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Emotional factors in history learning via digital history narrative creation

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EMOTIONAL FACTORS IN HISTORY LEARNING VIA DIGITAL HISTORY NARRATIVE CREATION

by

Amy Lynn Jones

An Abstract

Of a thesis submitted in partial fulfillment
of the requirements for the Doctor of
Philosophy degree in Teaching and Learning
in the Graduate College of
The University of Iowa

December 2012

Thesis Supervisor: Associate Professor Bruce R. Fehn

ABSTRACT

This study investigated the potentialities of student produced digital narratives in the context of a secondary history classroom. Using qualitative mixed methods, I employed think-aloud observations, interviews, nonparticipant observations and document collection with 14 high school freshmen as they completed digital history narratives, i.e., historical documentaries, as a requirement of their United States history course. The study found that components of digital history narrative creation evoked strong emotions in secondary high school students. Specifically, working with historical imagery and through a technological medium, study participants showed observable, activity-related achievement emotions; emotions that further resulted in increased motivation towards the successful completion of an original history product. The findings provide evidence that the use of technology and historical imagery possess potential to enhance the emotional quality of students' experience in the history classroom, and furthermore, that certain achievement emotions result in an increase in student motivation.

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CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph.D. thesis of

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has been approved by the Examining Committee
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For Rielle

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I am honored to take a moment in time to forever document the thanks owed to those who helped make this thesis possible. First and foremost in every aspect of my life, including the thanks given here, I thank my daughter, Rielle. From the instant she was born Rielle has inspired me to reach for the stars while reminding me of the reasons to keep my feet on the ground. She continually teaches me that anything is possible.

A big thank you goes to all the friends, colleagues and family that have helped me whether it involved having Rielle over for dinner while I was at class, walking me through the labyrinth of formatting or just listening to me talk about data. In the category of friends I include the many students I have had the pleasure to learn with. For the past ten years you have motivated me, challenged me to continually grow and learn, and provided me with innumerable laughs. I thank all of the wonderful people in my life for your understanding, support and encouragement. Without all of you, and you know who you are, I might not have completed this lifelong goal.

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ABSTRACT

This study investigated the potentialities of student produced digital narratives in the context of a secondary history classroom. Using qualitative mixed methods, I employed think-aloud observations, interviews, nonparticipant observations and document collection with 14 high school freshmen as they completed digital history narratives, i.e., historical documentaries, as a requirement of their United States history course. The study found that components of digital history narrative creation evoked strong emotions in secondary high school students. Specifically, working with historical imagery and through a technological medium, study participants showed observable, activity-related achievement emotions; emotions that further resulted in increased motivation towards the successful completion of an original history product. The findings provide evidence that the use of technology and historical imagery possess potential to enhance the emotional quality of students' experience in the history classroom, and furthermore, that certain achievement emotions result in an increase in student motivation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

I personally encountered both the process of digital narrative creation and Photo Story 3 software for the first time as a student. During the spring of 2006 I created a digital history narrative as part of the requirements for a graduate course I took in pursuit of my doctorate. This initial experience sparked an interest in the phenomenon for several reasons. As a student navigating a new learning process I experienced a rejuvenated sense of interest in the historical topic that I placed at the center of my digital narrative. Using images to relate my understanding an historical event increased the depth of my understanding of the players in the event, both named and unnamed. Humanizing people of the past resulted in an overwhelming sense of empathy for them and the desire to better understand the events and decisions that shaped their lives. In addition, I felt challenged and stimulated by the tasks of communicating without traditional text and through a new technological medium. As an educator, I started to conceive of ways in which I might incorporate such methodology into my secondary history classroom.

After subsequent experiences with creating historical digital narratives in my own educational journey, I became convinced that the activity would benefit my student's interest and understanding in history content as well as provide opportunities for them to gain experience with emerging technology. In the spring of 2008 I required my 8th grade social studies students to create their own historical digital narratives as an end of the year project. The students completed the entire project at school, allowing me to be present throughout their experience with the activity. I witnessed an increase in engagement similar to what I had experienced as the student. Additionally, students exhibited improvements in work ethic. Though an educator rather than a researcher in this instance, I developed a more refined curiosity about students' interaction with the

methodological approach of using images to create historical digital narratives affected the students' learning process.

Upon returning to the University of Iowa full time in pursuit of my doctorate in the fall of 2008, I reconnected with the professor responsible for my introduction to the process of digital narrative creation, Bruce Fehn. Though we both agreed that digital narrative creation possessed tremendous capability to engage students more deeply in the investigation of history; we also knew it was insufficient to simply *tell* the educational world of the benefits of incorporating digital narrative creation into the classroom, we must *show* them the benefits. In truth, the benefits, even to those of us who had engaged in the process, were still somewhat inexplicable. I decided then to pursue an understanding of what students experience while making a digital narrative as my doctoral research.

CHAPTER 1

AN INTRODUCTION TO THE STUDY: EMOTIONAL FACTORS IN HISTORY LEARNING VIA DIGITAL HISTORY NARRATIVE CREATION

Background and Context

On a brisk Monday morning in December 2008 students filtered into Mr. York's classroom, books in hand, chatting about weekend activities. I sat at the front of the room, off to the side, notebook out, ready to begin my research on digital history narrative making, which Mr. York was about to introduce to his 9th grade American history students. Over the quieting din Mr. York greeted the class and quickly moved to a review of homework deadlines and exam dates. Then, as the lights turned off, Mr. York garnered the students' full attention with the words: "You guys are going to make movies." Excitement buzzed through the room. Smiles broke out on the faces of the students as all eyes and ears focused on the front of the room to watch the short, five minute documentary film Mr. York cued up as an example of the kind of history production students, too, were soon to create. After viewing the documentary, which Mr. York himself produced, the students erupted with questions from all over the room: "What history topics can we choose?" "When can we begin?" "How do we make them?" Although a guest in the class, I felt myself swept up in their excitement at the prospect of making documentary films, or what I term in this dissertation as "digital history narratives".

With the ever increasing availability of online visual materials, as well as computer software programs for manipulating and presenting images, history educators and history teachers have found new pedagogical strategies for integrating visual material and technology into their history classes, including the creation of digital history narratives. I entered the research site intent on observing what students experienced when

creating a digital history narrative. As I gathered data that provided the answer of emotion, subsequent research questions emerged: how did digital history narrative creation evoke emotional responses from participants; and how did the emotions impact the participants' behavior during the learning process? Digital narratives, with a specific focus on the participants' interpretation of a self-selected historical topic, served as the instructional activity through which I studied participants' emotional experiences during the history learning process. As a result, this dissertation holds relevance for several areas of research: history education; technology in learning; and emotion in learning, but remains focused on the role of emotion in history learning.

The Question of Emotion in History Teaching and Learning

Driven by the "pictorial turn" (Burke, 2001; Cohen, 2003; Mitchell, 1994) in American culture and a surge of visual archives appearing online, professional historians have increasingly discussed how to handle images as historical evidence. Historians, history educators and teachers have pondered how they might properly manage the emotions that images evoke in the scholars and history students encountering these visual artifacts. Historians have discussed whether or how the emotion images arouse may interfere with the analytical process required to compose accurate narratives of what happened and why (Burke, 2001; Rosenstone, 2006). Conversely, some have questioned previously held negative attitudes that assume student emotion would release bias and participantivity that overwhelms the learning process (Barton, 2008; Wineburg, 2001). Rather than attempting the impossible task of avoiding student emotion or ignoring student emotion, scholarly inquiry now considers the potential benefits of students' emotional attachment to either the content or learning process itself, "Students…are interested in topics that involve emotion, morality, and individual judgment…" (Barton, 2008, p. 245). History teachers, at all educational levels, discuss how they might exploit emotions that images create in ways that spark engagement with the past, and thereby

enhance, history learning in their classrooms (Coventry, Felton, Jaffee, O'Leary, Weis and McGowan, 2006).

As this conversation continues, a greater need for research and understanding of emotion in history education emerged from the spate of technological teaching tools being presently developed. The new pedagogical strategies for integrating visual material into the history classroom via technology include student-produced digital narratives. As noted in current literature on technology in learning, student-produced digital narratives have become increasingly popular in the classroom (Hammond and Manfra, 2009; Opperman, 2008; Robin, 2008; Sadik, 2008). This investigation focused its efforts on understanding the emotions experience by the participants as they worked with the medium of digital history narratives.

The Phenomenon of Digital Narrative Creation

For this study I investigated whether digital historical narratives (DHNs) elicited emotions and how those emotions influenced the learning process of fourteen 9th grade students who composed DHNs within the context of an American history classroom. "Digital history narrative making," in this study, refers to practices exercised at a computer keyboard, utilizing computer software operations, to produce a primarily visual and audio representation of the past. Creating digital history narratives requires encounters with primary sources, as well as interpretation and synthesis of sources into the representation of a historical event or theme. Support for the integration of such an exercise into the classroom arose from those working both in the field of curriculum theory, as well as those focused specifically on historical thinking and learning. Holt (1990) argued that allowing students to work with the "raw materials of history", which includes images, documents and statistical data, in order to create their own narrative explanations offers far more benefit to the development of critical analysis skills than simply being made to memorize someone else's interpretation (p. 12). The audiovisual

components of digital history narratives affected both the students' historical practices and the final product of their efforts. Such a task required students to incorporate information from all of their senses into their historical interpretations and likewise, and to consider the multi-sensory experience of those that may encounter their finished digital history narrative. Eisner (2004) purported that if the role of the school is indeed to "foster the student's ability to understand the world, to deal effectively with problems, and to acquire wide varieties of meaning from interaction with it" then we must expand the ways in which students currently have the opportunity to learn within the formal education system (p. 20). Eisner further noted the importance of both image and music in the education of youth.

The practice and product of digital history narrative creation fit to the description of a multidimensional sensory experience in comparison to putting pen to paper. As students investigated an historic topic with a mind to create a digital history narrative, they engaged in the interpretation of historical information via multiple forms of representation, which Eisner (2004) attributes to fuller understanding. Students communicated their historical interpretations through sight and sound, as well as linguistically. This process required additional thought as to how one's final product might be perceived and therefore often resulted in the consideration of multiple interpretations of the visual product (Eisner, 2004). While educational practice has begun to employ such tactics, the research community must endeavor to fully understand whether the results truly reflect an enhancement of the educational experience or merely distract from the tedium of more traditional learning methods.

