 2001) has created a knowledge base for inquiry-based instruction to be heralded as the "signature pedagogy" (Calder, 2006) of history instruction. Historians, as professional practice, scrutinize and interpret primary and secondary sources in an attempt to either contest or validate common historical interpretation. These unique practices of historians used to assess and compare documents represent historical thinking (Wineburg, 1991, 2001). The role of the teacher in historical inquiry, according to Seixas (1993), is to serve as an arbiter between the discourse community of professional historians and the discourse community of secondary school students. This discourse community of inquiry within the secondary school history classroom is founded upon primary and secondary document-based instruction, with the teacher in the position of transforming the content for the students while allowing space for students to create histories of their own.

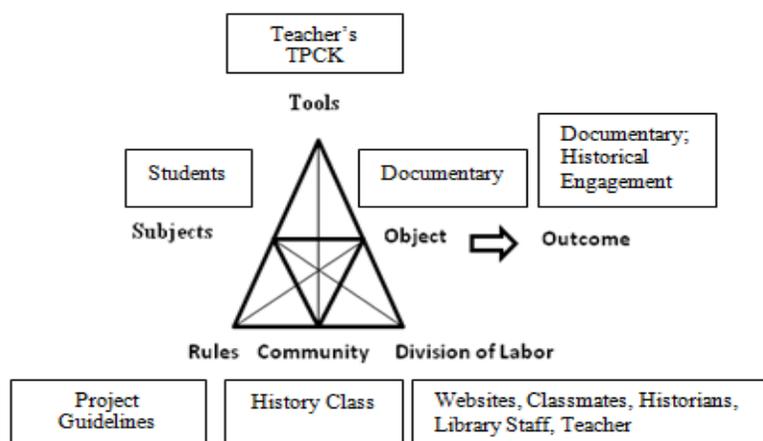


Figure 1. Activity system inaugurated by the teacher's TPCK.

Cultural Historical Activity Theory is a useful framework for analyzing and describing the effect that a teacher's instruction may have upon student behavior. Figure 1 shows, via the CHAT heuristic created by Engeström (1987), what the activity system initiated by a teacher who integrated DDM may look like.

The basis of CHAT is that human activity takes place within a particular social and cultural system. Its origins lie in the work of Vygotsky (1978) and Leontiev (1974) and further developed by researchers (e.g., Kaptelinin & Nardi, 2006; Roth, 2004; Roth & Lee, 2007; Yamagata-Lynch, 2007). The socio-cultural nature of CHAT contends that mediating agents (i.e., psychological tools, human tools, and material tools) affect human behavior within the activity system (Kozulin, 1998). The CHAT heuristic depicts these agents as rules, community, division of labor, and tools, where an object may be created. In relation to the activity of DDM, the documentary itself may serve as an initial *object*, with *rules* representing instructional guidelines set forth by the teacher who assigned the project, *community* may represent the students and teacher within the history class, or

whatever assemblage serves as the intended audience for the documentaries, and *division of labor* may represent any resources (material or human) that a student uses to complete their documentary. It must be noted that activity is fluid, with one action dependent upon another. This holds true with DDM as these mediating agents may shift throughout the compositional process with the realization that many *outcomes* may be achieved in the process of completing the ultimate outcome of a completed documentary.

RESEARCH CONTEXT

This case study of a high school history teacher was conducted in a rural-suburban public high school in the American Midwest. The high school, which will be called Landmark to protect anonymity, is a small local school district with primarily Caucasian students who derive from mostly a lower to middle class background in the midst of an industrial and agricultural economic sector. As a benefactor of state funds geared toward improving the technological digitization of schools in need, Landmark is amply supplied with technological resources. Each classroom in its new K-12 building is equipped with a *Smart Board*, projector, and at least one laptop computer for teacher use. The technological infrastructure of the school district is also conducive for students as there are several computer labs located in the building with a few instances where computers are available in the classrooms.

There is no other place at Landmark High School where digital technology plays such a central role than in Bill Havens' classroom. Mr. Havens, an experienced social studies teacher, works in a classroom unique from his colleagues in that it permanently houses a laptop computer cart with nearly thirty *MacIntosh* laptops at his disposal. "I am fortunate," Havens explained, "I have a lab that is permanently located in my classroom and am the only teacher who has that because I do a lot of the piloting of technology-oriented programs for our district" (Teacher Interview, September 22, 2010). Students in Havens' class are well accustomed to using the laptops as they are involved, according to Havens, in "probably 75-90 percent of what I do in the classroom" (Teacher Interview, September 22, 2010). The dominant presence of laptops in the classroom represents Havens' fervency to merge the technologically savvy world of his students with the learning environment in his history classroom. "Technology is such a pervasive part of these kids' lives," Havens asserted, "we have students who can text a hundred words a minute inside the pocket of the hoodie without an adult even knowing they're doing it." (Teacher Interview, September 22, 2010). Havens believed that the school experience is usually cold and stale when it comes to meeting the learning needs of his students and it is his personal mission to make his classroom culturally relevant:

The fact that we still put notes up on an overhead projector and make kids write it in pencil, when there's a more efficient and more comfortable way for them to do it...I don't understand that thought process. Just because it may be easier for me, it may not be easier for that student. My job is to work for them, they're not working for me. (Teacher Interview, September 22, 2010)

Havens proceeded to explain how he implemented traditional instructional strategies with use of the laptops:

From various standpoints, I still lecture. We still have class discussions. We still do classroom activities. We still do cooperative learning. But with that there's always the technology element. For example, if I give a

lecture, I use *PowerPoint* as a backup for my notes and for my images that I want to share with students. (Teacher Interview, September 22, 2010)

Havens' instructional practices are made more convenient and efficient by Landmark's employment of *Moodle* as the district-wide course software management system. All of Havens' classroom activities and technology-based resources are housed on each of his students' computer accounts.

Among the technologically-laden classroom activities that Havens assigns his students is DDM. At the time of this study Havens had integrated DDM for five years. The documentary making software that Havens is most familiar with in his instructional repertoire, and which he uses in his own classroom, is the streamlined digital audio workstation pre-installed in *MacIntosh* computers entitled *Garageband*. While this software is traditionally used as a music synthesizer, Havens enlists its capacity to record audio and add imagery in his DDM activities. While some studies on DDM (e.g., Fehn, 2011; Schul, 2010a) have featured teachers who integrate DDM through either *Photostory 3* or *iMovie* computer software, DDM has yet to be narrowly defined to only include a particular software program. In this study, therefore, a desktop documentary is simply defined as an audio-visual film presentation using digital software on either a computer desktop or laptop. While less sophisticated than other documentary making programs, Havens' use of the audio and visual capabilities of *Garageband* nonetheless may be categorized as a desktop documentary. Regardless of the software program that Havens incorporated in his DDM activities, his experience with integrating the strategy into his history instruction yields the necessary wisdom of practice (Shulman & Shulman, 2004) that is necessary for researchers and subsequently practitioners to perpetuate the successful integration of DDM forward into an increasing number of history classrooms.

The bounded setting (Stake, 1995) for this study was a general education social studies class entitled Junior Social Studies. The course consisted of a mixture of U.S. Government and U.S. History as its core subject matter and was required for all high school juniors in the Landmark local school district. The teacher incorporated DDM projects a total of two times in the school year, one for each semester, as a means to teach subject matter in the course. This study examines why and how the teacher integrated each of these DDM projects into the course curriculum.

RESEARCH METHODS

PARTICIPANTS

The primary participant in this study was Bill Havens (a pseudonym), who was in his thirteenth year as a high school social studies teacher at Landmark High School at the time of this study. Mr. Havens was purposefully selected for this study because of his vast experience with integrating DDM into his classroom practices. Purposeful sampling is a typical method employed in case study research to garner maximum information about a phenomenon (Patton, 1990). I first met Havens in the Spring of 2010 during a classroom visit and immediately noticed his use of digital technologies, including documentary making. Six student-participants were selected to gain depth of understanding toward Havens' integration of DDM. The study used only six students, all white-Caucasian, as a way to make the qualitative data more manageable and to avoid saturation or redundancy (Lincoln & Guba, 1985) as Havens' classes were highly homogeneous. Each student was a high school junior enrolled in the course under investigation and were randomly selected as participants in this study because of their

class schedules that enabled them to be available to this researcher. Another consideration in the selection of the students for this study was gender balance, however because of schedule conflicts only two females were able to participate. The six student cases (all names are pseudonyms) were selected immediately after the second DDM project assignment, which focused on World War I battles. The names of the students (all pseudonyms) are as follows: Ben, Chad, Emily, Lindsey, Nathan, and Steve. The profile information for the research participants is briefly displayed in Table 1.

Table 1. *The Profile of the Participants*

Name	Gender	Role	Race	Age
Bill Havens	Male	Teacher	Caucasian	41
Ben	Male	Student	Caucasian	16
Chad	Male	Student	Caucasian	16
Emily	Female	Student	Caucasian	16
Lindsey	Female	Student	Caucasian	16
Nathan	Male	Student	Caucasian	16
Steve	Male	Student	Caucasian	16

PROCEDURE

Data collection for this study consisted of observations, interviews, and document retrieval. Collecting such a variety of data infused depth to the study as it allowed this researcher to check my conception of the reality of the phenomenon from one data source to another (Creswell, 1998; Stake, 1995). Upon receiving Institutional Review Board (IRB) approval from the University in the Summer of 2010, data collection commenced in the Fall of 2010 with classroom observations. These observations, seven in all, occurred throughout the 2010-11 school year, and centered on the Junior Social Studies class scheduled from 12:50 until 1:30. Of the seven observations, four occurred as the teacher emphasized the integration of DDM whereas the remaining three observations occurred randomly so to gain an understanding of the teacher's instructional routine (See Table 2).