Though studies discussed in this manuscript applied varied terms such as digital story, or desktop documentary to discuss the film making project, this study employed the term *digital history narrative creation* to describe a similar technological process as those in the proposed definitions of previous research, while acknowledging the unique focus on historical content. Therefore, the term *digital history narrative* applied to the

phenomenon as studied in this research project, while *digital storytelling, digital documentary* or *digital narrative* may appear in reference to other examples of the use of similar practices within history education as well as other curricular areas.

The proliferation of digital narrative software and the push to embrace toward 21st century skills (such as visual and technological literacy, Iowa Core Curriculum, 2012), gave impetus for digital storytelling to find its way into classrooms at virtually all educational levels and a variety of content areas (Coventry, 2009; Felton, 2009; Oppermann, 2008). Student-created digital documentaries received validation in history education with the recent inclusion in the list of entry options for the National History Day Competition (2012). Research into digital storytelling in both secondary and post-secondary classrooms has been ongoing, many studies alluding to the engaging nature and emotional element inherent in the process of working with images and creating digital stories, but none has focused on the role of emotions when using digital history narrative creation in the educational process.

Despite the acknowledged emotional quality of working with historical imagery and the fact that historical imagery figured centrally in the construction of digital history narrative creations (Felton, 2009; Hofer and Owings-Swan, 2005), the current body of research on the phenomenon lacked an analysis of this component. As digital history narrative creation continues to grow in popularity, the research community needs to focus on the emotion students experience as they work with historical imagery within the technological environment.

Current Research on Digital Narrative Creation in the Classroom

The available research on digital narration aims to promote and advise educators how to use and evaluate digital storytelling in an educational setting (Banaszewski, 2002; Hammond and Lee, 2009; Kajder, Bull and Albaugh, 2005; Ohler, 2006, 2007; Porter,

2006; Swan and Hofer, 2007). Studies that went beyond informing the reader of the potential for digital narration in the classroom, focused on digital history narrative creation of an expository format, straying little from the dictates of history as a discipline. Emphases remained on the objective cognitive processes and historical thinking skills that students engaged in as history education took place within a new, technological format (Coventry, 2008; Felton, 2009; Robin, 2008; Sadik, 2008). While some research on digital narrative creation included the emotional responses of their participants within observed findings, they failed to focus on how the emotional responses connected to the participants' learning process. Few took place in the context of a history classroom or even the domain of history content.

Researchers noted that students enjoyed the process of creating digital narratives and felt other emotions, such as pride, in their final product, irrespective of the disciplinary domain of teaching (Felton, 2009; Sadik, 2008). Multiple studies, including those intended to focus on cognition and historical thinking practices demonstrated increased levels of engagement (Benmayor, 2008; Coventry, 2008; Hull and Katz, 2006; Oppermann, 2008; Robin, 2008). Similarly, researchers reported 'positive' effects on student engagement (Coventry, 2008; Felton, 1999; Swan and Hofer, 2007; Sadik, 2008) but neglected to examine the emotional involvement of students during production of digital history narratives.

This study goes beyond the recognition of participants' emotional experiences, as a compelling but empirically under-studied sidebar, to identifying how emotions work within teaching and learning processes. In addition, this study pinpoints how emotional interactions between the participant and the technological environment of digital narration operates within the discipline of history, a discipline which for centuries has been marked by debates over how emotion should be managed or handled in productions (e.g., monographs, articles, feature films and documentaries) of the past. Most centrally,

this study factored in the extremely relevant use of historical imagery and technology with the resultant emotional experience had by participants.

As mentioned, previous studies focused on the role of teachers and their instructional implementation of digital narrative creation (Hammond & Manfra, 2009; Hofer & Swan, 2008; Hofer & Owings-Swan, 2005; Robin, 2008; Schuck & Kearney, 2005; Yow and Swan, 2009). Many of these studies employed TPCK or Technological – Pedagogical and Content – Knowledge (Mishra and Koelher, 2006) a theoretical framework that describes teaching as a complex integration of the instructor's content knowledge, pedagogical decisions and technological savvy. With the addition of technological knowledge to Shulman's (1987) original framework of pedagogical content knowledge, TPCK embodies all of the main components at work when an educator integrates digital storytelling into the classroom. While aimed at improving the quality of instruction when using digital storytelling, the student element remained unaddressed from this perspective. The study herein centers on the belief that in order to truly inform and improve instruction the experience of the student must be observed and evaluated in order to understand their experience of the learning process.

Moving Forward: Theory and Framework for the Inclusion of Emotional Factors in History Teaching and Learning

As I progressed through the process of data collection, I recognized an abundance and variety emotional responses as participants wove together visual and oral materials into a production of the past. The findings illuminated an emotional component deeply tied to students' engagement that previous research on digital narrative creation acknowledged, but left unexamined. I felt my data were well suited to fill the gap I saw accumulating in the body of research on digital narrative creation as an educational tool. This research found digital history narrative making an emotionally charged and engaging activity for the study's participants. I sought to understand what type of

emotions resulted from the participants' interaction with historical imagery and the technological task of fashioning a digital historical narrative. In addition, and perhaps more important, I wanted to document and understand how these emotions affected the history learning process.

To document and help interpret how emotion operated in participants' documentary making activities, I utilized the educational psychologist Scherer's (1982) component process definition of emotion, which allowed me to empirically verify my identification of participants' behaviors and statements as indicative of emotional experience. In addition, I relied on a varied body of work within educational psychology in order to further refine and describe the type and characteristics of the emotions experienced during digital history narrative creation. Pekrun (1992, 2002) provided the distinction of task-related achievement emotion as emotions that specifically resulted from the learning task of documentary production. Others (Ainely, 2007; Linnenbrink, 2007) helped to distinguish 'emotion' as a response to an immediate stimulus, such as a learning task like digital history narrative creation, rather than affective states such as mood or disposition that are longer in duration and often removed from a specific antecedent. Establishing a distinction between affective states and emotions allowed identification of a clear correlation between the achievement emotions experienced by the participants and achievement task of digital history narrative creation. Ainely (2007) and Linnenbrink (2007) also provided research on characteristics of achievement emotion, such as valance and activation that helped locate and establish connections between the task-related achievement emotions my participants experienced and motivation towards history learning.

Identification of specific experienced emotions enabled me to connect those emotions to motivation towards the ultimate completion of the digital history narrative project, and specific components of the task, such as participants' interaction with historical imagery and technology. The participants' experience of motivation towards

the task of digital history narrative creation and history learning took shape for me through the distinctive characteristics describing concepts such as 'flow' (Csikszentmihalyi, 1990) and detailed empirical definitions of engagement and motivation (Fredericks, Blumenfield and Paris, 2004; Heckhausen and Heckhausen, 1989; Meyer and Turner, 2006; Ryan and Deci, 2000 Shernoff, Csikszentmihalyi, Schneider and Shernoff, 2003; Vallerand, 1992). Readers of this study may well have familiarity with Csikszentmihalyi's (1990) "flow" which describes a state wherein an individual attains complete and thoroughgoing immersion in a task. Participants in a state of flow are highly motivated to complete a task and experience emotions such as joy as they work toward completing, for example, a painting or some other complicated project. While recognizing my participants' experienced "flow," while immersed with the documentary process, I found that other experimental and educational psychologists provided the conceptual frameworks I could employ to describe and explain the participants' emotions exhibited in the course of producing digital historical narratives. I turned to Pekrun (1992, 2006, 2007) and his Cognitive-Motivation model of achievement emotion as an example of how to connect the emerging categories of data. Using his model as support, I created a framework that connected the achievement emotions participants experienced during digital history narrative creation to observed motivation in the context of history learning.

Introduction to the Data Collection Processes

To conduct an empirically reliable and valid study I spent several weeks gathering data on emotions displayed by fourteen and fifteen year old 9th grade participants as they produced digital history narratives. Heeding the recommendations of Merriam (1998) to vary means of data collection, I employed mixed qualitative research methods. In ways similar to those employed by Gislason (2009), I combined participant interviews, whole class observation, think-aloud protocols (Ericsson and Simon, 1984, 1993), and document

analysis to obtain varied perspectives into participants' experiences of creating digital history narratives.

Whole class observations enabled me to assess the classroom environment and ascertain Mr. York's pedagogical assumptions and approaches, his relationships with students, as well as the classes' reaction to the teacher's introduction and implementation of the instructional unit on digital history narrative making. I observed students and listened as they "thought aloud" (Erikson and Simon, 1984, 1993) during the production process and revealed many emotional nuances of the experience. I conducted interviews with participants within one week of completion of their digital history narratives. The interviews yielded data on participants' emotional reactions to images and emotions surrounding decisions they made in the technological environment of digital history narrative creation. Documents collected included all handouts given to the participants from Mr. York in regard to instructions and grading for the project, as well as participant journals and final digital narrative products. Handouts from Mr. York allowed me to ascertain the extent to which the parameters for the project, as determined by the teacher, influenced participants' choices in the construction of their narratives. Participants' journals provided a source of secondary emotions or emotions about an event experienced after-the-fact, as participants thought back and reflected on the process and content of their digital narrative creations (McKay, Wood, and Brantley, 2007). The journal provided participants an opportunity to reflect on their experience with digital narrative creation privately, free from any feelings of anxiety that might have been present when participating in the concluding interviews.

As I observed, recorded, identified, conceptualized and categorized participants' emotional expressions, such as enjoyment and empathy, I recognized that students' motivation for producing documentaries as intrinsic to the task. The participants' utterances and behaviors indicated that extrinsic motivation, such as the teachers' requirement that they complete a documentary, did not figure into their motivation for

completing their digital history narratives. Literally hundreds of studies (e.g. Matsumoto and Sanders, 1988; Ryan & Deci, 2000 Seo, Barrett and Bartunek, 2004) documented that intrinsic motivation infused individuals with determination to complete tasks such as digital history making because they derive enjoyment from engagement with the task. Many of these same studies have shown that intrinsic motivation, as compared to extrinsic motivation, enabled children and adults to complete projects requiring sustained, longer-term commitment of time and energy. Successful education includes motivation. The motivational capabilities of any learning task hold relevance to history educators. While not discounting the existence of extrinsic motivation in the form of the grade Mr. York would administer for the completed digital history narratives, intrinsic motivation to engage in the task of digital history narrative creation presented more clearly in the data I gathered.

Research Setting and Participants

I entered Mr. York's secondary history classroom to observe and discuss the process of digital narrative creation over the course of the 2008-2009 academic year. While each activity of producing a digital history narrative obviously took place in rich overlapping social-historical contexts involving, for instance, twentieth century politics and culture, family relationships, social entertainments and so on, I restricted my study of emotions, imagery and digital narrative composition to the 9th grade American history classroom. As such, the significant feature of social context and time included the technology (Photo Story 3 documentary making software) and its operations, which participants manipulated to produce narratives. The context also included students and their dispositions, which affected their interactions with Photo Story 3 digital narrative making software, each other, and with the online archives and websites that housed the imagery and audio components of their digital narratives. As the center of participants' digital historical narratives, images constituted another essential part of the context. Not

to be forgotten, the teacher and his instructional techniques, in particular those pedagogical approaches he enacted from the time he assigned students the task of making a digital narrative until the students completed the project, rounded out the context of the participants' experiences.

The Research Site: Community, School and Classroom

Located in a suburb of a mid-sized urban center in the mid-western portion of the United States, the research site served students from both the city and nearby rural areas. At the time of this study, the suburban area recorded a population 32,172. The suburb contained predominantly Caucasian residents. Fewer than 3% of its residents were African-American, Hispanic or mixed racial background. In July 2008, the adjacent urban center reported a population of 126,396, with 3.7% of the population recorded as African-American, 1.7% Hispanic and 3.8% as other minority ethnic groups (Advameg, Inc., 2009). Classified as a traditional public high school, Westside High served 1697 students in grades 9-12 (Schumacher, 2008). The racial makeup of the school proved only slightly more diverse than the surrounding urban and suburban areas, with Caucasians representing 1531 of 1697 students, or about 90%, of the total student body. The male to female ratio was nearly equal with 838 males and 859 females. The school reported 13% of the student population received free and reduced lunch as of 10/30/2008, which was lower than the 15.4% for the surrounding school districts (Schumacher, 2008).

Student-Participants

A total of 14 participants participated in the study over the course of the 2008-2009 school year. All participants enrolled in the American history survey course as part of their school sanctioned requirements for freshmen. Each of the participants completed a digital history narrative as part of the course requirements and each self-selected to participate in the study with the consent of their parents. The participants were 14 and 15 years of age: six girls and eight boys. Thirteen of the participants were Caucasian and one

was Asian. Participants represented a variety of ability levels and interest in history. I included all participants willing to participate in the study.

The Instructor

The instructor, Mr. York, who integrated digital history narrative making into his United States history course, was a Caucasian male 28 years of age, in his fifth year of teaching secondary U.S. history. The teacher decided to implement this method of history teaching independent from and prior to the initiation of this study. Mr. York encountered both the concept of digital history narrative creation and Photo Story 3 software while pursuing his master's degree in social studies education. As an educator, Mr. York believed that digital history narrative creation represented a new way to include primary sources in history education and possibly get students excited about learning history. From the perspective of a student, Mr. York's encounter with digital history narrative creation revealed not only a way for a wider variety of his skills to be assessed, but also a way to deepen historical thinking. For Mr. York this experience validated the use of digital history narrative creation in his classroom.

Technological Environment: Photo Story 3

As noted above, Mr. York required students in the classes I observed to use Photo Story 3 to create their digital history narratives. Photo Story 3 allows an individual to upload images and then, through the program's operations, arrange those images and connect them through moving transitions. The creator of a Photo Story 3 narrative directs the eye of the viewer to the desired parts of their selected images through the focusing and panning capabilities of the software. The use of special effects, such as color manipulation, provides another tool for adding depth and meaning to the image and contributed to the story told by the collection of images. The addition of sound, whether dialogue or music, offers another layer to the story and elicits meaning and emotion from both the digital history maker and the viewer.

While simple, the technical operations of Photo Story 3 positioned the digital history narrative creator to make hundreds of decisions concerning which pictures to use, the order to arrange them, where to focus the viewers' eye and how long to keep it there. In this study, digital narrative creators made decisions about whether to use voiceover or music and where to place audio material in conjunction with the images chosen for the production. Moreover, the digital history narrative maker decided which special effects to apply to various images in order to generate a certain meaning.

Digital history narrative creators' first move involved locating images on the internet for potential use in the narrative. They typically began their search by simply typing in their topics, and eventually derivatives of their topics, into the popular search engine, Google. This strategy resulted in the participants' exploration of a variety of image archives including sites regarded by academic historians as reliable sources of documents, such as the Library of Congress and the National Archives and Records Administration. The participants read about the images during the search. Often, examination of the image and its origins led to ideas and questions that influenced both the immediate search for additional images as well as the overall theme of the narrative.

Following the selection of images the digital history narrative maker saved them to a computer file in order to then import them into the Photo Story 3's "storyboard." In the storyboard, images appeared in a "filmstrip" across the bottom of the computer screen. Having placed the images in the digital storyboard provided by the software, the participants could then easily move and rearrange them in the process of shaping the documentary.

The ease of this process enabled participants of this study to quickly generate many different forms of their narrative and to experiment with a range of meanings. In addition, the software's capacity to add motion within each image, as well as between images, presented participants with a host of decisions about how to guide the viewer's eye for interpretive purposes. Photo Story 3 also enabled participants to 'play back' parts

of the narrative as they might appear in the finished version. With this capability, the authors had a "feedback loop" for making judgments about how best to formulate their emerging representations of the past. This foreshadowing of narrative possibilities enabled participants to make multiple adjustments to their narrative during the process of its creation.

In sum, participants in this study operated in a technological environment, or context that allowed them to control a few simple, yet generative, operations. While using these operations to manipulate image order, sound-image juxtaposition and special effects, the participants of this study made hundreds of decisions that elicited many emotions in the course of making a digital history narrative. Subsequently, participants displayed increased levels of motivation towards history learning within the immediate context of this project.

Preview of Upcoming Chapters

What did students experience when creating a digital history narrative using Photo Story 3 software and historical images? This question instigated the collection and analysis of data presented in this study. As the study progressed, I isolated specific avenues of inquiry in relationship to the interaction of digital history narrative creation, emotion and motivation – how did digital history narrative creation evoke emotion in students, and how did the experience of emotion affect students' behavior in the context of history learning? I turned to theories of emotion and motivation from the educational psychology literature in order to frame my findings and shed light on current educational practices.

The following chapter explains how the research community defines emotion and describes the concept of achievement emotion within educational settings. The explanation of emotional concepts is accompanied by a brief explanation of motivational outcomes resulting from various achievement emotions. Scherer's work with the

physiological demonstration of emotion helped me identify and define participants' particular emotional responses to historical imagery exhibited in the process of digital narrative creation. The coming pages offer a detailed description of how these physiological responses were revealed by the participants of this study. I put forward an empirically informed discussion of the concepts of achievement emotion, engagement, and motivation within the concepts of current research on affect and motivation in learning. I also provide a thorough explanation of Pekrun's Cognitive-Motivational model and how it connects achievement emotion to motivation and overall learning. I discuss previous literature on history teaching and learning, as well as the treatment of emotion in that specific context, as relevant precursors to the findings and interpretations of the current study.

Chapter 3 provides detailed information on the steps taken during data gathering and interpretation. The use of qualitative mixed methods served specific data collection purposes unique to this study. Each method is described and linked to the data collected.

Chapter 4 describes the interaction between participants and the achievement task of digital history narrative creation, as exhibited by their emotional and motivational responses. I present evidence of emotions elicited during the narrative making process as recorded by my own observations and documented in participants' own words and actions. A detailed description of individual participants' experiences with digital history narrative creation accompanies my interpretation via an original framework. I provide support for this framework through Pekrun's the Cognitive-Motivational Model. I connected activating achievement emotions, both positive and negative, to achievement emotion and increased academic motivation.

The final chapter turned attention towards the relevance of the current findings and implications for future research related to the present study. The findings of the current study suggested that employing digital history narrative creation as a method for teaching history in the secondary classroom resulted in emotional experiences that

increased student engagement and motivation. Findings indicated that inclusion of emotional experiences provided potential enhancement of the learning process through increased student motivation. These findings offer powerful arguments for the central place of historical imagery in history teaching and learning. The findings also posed significant implications for an educational system slow to incorporate new instructional technologies and for the secondary history curriculum that has often avoided emotion as a threat to the objective study of history.

The individual findings presented in chapter 4 called for a more in-depth, focused investigation to further substantiate their application to other educational settings. Repeated investigations may probe further into students' interactions with historical imagery, or likewise, focus solely on the experience within the technological environment of creating a digital history narrative. I presented a discussion of future studies and the need for additional measurement tools, such as Facial Action Coding (Izard, 1971; Linnenbrink, 2007), or student self-monitoring measures, to be considered when one examines affective responses to learning.

As we move into the 21st century humanity continues to become more and more reliant upon digital technology and visual communication systems. The Iowa Department of Education acknowledged that today's students live in a "media-suffused environment" requiring technological literacy to be successful in the ever-emerging global environment; "technological literacy supports preparation of students as global citizens capable of self-directed learning…" (Iowa Core Curriculum, 2012). Rather than balk at these new avenues of communication, educators must incorporate educational methods that build upon (Palfrey and Gasser, 2008). The walls between the school and everyday life should become more permeable, with the skills and knowledge taught in one arena remaining applicable in the other. However, to incorporate new methodologies (technological or otherwise) into educational environments without proper investigation

into their outcomes is irresponsible. Educational research must keep pace with society's changes, and with emerging technological innovation in the classroom.

Emotions are an integral part of individual and collective daily experiences. The incorporation of advanced technology into the classroom allows students to experience emotional encounters with history content through image, motion picture and sound in ways that were not possible only 20 years ago. Rather than avoid emotional encounters, the research presented here provided an understanding of how emotion benefits students and the learning process. I argue that teachers should embrace the findings of this research and direct them toward more refined ways of teaching and learning history.