Table 2. *Classroom Observations*

Date	9/2/10	9/29/10	10/6/10	10/13/11	10/20/10	4/18/11	4/26/11
Focus	DDM	Routine	Routine	DDM	DDM	Routine	DDM

Documents relevant to the study's research questions were collected and one formal semi-structured interview and several informal interviews of the teacher were conducted throughout the course of the 2010-11 school year (see Appendix A for teacher interview questions). Additionally, one semi-structured interview was conducted for each student in the Spring of 2011 along with the retrieval of the students' completed documentary project for the final DDM class assignment (see Appendix B for student interview questions). Notes were recorded on a laptop computer for each classroom observation and those observations involving the integration of DDM were both audio and video recorded. The semi-structured formal interviews of the teacher and students were audio-recorded and later transcribed. Notes from each informal interview of the teacher were recorded on a laptop at the moment of the interview.

DATA ANALYSIS

Analysis of data commenced simultaneously with data collection, with coding categories developing throughout the investigation (Erickson, 1986). All codes were developed under the auspices of the study's theoretical framework that enabled patterns to be revealed within the case (Bogdan & Biklin, 2003; Lincoln & Guba, 1985; Shank, 2002) resulting in a convergence of evidence from these multiple data sources (Yin, 2009). Several strategies were used to ensure validity of the results, including inter-rater reliability of the coding process with an undergraduate education major that was disassociated from this study as well as member checking with the teacher (Lincoln & Guba, 1985; Stake, 1995). What follows is a rendering of the results that emerged from this data analysis that reveal Havens' rationale for integrating DDM into his instruction, how he integrated it, and his students' compositional processes and outcomes.

RESULTS

Four themes emerged from this study. These themes assert that: (a) DDM may be used to nurture disciplined inquiry; (b) DDM fostered a new discourse community of inquiry among students, (c) technological instruction was managed by the teacher, (d) DDM was incrementally integrated in a digitally saturated learning environment. This section discusses these findings as they address this study's research questions.

RESULTS FOR RESEARCH QUESTION 1

The first research question asked: Why did the teacher integrate DDM into his classroom? A secondary research question closely associated asked: How, if at all, did students' practices fulfill the teacher's intent with DDM? The TPCK-CHAT lens was useful in this study with examining how students were influenced by their teacher as they composed their historical documentaries. While TPCK allowed for an examination of the teacher's pedagogical intent and practice with DDM, CHAT enabled me to investigate how the teacher's instruction affected student behavior as they composed their documentaries. This section discusses the two themes that emerged from this research question.

DDM and the Nurturing of Disciplined Inquiry. Bill Havens integrated DDM for the purpose of teaching particular pervasive skills in the classroom with his foremost desire to improve students' research skills. "I want to encourage the thought process in the thing," Havens said about his assignment. He expanded on what he meant by encouraging the thought process through DDM:

Life is not about rote facts. I'm not a big fan of just regurgitating facts. This (DDM) allows them to be creative in how they present what facts they understand and it's also synthesis. It's an opportunity to take all those pieces of information that are out there and bring them together into one piece. Then you get down to the basic things like following directions, following a process. There's value in those. (Teacher Interview, September 22, 2010)

In his DDM assignments, Havens required each student to create a documentary about a historical topic (See Appendix C and E for DDM project topics). He required each student to first research their given topic using a minimum of five secondary sources other than *Wikipedia*. On a side note, Havens not only guarded his students from using *Wikipedia* as a research source, but also required his students to avoid copyright

violations when downloading music by requiring them to select music from a website entitled “freeplaymusic.com” which provides music devoid of copyright restrictions.