CHAPTER 2

HISTORICAL, THEORETICAL AND EMPERICAL FOUNDATIONS: EMOTIONAL FACTORS IN HISTORY LEARNING VIA DIGITAL HISTORY NARRATIVE CREATION

Introduction

This research found digital history narrative production to be an emotionally laden process for its participants. I observed the consistent presence of emotion throughout participants' interaction with both historical imagery and the technological process of creating a digital history narrative. I entered the research site with the intent to observe and record what students experienced when they created digital history narratives. Upon observing my participants' highly emotional responses, I sought to understand how this activity evoked emotion and how these emotions operated during the history learning process. Focusing data analysis on participants' emotions while they produced digital history narratives required an immersion in the literature of history teaching and learning, the use of technology and imagery in history teaching, and in the psychology of emotion and learning. I ultimately had to draw upon research and theory produced in the field of educational psychology for concepts and models to aid in my description of how emotions worked during participants' production of digital historical narratives. In addition, several other areas of scholarly inquiry, including history, history education, documentary making, technology and educational psychology, continually informed my thinking as I tried to comprehend how emotion and history production worked together in participants' construction of documentaries. In this chapter I explore these intriguing sets of scholarly intersections.

Emotion and Scholarly Literature

Of course it comes as no surprise that history arouses tremendous emotion. In the United States one needs only to think back to the politicized history wars of the 1990s.

Ignited by the 1994 release of the National History Standards historians actually appeared on national television to defend the standards they designed. Their defense was made on the grounds of diversity, especially as it pertained to and minority groups. Just as vigorous were opponents of the standards, who castigated their creators as distorting what they viewed as the largely positive trajectory for American history toward democracy and freedom (Nash, Dunn and Crabtree, 1997). In other countries, too, history has aroused tremendous emotion: Koreans insisting the Japanese provide compensation for "comfort women"; Armenians demanding that the Turks' acknowledge their role in perpetrating genocide against them; Greeks expressions of resentment against fascist occupations during World War II. There are obviously many more examples of everyday emotional investments in past events and developments within the United States, as well as within and between many nations.

Academic historians, too, recognize the power of emotions in positioning their readers to engage their analytical approaches to the past. Historians often hooked and sustained readers' attention by beginning or pock marking monographs or articles with emotionally laden scenarios. For example, Branch's (2009) first sentence from the first page of Chapter 1, volume three (*At Canaan's Edge*), of his multi-volume biography of Martin Luther King, Jr.: "*Terror* approached Loundes County through the school system" (p. 7 italics added). The reader cannot help but respond to the emotional states, not the least of which include curiosity and fear, ignited by the word '*terror*'. Intellectual historian Burrow (2007), noted that some historians, including the 19th century historical Thomas Carlyle, believed linear, analytical history devoid of emotion inevitably distorted the past. Citing the case of mob violence in the French Revolution mob, Carlyle preferred to use emotionally charged words to capture mass emotion including, "hunger and hatred, suspicion and rumour."

In her book *Why History Matters: Life and Thought* (1997), Gerda Lerner believed that the placement of pictures in photo albums, and many other forms of history

production as ways of making history and creating of meaning from artifacts. Such activities were key to making history more meaningful and emotionally relevant. She argued that historians need to understand that such everyday kind of history making represented emotional connections to the past. In speaking to other academic historians she wrote: "Without relaxing our standards of accuracy and our commitment to scholarship, we must accept that there are many roads to historical understanding. We must be open to the ways in which people now relate to the past, and we must reach out to communicate with them at their level" (p. 124).

Although prominent historians such as Lerner called her colleagues' attention to the importance of connecting emotions and human beings to "everyday" historical activity, academic history has remained wedded to a highly analytical approach to the past. Appearing in a very different form in secondary schools, history teachers have typically embraced what they perceived as an "objective" approach to the past (Barton, 2008). For many teachers, objectivity translated into teaching practices that focus on recall and that convey the past as a prescribed narrative not open to debate or interpretation (Peck, Carla, 2005).

While still dominated by textbook driven history and memorization of narrative and facts, there has been a new emphasis on students' use of historical methods for producing the past. While there have been other important contributors to this tendency (e.g., Bass, 2003; Bransford, Brown, and Cocking, 2000; Perkins, 2003; Seixas, 1998, VanSledright, 2002), Wineburg, has been at the forefront of teaching history according to the standards undergirding the work of professional historians. In Wineburg's (2001) words: ". . . where should our standards for [teaching history] come from? To me, there is only one defensible answer: We must look to the discipline" (p. 81). Wineburg further argued teachers should present to students primary sources upon which they would exercise the "historical thinking skills" of analysis, interpretation, assessment of bias and perspective in sources, and synthesis skills expressed in a number of national and state

standards documents, (2001, National Council for the Social Studies, 2010; National Council for History in the Schools, 1991; Iowa Core Curriculum, 2010).

Wineburg and other prominent scholars in history education (e.g., Seixas, 1993; VanSledright, 2002) have helped move a significant number of elementary and secondary history teachers toward requiring students to analyze and interpret sources with an eye toward objective analysis and interpretation of productions of the past. While advocating an approach to history teaching that emphasizes the objective analysis of sources, history empathy and avoidance of presentism, this approach to history teaching and learning has sought to have teachers and students distance emotional responses to, and projections of, emotions in the processes of investigating and interpreting history.

Ironically, teachers' deployment of primary sources, (movie clips, photos, oral history testimony et. al) actually invites students to "care" about the lives of men and women from times in the recent or distant past. History teachers provoke feelings about cruel natural disasters and a man-made depression that sent tens of thousands of desperate Americans west to California to the 1930s. The images captured by Dorothea Lange and Arthur Rothstein enable students to identify with human misery and hope. Barton and Levstik (2004) observed: "We [history teachers] cannot interest students in the study of history – something they enjoy outside of school but often despise within it – if we reject their cares and concerns or if we dismiss their feelings" (p.).

Wineburg, too, recognized the role of emotion in helping to "advance historical understanding" (2001, p. 250). Working with high school history students, Wineburg (2001) captured the relationship between emotion and the ability to understand and connect to the past through the words of a student who stated less emotion and more objectivity in the study of history "…would dampen me because I wouldn't be able to relate as much…" (p.236). Wineburg concluded that passion for history and empathy with people and events certainly played an important part in the work of professional historians and therefore bore relevance on the manner in which educators and students

engaged in history learning. Empathy with historical figures and events opens a door for students to relate to historical figures and events, increasing their overall engagement with history learning (Brenneman, 2001; Cunningham, 2007). Barton reports that students enjoy learning about historical topics when they are charged with emotion and the potential for debate (Barton, 2008).

Within the discussion of emotion and history, scholars have investigated the efficacy of various forms of teaching that might productively harness students' "natural" emotional responses to historical material. Researchers have reported upon various types of encounters with the past fostered by emotional reactions that have increased interest in history learning. Thelen and Rozenzweig's (1998) path breaking study of how "ordinary" people felt about and consumed history discovered that it was often tied to genealogy and family reunions. Although most people recall school history teaching as dull and boring, they nevertheless like exchanging family stories, watching historical films and documentaries, and visiting museums and battle sites.

It is within this rich tapestry of scholarly discussion and research concerning history and emotion that this dissertation finds its place. With its focus upon emotions that secondary high school history students demonstrated while making digital historical narratives, the project contributes to understanding how joy, frustration, and other emotions worked in the participants' task of weaving primary sources presented in visual, aural and written forms into an interpretation of the past. Pinning down, as it were, the precise emotions document making elicits, scholars and teaches can better assess whether, why (for what purposes) and how they might integrate or further integrate documentary making into their history curriculum.

Digital History Narrative Creation in the Classroom

Emerging in the late 1990s with the availability of documentary making software and online archives, digital history narratives researchers investigate how teachers

employ, and how students produce documentary productions. The most prominent research approach to historical documentary making reflects the work of Wineburg and other scholars whose approach to the teaching and learning of history is tied to objective or academic renderings of the past. Although most researchers have observed and commented on students' emotional displays while making documentaries, this is the first research effort that analyzes and interprets data on emotion demonstrated through digital history narrative making **(**Benmayor, 2008; Coventry, 2008; Felton, 1999, 2009; Hull & Katz, 2006; Oppermann, 2008; Robin, 2008; Sadik, 2008; Swan and Hofer, 2007).

Working in the influential tradition established by Wineburg, Hofer and Swan (2006, 2007, 2008) studied digital narrative making as an instructional method that refines students' academic or scholarly approaches to historical material. These history education scholars tended to frame their research in terms of whether, and to what extent, digital narrative making worked to help students become more analytical, rather than emotionally involved, in the face of evocative imagery from the past. One of several studies on digital narrative creation found that classroom implementation of digital history narrative creation, "challenged [students] to deeply research, understand and represent content knowledge in dynamic and creative ways" (Hofer and Swan, 2008, p. 196).

At the tertiary level of history instruction, faculty involved with the "Visible Knowledge Project" describe how they used new media methods to teach the knowledge generating practices of historians. (Coventry, Felton, Jaffee, O'Leary and Weis, 2006). In the first of several articles resulting from the Visible Knowledge Project, Coventry et al. (2006) discusses how digital narrative creation required students to exercise historian's skills, while also providing "innovative opportunities for expression of historical understanding." They found digital narrative creation required students to exercise tried-and-true, domain-specific historical practices, (e.g., close analysis and disciplined interpretation). In addition, digital narrative creation generated opportunities

for students to compare their audio-visual representations with written versions of the past. This comparative approach allowed students to deepen their understanding of history as a construction, whether produced in written or audiovisual forms (Coventry et al., 2006; Jaffee, 2006).

Subsequent articles by each scholar closely examined how new media pushed students to develop "visual arguments," as they applied historian's skills to images and sound. They discovered visual histories supported instructional goals for writing, while enabling students to appreciate the unique history making properties of historical documentaries. As was the case with *writing* historical narratives, these professors that found visual essay production helped students understand that every primary source has been created with purpose and intention, and how such sources must be viewed skeptically and interpreted in conjunction with other sources.

By producing visual histories, students begin to question the comprehensive ability of writing in representing historical knowledge. Furthermore, digital history narrative creation encourages students to shape and disrupt earlier understandings of past events and developments. By experimenting with image and sound combinations, they deepen their comprehension of how history is constructed. Students also recognize that those who had struggled or thrived before them had felt emotions and commitments (Coventry et al., 2006).

Though focused on the historical practices used by students when encountering historical images via media, Felton's (2009) findings offered evidence of students' powerful emotional responses to imagery encountered in the process of digital storytelling. Commenting on the increased amount of engagement or interest that students conveyed in the participant matter, Felton (2009) described the difference that occurred when students read text about an historical event, such as the lynching of African-Americans, versus handling historical imagery on the same topic:

> Many of my students, for example, would read with discomfort but detachment about lynching, but the same students experienced overwhelming emotions when viewing photographs of lynching. As a teacher, I do not want to cause my students emotional distress, but I do want them to engage deeply with the past. I also repeatedly observed how strong emotional reactions provoked some students to make significant strides in their historical thinking. Rather than turning away from the image, these students became passionate about learning (p. 8).

In a classroom based study, Schul (2010) described how a talented secondary school high school history teacher used digital narrative creation to deepen Advanced Placement history students' understanding of historical method. The teacher fostered in students productive "tensions" as they sought to solve problems presented by both historical content and digital narrative creation software. By framing his research approach in terms of Cultural Historical Activity Theory, Schul found that his participants intended to infuse emotion into their productions. They also possessed a sense of their audience, and acted to impress their classmates, by making image and music combinations designed to emotionally involve fellow students.

Neither Swan and Hofer, nor Schul, nor those scholars associated with the Visual Knowledge Project, focused upon how particular student emotions worked during the construction of digital history narratives. This study found that students' emotional investments in digital history narrative creation, as well as emotions elicited by historical material they encountered, were central to understanding how history learning.

Repeated observations of emotional responses accompanied by vivid accounts of the power of emotion in history learning, such as the one described by Felton above, support the importance of a more concentrated effort to understand the impact of emotional experiences on learning. The current study represents such an undertaking. My investigation of educational research needed to expand in order to help me understand how emotion, motivation and cognition interacted in the learning process that occurs via digital history narrative creation.

Fortunately, much work has been done on the topic of how emotions work in various learning activities and settings (Ainley, Hidi, & Berndorff, 2002; Linnenbrink & Pintrich, 2002; Schutz & Davis, 2000; Schutz, Hong, Cross & Osbon, 2006). This growing body of scholarship offers several possibilities for the investigation of emotion in the process of history teaching and learning via digital history narrative production. As the following section makes clear, I drew heavily from educational psychology research and associated theory to describe and explain how emotion experienced during the creation of digital history narratives worked to increase student motivation towards history learning.

Emotion and the Process of Learning

As noted at the outset of Chapter 1, I observed the consistent presence of an emotional component during the participants' process of creating digital history narratives. The participants in the study were *interested* in and *enjoyed* working with the technological facets project. They experienced *pride* in and *anxiety* about the reactions of a perceived audience. They reacted with *sadness, interest, empathy* and *joy* to the historical images they encountered. Earlier in this chapter I discussed the debate on the productivity of emotion within the confines of history teaching and learning. Data presented herein do indeed add to that debate. However, to explain the data generated through digital history production, I needed a more refined and thorough understanding of emotion and the extent to which emotion worked in various learning activities or settings. For this I turned to literature from the domain of educational psychology. Researchers in educational psychology provided theory and concepts that enabled the analysis and interpretation of data. In the sub-sections that follow I provided a refined discussion of how these researchers positioned me to reveal and describe the ways in which emotion worked in participants' construction of digital historical narratives and thereby, history learning.

Defining Emotion

> Everyone knows what an emotion is, until asked to give a definition.
>
> Fehr & Russell, 1984

What is emotion? How do we know when we see it in another human being? Initial attempts to increase my understanding of the relationship between emotion and learning began with the need to establish a clear perception of how the research community identified emotion when observing participants in a research setting. I searched for previous research to help validate whether observable behaviors that I witnessed qualified as emotion from an objective, empirical perspective. I drew from the work of Scherer (1982, 2005) and his component process definition of emotion, which detail the ways in which a human simultaneously experiences and expresses emotion.

As early as 1982, the concept of emotion as a process was described by Scherer as involving several different subsystems. This component process definition of emotion explained the relationship between five organismic subsystems and emotional functions, offering insight into the role of emotion in cognition, motivation, as well as motor responses to emotional experience (see Table 1). The component process definition of emotion formally refers to emotion as "an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event…" (Scherer, 2005, p. 697). Simply put, an emotional episode consists of the combined states/behaviors of the five components described in Table 1 as they dynamically change in conjunction with one another in response to stimuli.

People experience emotions through physical changes, which they then reflect to the outside world through verbal, facial and posture. Furthermore, the experience of emotion affects the way we think, make decisions, and our level of interest or motivation in a given situation.

Table 1: Relationships between organismic subsystems and the functions and components of emotion (Scherer, 2005)

Emotion Function	Organismic Subsystem and Major Substrata	Emotion Component
Evaluation of objects and events	Information Processing (CNS)	Cognitive component (appraisal)
System regulation	Support (CNS, NES, ANS)	Neurophysiological component (bodily symptoms)
Preparation and direction of action	Executive (CNS)	Motivational component (action tendencies)
Communication of reaction and behavioral intention	Action (SNS	Motor expression component (facial and vocal expression)
Monitoring of internal state and organism-environment interaction	Monitor (CNS)	Subjective Feeling component (emotional experience)

Note: CNS = central nervous system; NES = neuro-endocrine system; ANS = autonomic nervous system; SNS = somatic nervous system.

The five components of emotion include facial/vocal expression, subjective feeling and neurophysiological changes, such as an increased rate of respiration (Scherer, 2005). The addition of motivational and cognitive/information processing components of emotion help to explain the role of emotion in human decision. Consideration for all the components outlined by Scherer's definition helped to clarify how emotion was observed and recognized in the participants of this study.

Scherer's (1982, 2005) definition of emotion rests on the provision of defining what behaviors constitute an emotional response from the participants involved in the current research. Four aspects of Scherer's component definition validated the label of emotion applied to the behavioral data collected in this study: appraisal, motor

expression, motivation and subjective feeling. Based on these components, I felt justified in the classification of the various comments, vocalizations, facial expressions and body language witnessed in my participants as indicative of an emotional experience.

Various authors in the field, including Ainley (2007) and Linnenbrink (2007), enabled me to further narrow the concept of emotion by providing a timeframe in which affective responses are judged to result from the immediate experience. General agreement has resulted in the distinction of emotion as an affective response that is shorter in duration and linked to specific stimuli (Fredrickson, 2001; Schutz, Hong, Cross & Osbon, 2006). Such an understanding of the concept resulted from the painstaking work of previous research efforts to distinguish between various affective experiences. The relative terms of 'emotion', 'mood' and 'disposition' demanded clarification. While researchers working in the field of affect in learning employed various terms, I found that for the most part, agreement existed on the general nature of these concepts based on antecedent, duration and intensity. This rendered my data distinct from wider ranging emotional responses that might have reflected confounding variables such as a fight in the cafeteria, rather than a direct response to the phenomenon of digital history narrative creation.

Relevant Types and Characteristics of Emotion

Having established what constituted as emotion within a research context, I began to search the literature for findings that would help me further ascertain how emotion worked in the learning process of digital history narrative creation. In doing so, I alighted upon the concept of 'achievement emotions.' This concept helped me analyze and separate data from any observed or reported emotional experiences that participants had in relationship to something other than digital narrative creation or the images encountered during said process.

As noted above, research in educational psychology separated 'emotion' from concepts such as mood and disposition based on the relatively short duration of emotional response and its link to a specific trigger or stimulus. Pekrun, who also applied a component processing definition of emotion drawn from Scherer, and Heckhausen provided the additional classification of achievement emotion (2007; 1991).

The concept of 'achievement emotion' refers to emotions "tied directly to achievement activities or achievement outcomes" (Pekrun, 2007, p. 15). In this study, the concept of activity or task related achievement emotion refers to participants' emotional responses to historical imagery, as well as emotions experienced in response to the technological tasks involved in creating a digital history narrative. Emotions such as concern or anxiety about audience interpretation received the classification of activity or task related rather than outcome related because the perception of a viewing audience is considered to be a unique component within the task of digital history narrative creation. The distinction of 'achievement emotion' is important to note as the classroom is laced with emotions resulting from social interactions. Socially derived emotional experiences represent a separate phenomenon of affect in the classroom, irrelevant to the emerging focus of this study to understand the emotions elicited by the learning task of digital history narrative creation. As extraneous data, they were eliminated from analysis.

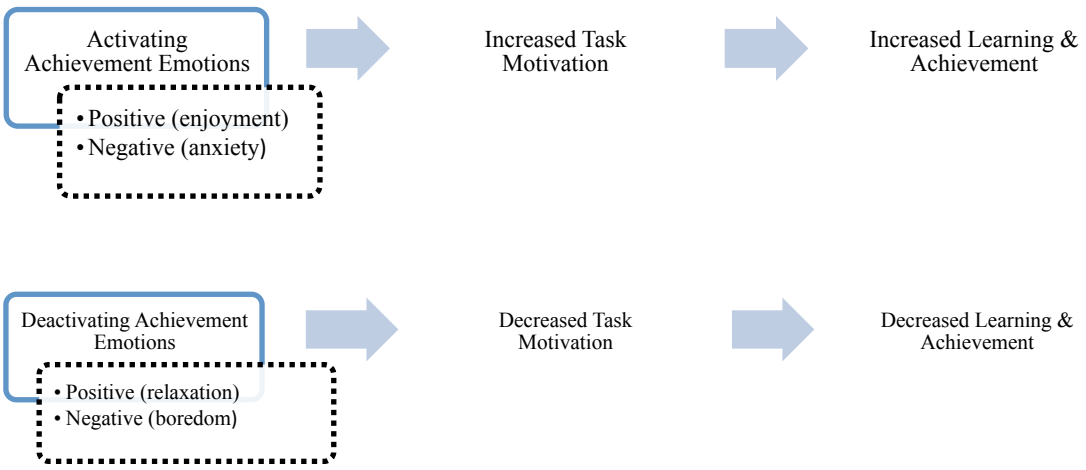
Having established an empirically verified operational definition of the emotional phenomenon I witnessed in the space of digital history narrative creation, I then looked further into the educational psychology research for conceptual help categorizing specific emotions and on behavior, particularly, task related behavior. Ainley (2007) and Linnenbrink (2007) provided conceptual help to describe emotions along two separate continuums relative to a task: activation and valence. These two researchers described emotions in terms of their qualitative valence, (positive or negative) and their tendency to stimulate or stifle activity in a person. Both characteristics of task related achievement

emotion held significance for this study's analysis and interpretation of emotion and motivation in history learning.