In order to alleviate some of the problems students may initially encounter when creating their desktop documentary, Havens first required his students to create a script on a handout that he distributed to the students and that they would submit back completed to their teacher before they commenced their composition of the actual documentary itself (See Appendix D for Storyboard Sheet). In doing this, Havens ensured that students learned the basic skills of analysis and synthesis that is the foundation of the research process. Once having finished their documentaries, Havens’ students testified how their teacher’s approach toward integrating the DDM project enhanced their research skills. This requirement, according to the statements of the students in this study, proved to be integral in focusing the students’ compositional efforts as the most difficult part of the DDM project, according to the students involved in this study, was putting together the script. “The hardest part was putting together the script; but once you got that done, it just flowed from there,” remarked Steve (Student Interview, May 16, 2011). Chad agreed with Steve, saying:

The hardest part was probably writing the script because you have to. Mr. Havens gives you a paper that’s got a blank square that’s got lines underneath it so you can put what image you want in there and write what you want to say underneath that image I have a lot of problems, you know, getting my mind, my mouth to say what my mind wants; and so, it was kind of hard to write the script- but once you get the script going, it just kind of flows. And then recording is easy, and then adding the music and images are just real quick. (Student Interview, May 16, 2011)

Lindsey echoed Chad’s appreciation of Havens’ distribution of the script handout by saying it made the compositional process “really fast and easy for me” and that it allowed her to conduct thorough research for her project that she even deemed was “fun” (Student Interview, May 16, 2011).

DDM and the Formation of an Authentic Community of Learner. In addition to teaching research skills, Bill Havens also used DDM to foster collaboration amongst his students. Havens placed a high value on collaboration amongst his students. His classroom activities, for instance, ran parallel with the idea of helpful collaboration, as revealed in one of his review activities that required students to work in groups to answer questions about the French and Indian War given to them in a concealed envelope. Once a group finished with answering their questions, he required the entire group to walk around the class helping the other groups as they continue to work. “We’re going to teach each other because that’s what friends do, they help each other learn,” Havens reminded the class at the commencement of the activity (Classroom Observation, October 6, 2010). After assigning the activity, Havens proceeded to walk around the room while singing the phrase “we’re better together” to a musical melody.

Havens’ assignment of DDM resonated with his concern for building a learning community within his classroom. In fact, classroom collaboration was front and center in Havens’ assignment of his DDM project, evidenced by the fact that he entitled the DDM project “Community of Learners.” In a description of his DDM project, Havens explained that it had multiple stages “in which students encountered peer review, peer analysis, presentation, and then synthesis into assessment” (Teacher Interview, September 22, 2010). This first step was the actual project itself where students were assigned a historical topic, which they research and create a documentary. In this project, he required each student to become an “expert” on the given topic and subsequently teach

that topic to their classmates. The second step included each student to be assigned three to five of their classmates' individual documentaries to view, analyze, and assess. This peer assessment was given to the teacher along with three questions about each documentary. Havens personally assessed each documentary and combined his assessment score with the peer scores. The third step was the public presentation of the documentaries where the teacher asked the class the questions created by the peer review and they shared answers given to them by the video project. These questions were generally fact-based, with little interpretation, and may appear on a written unit assessment.

Students who participated in this study were greatly influenced by Havens' requirements that the DDM project nurture a learning community. "We end up basically teaching ourselves," Ben said when asked about his first impressions of the documentary project (Student Interview, May 16, 2011). "It wasn't just a teacher talking," Chad remarked, "it is almost as if I was talking to the other students about each topic." (Student Interview, May 16, 2011). The comments made by Ben and Chad reflected Havens' success with positioning each student to share their knowledge with one another. This feature of the project was novel for the students. Emily, for example, shared that her primary intent in making her documentary about the Battle of Flers-Courcelette was that it be useful for other people: "I thought that it told people about the battle, what happened, and everything like that, so I think it would be a pretty good tool for other people to use." (Student Interview, May 16, 2011). Each student in this study remarked how they learned from one another and the benefits associated with this characteristic of the project. "Everybody in the class gets their perspective on their things," Chad said (Student Interview, May 16, 2011). Colt remarked how he enjoyed seeing his classmates' perspectives on the various historical topics, saying that "it shows how people [his classmates] work" (Student Interview, May 16, 2011). Nathan even went so far as saying that he found it easier to learn the subject matter from his classmates' projects than he would through a traditional teacher-centered presentation: "You can hear from other students and it just seemed a lot easier to learn and see what they had to say and what they learned from these" (Student Interview, May 16, 2011).

RESULTS FOR RESEARCH QUESTION 2

The second research question asked: How did the teacher instruct the components of digital technology necessary for students to produce their assigned documentaries? Havens' TPCCK was intertwined with his practices of integrating the DDM project into his instruction. However, in order to clearly and specifically answer this second research question, the analysis from this second research question yielded two prominent themes that illustrate both how Havens' delivered technological instruction and how he fit the project into his course curriculum. This section discusses the two themes that emerged from this research question.