An important characteristic of achievement emotions acknowledges the degree to which the achievement emotion can be characterized as positive or negative (Pekrun, et al, 2007; Scherer, 2005). Additionally, one must also consider whether the achievement emotion experienced *activates* or *deactivates* important learning behaviors, such as focus and perseverance. Achievement emotions, like interest or enjoyment, activate an individual, provoking "arousal, mobilization, and energy" (Linnenbrink, 2007, pg. 108). Other achievement emotions, such as boredom and depression, deactivate, resulting in disengagement from the activity at hand.

The relationship between achievement emotion and motivation is complicated. Both the valence and activation characteristics of an achievement emotion must be evaluated when investigating the effect of achievement emotion on motivation. Neglecting to consider the characteristic of activation as separate from valence, early work on the relationship between emotion and motivation supported the logical assumption that negative emotions counter the benefits of positive emotions, reducing motivation towards the task at hand (Pekrun, 1992). Negative emotions, such as boredom or anxiety may also result in *negative* motivation, which translates into increased motivation and drive to avoid the task at hand and potentially, other similar tasks in the future. Later studies, viewing valence and activation as separate characteristics of achievement emotion, offered conflicting results as to the motivational effects of negative emotions like anxiety. Such studies suggested these emotions though negative, also contained the ability to activate and, therefore, resulted in an increased commitment of time and effort towards the success of the task (Linnenbrink, 2007; Pekrun, Frenzel, A., Goetz, T. & Perry, R., 2007). In fact, certain positive achievement emotions, such as relaxation, can also have detrimental effects on motivation to complete a task (Pekrun et al., 2002). Figure 1 reveals how both positive and negative achievement emotions might

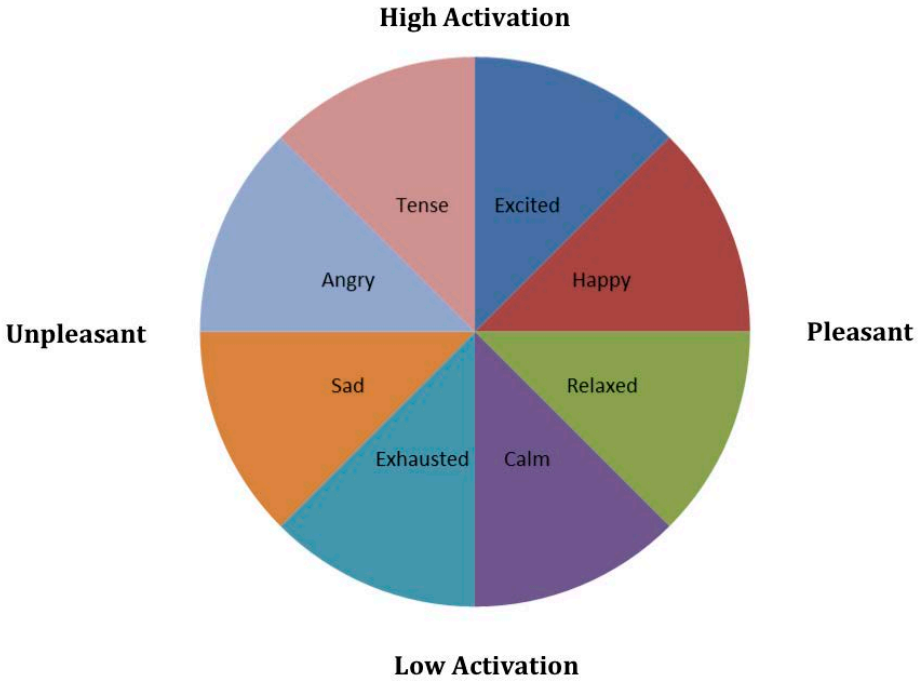
Figure 1: Contrasting effects of positive/negative and activating/deactivating achievement emotions on motivation



activate or deactivate behavior and thereby, effect motivation to learn. Based on this understanding, the characteristic of activation supersedes the characteristic of valence when determining the effect of an achievement emotion on motivation.

Other researchers have helped establish empirically based designations of valence and activation characteristics in individual achievement emotions. Barrett and Russell (1998, 1999) presented an affective circumplex in which a range of positive and negative achievement emotions correlated with both activated and deactivated states resulting in categories like 'activated pleasant', 'deactivated pleasant', 'activated unpleasant' and 'deactivated unpleasant' (see Figure 2). The model reflects integrated possibilities of various emotional experiences within an educational context. Linnenbrink (2007) concurs with the circumplex model arguing, for instance, that the negative achievement emotions of anger and tension produce more intense engagement with achievement activities just as the positive achievement emotions of excitement and happiness generate.

Figure 2: Affective circumplex (adapted from Barrett & Russell, 1998 and Linnenbrink, 2007)



To repeat, the current study adopted this model of labeling of participants' emotional reactions to digital history narrative creation. Consideration for relationships between both positive and negative achievement emotions and the level of activation or engagement with an achievement task refined how emotion works to increase or decrease students' motivation to complete a project. Pekrun (2007) offered a similar model combining positive/negative valence and activation vs. deactivation with the addition of object focus in order to classify a range of achievement emotions in a three-dimensional taxonomy (see Table 2). It is important to note that while Table 2 represents examples of activating/deactivating and positive/negative relationships as they occur in conjunction with activities and outcomes, certain emotions are not tied to only an activity or outcome focus. In Chapter 4 of this study, for example, participants' achievement emotions are

Table 2: Pekrun's (2007) three-dimensional taxonomy of achievement emotion

	Positive		Negative	
	Activating	**Deactivating**	**Activating**	**Deactivating**
Activity Focus	Enjoyment	Relaxation	Anger Frustration	Boredom
Outcome Focus	Joy Hope Pride Gratitude	Contentment Relief	Anxiety Shame Anger	Sadness Disappointment Hopelessness

categorized as task related, in addition to the identification of valence and level of activation.

As previously noted, activating achievement emotions have come to inhabit a research space distinctly connected to the concepts of engagement and motivation. The important role played by engagement in student learning has been documented by the work of Fredricks, Blumenfeld, and Paris (2004), Newmann (1992), and Steinberg, Brown, and Dornbusch (1996). Educational researchers have recognized engagement as a state in which students exhibit "concentration, interest, and enjoyment" (Shernoff, et. al, 2003, p. 158). This description of engagement is closely related to the concept of flow described by Csikszentmihali (1997) whose work notes the simultaneous experience of interest, enjoyment and concentration from participation in a particular activity.

The categorization of engagement as containing interest, enjoyment and concentration corresponded with additional research that describes engagement as a multifaceted concept broken down into behavioral engagement (concentration), emotional engagement (enjoyment) and cognitive engagement (interest) (Fredricks et. al, 2004). In the study, participants were recognized as being engaged with the achievement

task of digital history narrative creation when exhibiting concentration in the form of body language and attention to the project as opposed to other classmates and non-relevant websites. Time spent completing the project, particularly outside of designated class time, also indicated interest. I observed enjoyment, smiling, laughing and positive declarations about the achievement task of digital history narrative creation and its various elements. Seen as the opposite of boredom, engagement doubled as an achievement emotion experienced in and of itself (Shernoff, 2003). In the study presented here, engagement, alongside the above mentioned examples of interest and enjoyment, was indeed recognized as one of the achievement emotions that participants experienced in relation to the achievement task of digital history narrative creation and in conjunction with the historical imagery they encountered as part of that achievement task.

Some researchers have placed engagement in the position of the precursor to motivation in learning, while others have regarded the two terms as synonymous (Fredricks, et. al, 2004). For the purposes of this study, engagement and motivation inhabited separate spaces, though often having reciprocal effects on one another and exhibited through similar words and actions of the participants. The best example of such an overlap is how to interpret the amount of time participants spent on their digital history narratives. In this study, the use of personal time was indicative of engagement with the activity, as well as motivation towards its completion. Engagement, seen here as an achievement emotion, acts to enhance or increase the motivation towards digital history narrative completion.

The characterization of engagement as emotion received support from Ford's Motivational Systems Theory (1992) in which he described the foundation of motivation as a combination of personal goals, agency and emotional arousal, further stating that the emotional arousal component helps determine the particular action an individual will take. Due to the almost inextricable relationship between emotions, like interest and engagement and motivation, researchers such as Maehr (2001) called for a push to

investigate "the role of emotions in motivation" (p. 184). Supporting such research focus, the findings of multiple studies combining psychological concepts and neurobiology point to emotion as a central factor in motivation (Damasio, 1994; Forgas, 1995; Isen, 2000) and as well as an influence on cognition and behavior (Haidt, 2000; Izard, 1993, 2009). Researchers have responded by taking a more integrated approach to investigations of emotion, motivation and cognition in learning (Meyer and Turner, 2006). This study followed that example and acknowledged that, while addressing achievement emotions such as engagement as a separate concept from emotion, participant data at times, simultaneously represented the emotionality of participants' experiences as well as their level of motivation towards the task at hand.

In this study, engagement represents one example of emotional arousal that can affect the motivation to create a digital history narrative. In turn, motivation is a factor tied to increase overall learning (Pekrun, 2002). Izard (2009) strengthens the connection between emotion and motivation by describing emotions as "cue-producing" or as that which "provides information relevant to cognition and *action*" [italics added] (p. 5; Izard, 1971). Indeed various researchers have affirmed the role of emotion as informative in human decision making and action (Clore, Gasper and Garvin, 2001; Ford, 1992; Frijda, 1988; Ortony & Turner, 1990; Schwarz & Clore, 1983).

This study adopted the perspective on emotion as information with the power to influence the decisions participants made about the content of their digital history narrative, and about the time and effort put into the learning process via completion of their digital history narrative project. Data from the current study, (presented in Chapter 4), illuminated connections between achievement emotions and motivation towards history learning as experienced in the context of the achievement task of digital history narrative creation. To fully describe how achievement emotion worked in participants' productions, I drew upon Pekrun's (1992) Cognitive-Motivation Model, which connected the various concepts of achievement emotions with their respective levels of activation

and valence, to motivation in a way meaningful to educational researchers and practitioners alike.