Teacher as Technological Expert. Bill Havens believed that his technologically driven approach to teaching was more difficult than the approach traditionally used by history teachers. "You actually have to do more work on the front side to be able to do a lot of this stuff", Havens asserted, "than if you just went ahead and did it in the traditional format" (Teacher Interview, September 22, 2010). Havens further explained how his approach to teaching was actually more time consuming than the approaches taken by traditional history teachers:

I know a lot of teachers, and good teachers, who can walk in on a Thursday and say, "Ok, I'm giving my lecture on the Inquisition." Great,

fantastic- and there's not a whole lot of work there. Where as opposed to if I want to give something on the Inquisition, I've got work up all those pieces ahead of time and make sure they're sequenced properly on the computer; and I've got to make sure kids can access it. So, there's that aspect of it. There are a lot of parts you have to have in place, and I drive my technology coordinator nuts. (Teacher Interview, September 22, 2010)

Havens attested that his approach to teaching required him to put in a substantial amount of time moving "parts" in place. What then are those "parts" that he must prepare beforehand? To begin with, Havens created "how to" videos concerning various technological skills that he required his students to be able to perform in his class assignments:

One of the things I started doing last year was I started recording those. How to use *Garage Band*; how to use *Power Point*; how to use *Keynote* or whatever the program is. Also, how to upload onto *Moodle*- how to do these things. Now I have these series of videos that a student who may have forgotten how to do something and can now go back and reference it. (Teacher interview, September 22, 2010)

These tutorial videos created by Havens were easily available to students on their *Moodle* account. With the DDM project, for instance, Havens found an online tutorial on how to add sound on students' documentaries using *Garage Band* and subsequently placed it as a resource on students' *Moodle* accounts.

In addition to creating or finding technological tutorials, Havens spent time becoming an expert on the technological skills required for his classroom projects. Havens believed that a teacher who immerses students into digital technology must practice the necessary technological skills to such a degree that they become an expert who can, in turn, solve any problem that a student might encounter. Havens explained his rationale for being the technological expert:

You've got to be able to try to find all the problems that a student may have before a student even has it because the nature of the technology is- if I have to wait, if the student has to wait, now that student is behind. That's putting them behind in the equation. So, you've got to kind of account for every problem they might have on the front side and be prepared to answer it or deal with it as it comes. (Teacher Interview, September 22, 2010)

Havens employed his expertise in two ways. First, he provided direct instruction of particular computer software at the onset of assigning a project that will require students to use the software. This first method of direct instruction took place in the classroom and will be discussed further in the next assertion from this research question. Second, he spent some additional instructional time in email correspondence with his students as they worked on a particular project that he assigned:

It's not unusual for me to be sitting at home at night, my email to go off and a student having a question about an assignment and I can go into the computer and I can help the student with an assignment, from in my case, forty miles away (Teacher Interview, September 22, 2010).

In order to be the expert who can assign and later trouble-shoot for students who encountered technological problems, Havens believed that he must seek professional development opportunities. “I’m known for spending hours at a time searching for different freeware programs out there and talking to other people going to conferences,” Havens asserted. (Teacher Interview, September 22, 2010). Havens committed a significant amount of time to being a technologically savvy teacher because, as he put it, “you’ve got to stay ahead of the curve, because the kids are staying ahead of the curve.” (Teacher Interview, September 22, 2010)

Incremental Integration and Digital Saturation. Havens’ integration of DDM was incremental in that he first introduced the students to the learning strategy through an assignment where he required students to share about their summer vacation. Havens explained his reasoning for the initial summer vacation project:

The first thing that we talk about is going out and becoming an expert on the topic. So, I have them tell me about something they should already be experts on: themselves. In the case of junior and seniors, they’re going to tell me about their summer, whether it’s the summer they had or the summer they wish they had. Again, they’re the expert. So with desktop publishing, the first trick is to become the expert. (Teacher Interview, September 22, 2010)

This first assignment was intended to introduce students to DDM and the software, which they were required to use throughout the year. This initial introduction includes Havens’ showcasing of his own documentary about his summer vacation for the class to see as an example. In the second DDM project, which was assigned in the Fall, Havens required his students to compose documentaries on individuals and events involved in the American Revolution (See Appendix E for a listing of the American Revolution subjects.) The third documentary project, assigned in the Spring, was the World War I assignment mentioned earlier in this paper.

The weekly structure of Havens’ class schedule also reflected his incremental approach toward integrating digital technology. Each week he allocated two lab days for the students to work on various computer projects that he assigned. Additionally, this class time was often used by students as a way to get their teacher to trouble-shoot their technological problems for them. Havens explained his schedule and his rationale for it:

My typical schedule is in a traditional 5 day week. I have a senior class, freshman classes and junior classes. Each class alternates lab days. Seniors and freshman have labs on Tuesdays and Thursdays where they have the work for the week they need to do, and I’m here, and it’s a laboratory environment. I’m accessible. I’ll go around and help. On Tuesdays and Thursdays, meanwhile, the juniors are doing traditional classroom things like *History Alive*, or I give a lecture, or we’re doing a cooperative learning activity, or a primary source activity. Those would be those non-lab days; and so, we alternate those between the kids to where they have the technology component with me helping them, where they’re taking all those pieces that we talked about in discussion and lecture and activity; and they start putting them together in activities like desktop publishing. (Teacher Interview, September 22, 2010)

During one classroom observation, which was a lab day for juniors, Havens entered the room at the ring of the bell and authoritatively directed the entire class to look at directions written on the board. He reminded the class that the day was a lab day and proceeded to talk about homework assignments, which included a critical analysis of video clips of documentaries and movies associated with the American Revolution. Students were each sitting down with their laptops opened atop their desks. It was routine for students to pick up a laptop immediately upon entering the classroom. During the majority of the class period, Havens sat at his desk staring at his own computer, as were each of his students. The class was silent as some students were writing and others wore headphones as they watched the video clips assigned to them by Havens. Near the end of class, Havens walked around the room and announced “five minutes remain, plan accordingly” (Classroom Observation, September 29, 2010). Once students placed their laptops back in the computer cart to be charged, each student left at the ring of the bell that signified the end of a routine lab day in Havens’ classroom. This class schedule made it very conducive for Havens to integrate DDM into his classroom as students were accustomed to working with digital technology and were provided time in class to work on computer assignments.

IMPLICATIONS AND DISCUSSION

The results from this case study research revealed that DDM is an instructional strategy that teachers may use to nurture students’ research skills. Bill Havens’ students searched for information about their historical topic from at least five secondary sources and then organized their portrayal of their historical document onto a written storyboard prior to producing their documentary. Additionally, teachers’ incorporation of DDM may enhance a discourse community of inquiry among students as evidenced by Havens’ use of DDM to position each student to evaluate one another’s historical documentary. With regard to how DDM may be integrated into instruction, this research revealed that Havens managed the technological instruction almost solely on his own and incrementally integrated DDM into his history curriculum. The implications of these research results regarding teachers’ use of DDM in history classrooms as well as possible areas for future research are discussed in this section.

This study yielded several significant implications that inform and promise to improve the integration of DDM in general education classrooms. First, this study revealed that different teachers may use DDM for different purposes. Some teachers might be more concerned with the students’ critical analysis of the historical topics they are creating a documentary about, much like the teacher in my earlier study (Schul, 2010a), while others, like the teacher featured in this study, might have other purposes in mind such as improving research skills and cooperating with other students. The fact that students in this current generation enjoy imagery and often experience history outside of school through the media in the form of movies and documentaries (Coventry, et al., 2006), make DDM an appealing method for teachers to use in the classroom for any number of purposes. History teachers who integrate DDM into the classroom instruction may fulfill all of Taba’s (1962) levels of content: facts, organization of basic ideas, concepts, and disciplined-centered thought patterns. In this sense, DDM may be a very efficient instructional approach for history teachers. Bill Havens, for instance, wanted his students to learn facts and concepts from one another’s documentaries, but his primary reason for having students construct historical documentaries was based on his understanding that DDM consists of ongoing synthesis and data collection (Fehn, 2011). Havens intended to use DDM as a means to improve students’ research skills since they were required to “become the expert” on a topic, select images and audio, and then write

up a storyboard, all before the actual process of composing the documentary on the computer software. Another teacher might very well see other possibilities with DDM that fit with their curricular needs and subsequently use it for those different purposes.

Havens' personal approach toward integrating DDM into his classroom also showed how DDM might be used to privilege student voice among a group of students. History classrooms that enliven students' interests are ones that position students to interpret meaning from the past and use their imagination (Booth, 1993). Students in this study shared how much they enjoyed looking at their classmates' interpretations of their topics. Some even shared that this was more effective than listening to a teacher. The fact that students' histories may be easily reviewed and critiqued by peers with the digital technology was a prominent feature of Havens' integration of DDM into his classroom. Teachers who, like Havens, position students to critique classmates' documentaries in the classroom setting empower their classroom to nurture a community of inquiry (Seixas, 1993) among students in a way that is seldom done in the context of history classrooms today. Perhaps the primary dilemma for teachers as they contemplate on including DDM in their classroom is how to fit it into their curriculum. The answer to this, of course, is dependent upon the teacher's purpose with bringing DDM into her or his classroom. Havens provided one approach where DDM is assigned several times in the year, while Schul (2010a) examined a teacher who integrated it once near the end of the school year. If the teacher's aim is to nurture a discourse community of inquiry within the classroom where students discuss and question one another about the histories made by their peers, then Havens' approach is likely the most appropriate seeing that community is usually developed over the span of time rather than in the midst of a singular project. The fact that Havens saturated his students in digital technology also helped him with integrating DDM as many teachers fear the unpredictable nature of the digital technology and would fear that it would simply take too much class time away from coverage of future content. However, Havens' assignments required students to create documentaries more closely resembling encyclopedic entries rather than histories laced with rich narratives which may likely lead to students' shallow or even absence of conversation about their classmates' documentaries since they may likely focus on heritage rather than history (Hofer & Owings-Swan, 2005; VanSledright, 2002).