Connecting the Pieces: The Cognitive-Motivational Model of Achievement Emotion

In an effort to expand research beyond the effects of singular emotions like test anxiety on learning and achievement, Pekrun (1992) advanced a preliminary theory that accounted for how a wide range of achievement emotions affected student learning. Named for what were thought to be mediating factors between emotion and learning, the cognitive-motivational model outlines the connection between an achievement task, activity-related achievement emotion experienced during said task, and subsequent evidence of motivation towards learning (Pekrun et al., 2002; Pekrun, 2007). The level of motivation is, then, positively correlated to the level of overall learning (Pekrun et al., 2002).

Such a model supports what the data in this study reveals about how emotions elicited by creating digital history narratives impacted the motivation of students in the history classroom. This study focuses on connections between digital history narrative creation, the experience of specific activity related achievement emotions and the resulting motivation towards task completion. The added implication, as posited by Pekrun's model, that with increased motivation, overall learning increases as well is suggested for investigation in future studies.

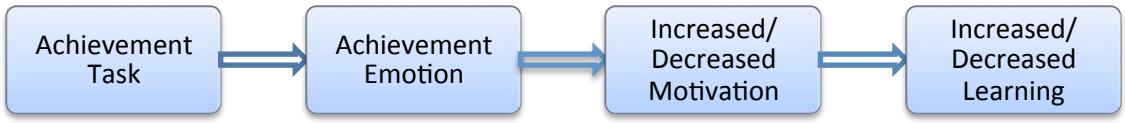
In studying how achievement emotions in general affect learning, Pekrun and his colleagues relied on cumulative grades and final exam scores, as well as course completion and graduation rates. The findings of Pekrun and his colleagues confirmed the anticipated positive correlations between the above measures and students' experience of positive/activating achievement emotions, as well as negative/activating emotions (2002). These data support the importance of emotion in learning and reinforce

the relevance of emotion's activating or motivating qualities, as highlighted in the current study. In addition, Pekrun's (2002) research found that negative/deactivating achievement emotions, such as boredom and hopelessness, were reliable predictors for dropping out of a course and out of school all together.

Pekrun and his colleagues specifically suggest that cognition and motivation act as mediating factors between achievement emotions and a student's learning and achievement. The foundation for Pekrun's work can still be found within Scherer's component process definition of emotion, but adjusted to show that each emotion specifically, and categories of emotions generally, influence two major factors of learning and achievement: motivation and cognition. Cognitive mediators between achievement emotion and overall learning and achievement include the storage and retrieval of information (memory), information processing strategies, and attention. Positive/activating and some negative/activating achievement emotions correlated positively with task-relevant thinking, and the use of flexible, creative thinking modes such as elaboration, critical analysis, organizational techniques and use of metacognitive strategies (Pekrun et. al., 2002).

While noteworthy and certainly deserving of further attention, these cognitive mechanisms only represent one of two mediators between achievement emotion and learning identified by Pekrun. I focused on the aspect of motivation as a central issue in student engagement in history teaching and learning. The general relationship between achievement task, achievement emotion, motivation and learning, as envisioned in Pekrun's (1992) cognitive motivational model, is depicted in Figure 3, and lays out a relatively simple cause and effect sequence with emotion as the antecedent to various levels of motivation, learning and achievement. Using self-reported efforts as a measure of motivation, research has been able to show a positive correlation between positive/activating and negative/activating achievement emotions and task motivation (Pekrun et al., 2002).

Figure 3: Original representation of the relationship between achievement task, achievement emotion, motivation and learning with motivation as a mediating factor, as described by Pekrun (1992, 2002, 2007). Note the concept of cognition is not included.



Pekrun also collected participant self-reports on effort and time spent on the achievement task and added data from observed effort and time on task. Taking into account the activating nature and the valence of each potential emotion experienced by students in response to specific stimuli, such as an historical image, complicates the relationship between emotion, motivation and learning (see Table 3). Data analysis provided in chapter 4 bore the weight of such distinctions in an effort to fully divulge how specific achievement emotions impact motivation and learning when creating digital history narratives. Pekrun's cognitive motivation model provided much of that bridge. Pekrun's model boasted several instantiations, none of which perfectly met the desired structure for a heuristic for interpreting data presented in Chapter 4, but parts of which provided the framework that tied the findings of achievement emotion to increased motivation and a conclusion that support the use of digital history narrative creation in the history classroom.

Pekrun (1992, 2006, 2007) specifically identified achievement or task-related emotions as those that stem directly from a certain task as the starting point in his model. This demonstrated that the emotions the motivational outcomes experienced originated from the task of digital history narrative creation, rather than from what happened in say, the hallways that day.

Table 3: Original representation of the relationship between positive/negative emotions, increased/decreased motivation and increased/decreased learning

Emotional Valence and Degree of Activation	Motivation Level	Learning and Achievement
+/ activating emotions	Increased motivation	Increased learning
+/deactivating emotions	Decreased motivation	Decreased learning
-/activating emotions	Increased motivation	Increased learning
-/deactivating emotions	Decreased motivation	Decreased learning

I employed this sequencing in the analysis of my own data, identifying two specific tasks within digital history narrative creation from which participants' emotional encounters originated. Pekrun (2007) also noted that achievement emotions bore valence and activation potential, allowing the model to work well with the categories of Ainley (2007) and Linnenbrink (2007). Furthermore, the cognitive-motivational model also linked achievement emotion to motivation and overall learning (Pekrun et al., 2002; Pekrun, 1992, 2006, 2007). Ultimately, the final stage of original figures I provide in Chapter 4 reveal that the achievement task in question, namely digital history narrative creation, resulted in both positive and negative achievement emotions that increased motivation toward the achievement task.

Summary

The combined effect of technology integration and the embrace of emotion as part of the learning process provided the context for the current investigation into emerging instructional methods in the history classroom. The bodies of research on digital narrative creation as a method for integrating technology in the classroom, and emotion

as an influence on motivation and learning converge in the research findings presented here. By specifically focusing upon participants' emotional responses as they created digital history narratives, I assessed the types of emotion evoked by digital history narrative making and the effects of these emotions on the participants' behavior in the form of motivation towards the task. This illuminated on the role of emotion in learning, while also filling a gap in current research on digital narrative creation in history teaching and learning, which previously focused on cognitive processes. The findings presented here further inform the research on history teaching and learning as it relates to how technology and students' emotions may best be used to enhance the learning process.

Using Scherer's (2005) component process definition enabled me to operationally define emotion as the phenomenon I observed in participants of this study. A large body of educational psychology research has identified the types and characteristics of emotion at work in educational settings, helping me as I determined activity related achievement emotion with attention to differing valence and activating potentialities to be categories within the phenomenon of achievement emotion (Ainely, 2007; Forgas, 2000; Heckhausen, 1991; Linnenbrink, 2007; Pekrun, 2007; Rosenberg, 1998; Scherer, 2005; Schutz, Hong, Cross & Osbon, 2006; Schwarz & Clore, 1996; Schwarz, 1990). Additional research supported the way this study viewed task-related achievement emotion as an influence on motivation (Clore et al. 2001; Izard, 1971, 2009; Frijda, 1988; Ford, 1992; Ortony & Turner, 1990; Schwarz & Clore, 1983). Finally, Pekrun's cognitive-motivational model provided a useful model for explaining precisely how the achievement emotions experienced by participants translated into observable motivation. The following chapter provides a detailed description of methods used for the collection and analysis of data for the current study.

CHAPTER 3
METHODS AND INTERPRETIVE FRAMEWORK: EMOTIONAL FACTORS IN HISTORY LEARNING VIA DIGITAL HISTORY NARRATIVE CREATION

Introduction

As established in the previous chapter, history, including documentary production has powerful emotional features. Those who have studied filmmaking and movie productions have documented how moviemakers develop emotional attachments to the participant matter of the films they produce or direct (Plantinga and Smith, 1999). These emotions included those elicited when filmmakers encounter images or sound – a powerful iconic image from the Vietnam War, for example, or a song that evokes feelings. Filmmakers also experience frustration, enjoyment, pride and other emotions associated with the technical difficulties encountered while making all varieties of film.

This held true with the participants of this study - 9th graders composing digital history narratives in the academic space of the secondary classroom. I entered the research site to observe and describe what students experience as they create digital history narratives. Upon answering my initial question, I sought to pinpoint the exact qualities of digital history narrative creation that were responsible for participants' emotional reactions, as well as how those emotions affected their behavior in the educational context.

I found that 14 and 15 year old digital history narrative creators, working within the context of a 9th grade history class, experienced a range of achievement emotions in response to both the imagery they encountered and the process of constructing a digital narrative from those images. How did this study unearth participants' emotional experiences as they constructed their digital history narratives? What methods were employed to pinpoint, identify, classify and describe various achievement emotions at

work in the course of participants' digital history narrative creation? How were achievement emotions demonstrated by participants identified and recorded? This chapter provides the answers to these methodological questions. I provide a description of how I applied a framework supported by theoretical models to identify and describe the emotions observed in participants, connect these emotional experiences to specific components of digital history narrative creation, and then, to explain how emotion affected participants' behavior. First, however, I will detail the rationale for my research approach, and explain and describe the chosen research site and sample population. I will discuss methods of data collection and analysis, as well as my efforts to ensure the trustworthiness of my results. I also discuss the research ethics informing my study. A conclusion offers a brief summary of the methods used and how they resulted in the findings discussed in the following chapter.

Research Approach

I entered the research site to observe fourteen student-participants as they used Photo Story 3 software to fashion images and sound into representations of an historical event or period. As many qualitative researchers have discerned (e.g. Erickson, 2011; Goetz and LeCompte, 1984), and theorists have noted (Erickson, 1986; Glaser and Strauss, 1967; Sherman and Webb, 1988; Strauss and Corbin, 1990;), research at sites with complicated social dynamics yield unexpected observations. I did not enter the research site intent on studying emotion, only to observe the interaction between student and task in the hopes of capturing an emic description of the process. Early in my investigation of 9th grade participants' history learning process via digital history narrative creation, I repeatedly observed significant displays of emotion. In a seemingly reciprocal exchange, historical imagery evoked emotional responses that then drove the understanding and thematic structure of the visual history participants created. Emotions appeared to inform students' decisions about the inclusion of visual and aural sources,

and the use of juxtopositioning and editing effects employed within their emerging compositions. Likewise, participants experienced task-related achievement emotions as a result of the unique technological context of digital history narrative creation. Equally important to the task of history educators, emotion played a further role in the level of motivation and commitment participants displayed to the project as a whole.