Another implication of this study is that it opened up the possibility that general education teachers may need to be much more technologically savvy than teachers of Advanced Placement courses. In other words, this study showed Bill Havens working seemingly tirelessly to ensure that students were adequately equipped with the necessary technological knowledge and skills necessary to create their desktop documentaries. This hands-on nature of Havens' technological instruction starkly contrasted the teacher featured in my earlier case study (Schul, 2010a). This teacher, Harlan Jones (a pseudonym), was observed to rely heavily on student networking for technological instruction in a DDM project assignment but confessed if he were a general education teacher he would provide more direct instruction of technology. Havens' case is definitely an exception among teachers when it comes to teachers' use of digital technology since digital technology's unpredictable nature often discourages teachers from integrating DDM into their classrooms (Hofer & Swan, 2008). Although Havens' case is a rarity among teachers in terms of technological knowledge, it does lead to a significant question for researchers and teachers alike: Is a robust knowledge in digital technology necessary for teachers who aspire to integrate DDM into their general education classrooms? The answer to this question is still unclear, though the results from this study and the findings from my earlier study of Harlan Jones infer that there are different purposes and approaches toward integrating DDM for general education settings as opposed to Advanced Placement settings. In fact, Harlan Jones even mentioned that

he would rely more on direct technological instruction if he taught general level students. While it might be unreasonable to expect teachers to be as technologically savvy as Havens', his incremental approach toward integrating DDM might serve as a useful approach for even the less technologically adept teacher to aspire to use DDM as an instructional strategy since students' struggles with technology significantly dampen their efforts to produce a high quality documentary (Hofer & Owings-Swan, 2005).

In addition to some of the issues discussed in previous paragraphs, this research investigation has instigated many other important questions. Havens' classroom was supplemented by the school district's commitment to digital technology, but not all classrooms are so fortunate. What then are some issues that teachers, particularly general education teachers, face in school settings that are technologically impoverished? Future research in such classroom settings is required in order for more clarity to be gained about the nature of DDM integration in general education classrooms. Havens' approach to DDM also affirmed that DDM may be used to nurture a discourse community of inquiry (Seixas, 1993). However, there is no empirical research on the discourse among students as they critique one another's documentaries in classrooms where such a community of inquiry is present. What types of documentary assignments evoke the most student discourse? What sort of questions about the documentaries should the teacher ask the students in order to foster rich yet respectful discourse? Do the students need to be accustomed to inquiry in order to successfully critique one another's documentaries, and if so, what then is required to make them feel accustomed to inquiry? In addition to further research that answers these questions at the secondary level, more research is required in elementary and middle childhood classrooms that seeks to answer not only if and/or how a teacher at those grade levels may nurture a discourse community of inquiry with DDM, but also why and how teachers experienced with DDM at those levels integrate it into their classroom instruction. Such investigations will continue to perpetuate the emergent literature on DDM so as to improve teachers' integration of DDM in all types of instructional settings.

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APPENDIX

APPENDIX A: TEACHER INTERVIEW QUESTIONS

- What did you intend to accomplish by integrating desktop documentary making into your classroom?
- What influenced you to implement this unit?
- How did you learn Photostory 3 to prepare yourself to teach it?
- How do you teach desktop documentary making to students?
- What content do students learn and need to know to potentially create competent desktop documentaries?
- Who were your influences in your profession?
- What historical thinking skills do students exercise when making desktop documentaries?

APPENDIX B: STUDENT INTERVIEW QUESTIONS

- What grade are you in?
- What was your documentary topic?
- What are your thoughts about Mr. Haven's podcast assignment?
- Tell me about your experience doing this project.
- What were you trying to do with your composition? Do you think you achieved this? Tell me how you achieved this.
- What did you learn about your topic?
- Have you watched any of your classmates' documentaries? Do you plan to?
- Is there anything else you'd like to tell me?

APPENDIX C: WORLD WAR I PROJECT

Your World War I project is to create a documentary of a World War I figure or event. You will be assigned (VIA MESSAGE) one of the topics below. If covering a battle you need to make sure that you cover all the information, including geographic location and armies, and leaders on each side, style of warfare, significant events within, final outcome of battle and its effect on the war.

If assigned a person you should give a somewhat brief biographical background of the person prior to the war. You should then discuss that person's involvement and impact on the war as a brief summary of their post-war life.

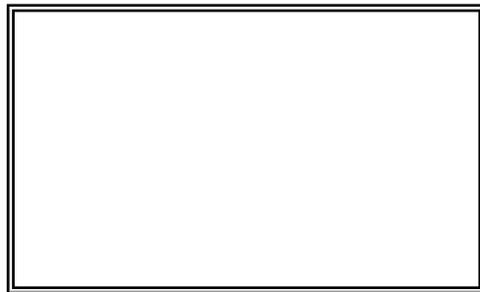
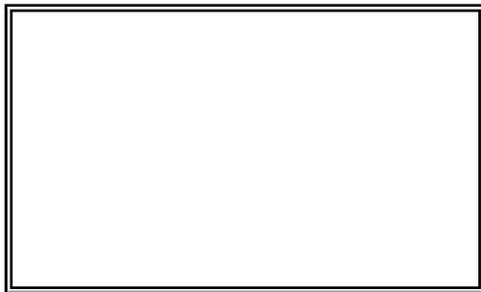
Make sure you cover all the information well, that you have a minimum of 12 images, and music must accompany the documentary.

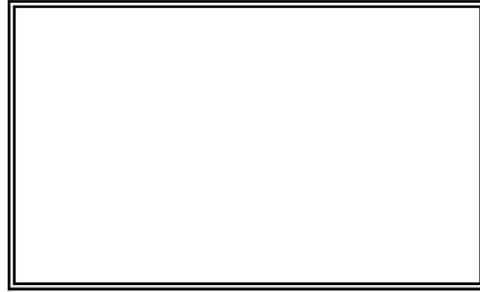
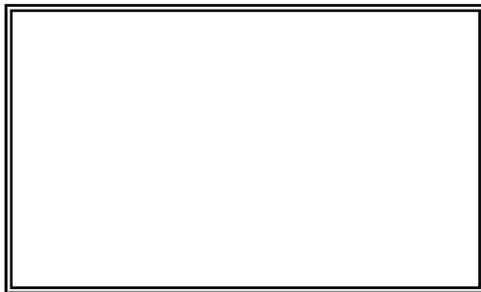
Feel free to use the storyboard sheet, and reference the “how to” videos to remind you how to complete the documentary. Make sure that you final check your sound levels.

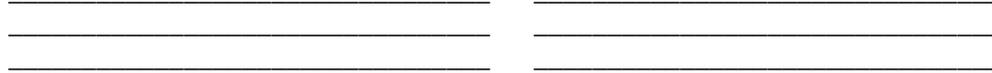
MONS
TENNENBERG
HELIGOLAND
AISNE
ALBERT
ARRAS
YPRES
NEUVE CHAPELLE
GALLIPOLI CAMPAIGN
ARTOIS
ISONZO
VERDUN
JUTLAND
SOMME
GORIZIA
FLERS-COURCELETTE
GAZA
MESSINES
CAPORETTO

LE HAMEL
AMIENS
ST. MIHEL
MEUSE-ARGONNE
CANA DU NORD
VITTORIO VENETTO
WOODROW WILSON
VITTORIO VENETO
DAVID LLOYD GEORGE
VITTORIO ORLANDO
GEORGES CLEMENCEAU
FERDINAND FOCH
HENRY CABOT LODGE
VLADIMIR LENIN
ALVIN YORK
JOHN J. PERSHING
NICHOLAS II
KAISER WILHELM
CAMBRAI

APPENDIX D: STORYBOARD SHEET







APPENDIX E: AMERICAN REVOLUTION SUBJECTS

JOHN ADAMS
SAMUEL ADAMS
NATHANIEL GREENE
ALEXANDER HAMILTON
JOHN HANCOCK
HENRY KNOX
THOMAS PAINE
CAESAR RODNEY
PAUL REVERE
BUNKER HILL
LEXINGTON AND CONCORD
BATTLE OF SARATOGA
BATTLE OF PRINCETON
VALLEY FORGE

VALLEY FORGE
BATTLE OF BRANDYWINE
BATTLE OF GERMANTOWN
KINGS MOUNTAIN
BATTLE OF COWPENS
BATTLE OF ORISKANY
BOSTON TEA PARTY
BOSTON MASSACRE
1ST CONTINENTAL CONGRESS
2ND CONTINENTAL CONGRESS
GEORGE ROGERS CLARK
ANTHONY WAYNE
DANIEL MORGAN
FREIDRICH VON STEUBEN