Qualitative researchers (e.g. Erickson, 2011; Goetz and LeCompte, 1984) seek to understand how individuals make meaning from their experiences. In this study, that refers to participants located in the context of a secondary history classroom engaged with the achievement task of creating a digital history narrative relating their interpretation of an historical topic to a perceived audience. As an observer, I attempted not only to identify and describe participants meaning making focusing on how emotion worked in the process, but to understand historical meaning making from the vantage point or experiences of history learners making documentaries.

Merriam (1998) described qualitative research as that which "focuses on meaning in context" (p.1). Employing qualitative methods allowed me to study the phenomenon of history learning via digital history narrative creation within a secondary history classroom imparting little influence or disruption ensuring that the results provided authentic description of the instructional and learning experiences. In alignment with the interpretive orientation of qualitative design, I sought to understand the student lived experience of creating a digital history narrative as it occurred naturally in the school setting rather than enter the research setting with a presumed outcome (Merriam, 1998).

Wanting to observe the phenomenon as it occurred meant I did not enter the research setting with preconceived notions or anticipated research outcomes. Similarly, the theoretical framework that ultimately supported my data analysis was not present at the outset of this study, but rather emerged during data collection and analysis. Qualitative research is, by nature, inductive, working to "build toward theory from observations and intuitive understandings gained in the field" (Merriam, 1998, p. 7). As

a research effort generating a grounded theory, the study presented here illuminated the practice of digital history narrative creation as enacted in authentic classroom settings, a perspective lacking in the current body of research on the topic (Hofer & Owings Swan, 2005). The fact that I examined 14 individual experiences of the same phenomenon, moreover cohered with Glaser and Strauss' (1967) discussion on the inclusion of multiple observed incidents when conducting the grounded theory approach to qualitative research. Grounded theory refers to the process of forming a framework or theory based on a collection of data, fitting, or describing that data set perfectly (Glaser & Strauss, 1967). The result of my data analysis is a framework emergent from the data itself, and capable of explaining that data and its detailed interactions.

Research Setting and Sample

I conducted this study at a suburban public high school located in the Midwest region of the United States. In the interest of participant anonymity, I will refer to the school as Westside High throughout this manuscript. The school serves 1697 students (grades 9-12) from both the suburban area in which it was directly located and a nearby urban area. I selected this school because digital history narrative creation was already being added to the curriculum in one of the courses in American history.

The use of the only classroom in the school engaged in digital history narrative creation categorized the initial sample population as a "convenience sample" (Patton, 1990). Within the number of students enrolled in the course, actual participants self-selected through their individual willingness to participate after consent was given by their parents. From the 14 total participants, I conducted think-aloud observations with 6 participants. Drawing from his prior experience with the participants, the teacher participant, Mr. York, selected the six participants that he felt represented an array of interests and academic abilities (Patton, 1990). The attempt to include such an assortment of student interest and abilities was intended to secure a level of transferability of data

findings to similar student populations. Additionally, Mr. York purposefully selected the six students whom he believed would engage in think-aloud observations (e.g., Wineburg, 2001) – participants' verbalizations provided to me concerning what they were doing and why during the process of constructing a documentary. This final step in participant selection represents a selection bias addressed in the final chapter of this manuscript.

The teacher participant, Mr. York, was a Caucasian male 28 years of age, in his fifth year of teaching secondary U.S. history. Of his own volition, Mr. York's chose to implement this new method of history teaching. His decision preceded the initiation of this study. Mr. York encountered both the concept of digital history narrative creation and the Photo Story 3 software in the course of pursuing his master's degree in social studies education. In May 2008, Mr. York's enrolled in a course titled "Vietnam War on Film," wherein the professor focused upon the Vietnam War using filmic representations. The course required students to create their own digital history narrative using the Photo Story 3 computer software. It was during this course, in which I also enrolled, that I became acquainted with Mr. York and learned of his plans to include digital history narrative creation into his own secondary history classroom.

Mr. York described his own instructional style as largely "inquiry based" and implemented digital narrative creation in line with his views of effective teaching. This meant, at a minimum, offering students primary sources and having them analyze and interpret them. Already practiced in using primary documents, Photo Story 3 offered Mr. York a new way to use these sources in his classroom. Mr. York stated that his decision to use digital history narrative creation in his teaching resulted partially from his own experience of "really needing to understand the content" in order to tell, in his case, a warranted audiovisual history of the Vietnam War (Interview, May 21, 2009). For him, this experience validated the method as a productive learning tool, rather than just a fun alternative to written history. As a student, Mr. York *enjoyed* being assessed in a manner

that "allowed me to use other skills of mine than writing" and wanted to explore the option for his own students' learning experience with history (interview, 5/21/09).

During the fall of 2008 I pursued and received approval from the Institutional Review Board at the University of Iowa (Appendix A) to conduct study of Mr. York and his classroom, including selected students. Having obtained the principal's and the school district's permission to conduct the study, I began to discuss the study's schedule and methods. Mr. York and I agreed that the classroom project and the opportunity to participate in the study would be introduced to the students one week before the project actually began. On the Monday, one week before the project began, Mr. York briefly introduced the idea of creating a digital history narrative to the students and gave them the name of the software (Photo Story 3) - encouraging them to look at it before the project would begin the following week. At that point, I explained the open-ended purpose of my research and the requirements for those who chose to participate. I distributed consent forms (Appendix A) and asked the students to look them over with their parents. I requested that the students return the consent forms to Mr. York regardless of their decision about participation, by Friday of the same week.

The first round of the study took place in December 2008 with eight students and their parents consenting to participate in the study. In the second round of the study (May, 2009), six students, along with their parents, consented to participate in the study. Both rounds of data collection spanned three class periods of Westside High's daily block schedule. This allowed me the opportunity to work with one student one-on-one each class period. All of the participants were high school freshman between 14 and 15 years of age at the time of the study. Six participants were female and eight were male; one Asian and 13 Caucasian.

Mr. York and I gave participants in the study the same instructions for their digital history narrative projects as the students who did not participate. We also agreed that participants should not be required extra work in comparison to the rest of the

student's in Mr. York's classes. In addition to the digital history narrative, Mr. York assigned a one to two paragraph essay to function as a companion piece, explaining the thesis of their digital history narrative and how they attempted to achieve it. Participants in the study completed a "digital history narrative journal" (Appendix B). The journal contained structured questions for the participants' to respond to as they completed their digital history narratives and replaced Mr. York's two-paragraph essay assignment.

Disappointed with the students' responses to the open ended essay, Mr. York adapted the digital history narrative journal I used with study participants and created a response packet that he assigned to future students completing the digital history narrative project (Appendix B). Mr. York designed the packet to capture the same data that the digital history narrative journal did, so I adopted its use during the second round of data collection. This allowed for even greater consistency of experience between the participants and the non-participating students also completing digital history narrative projects. All students, study participants and non-participants, received the same instructions from Mr. York with the addition of a grading rubric in the second round of data collection (Appendix C). All students and study participants used the same computer program (Photo Story 3) as the medium with which they would construct their digital history narratives.

Mr. York based his choice of Photo Story 3 movie making software for three reasons: familiarity, ease and cost. Mr. York's prior experience with the computer program during his graduate coursework gave him confidence in both using the software himself and facilitating his students' use of the program. Having used the program before, Mr. York determined that the program would allow his students the opportunity to create visually impressive digital history narratives without being so complex that the technical aspects of the project would overwhelm learning objectives involved in the interpretation and analysis of historical imagery.

The ability to download Photo Story 3 from the Internet for free was important too. Mr. York wanted his students to complete their projects during class time. In order to accomplish this, Mr. York needed to get the proper software downloaded onto the computers in the lab of Westside High. Being able to do so for no additional cost to the school made the approval process smoother. Additionally, the program's availability and lack of cost enabled students to work at home if they chose to do so. For these reasons, Mr. York felt it would be most manageable if all students used Photo Story 3 and only Photo Story 3.

The Technological Environment: Photo Story 3

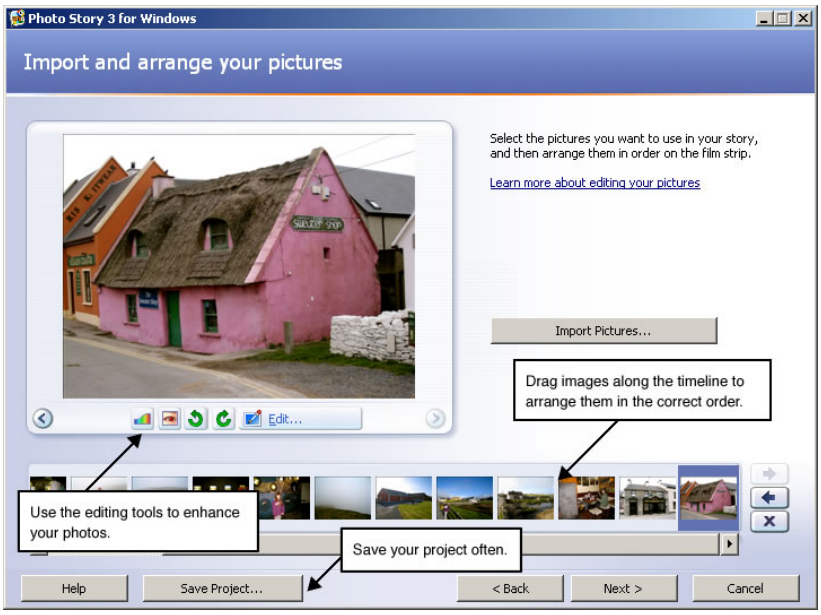
Participants participating in the study were charged with the task of creating a digital history narrative on an historical topic as a requirement of their 9th grade American history course. Such a task required the use of computer software capable of allowing the participants to upload, modify and arrange both images and audio selections. Photo Story 3 provided the proper balance of technological capabilities and user ease to facilitate digital history narrative creation in a secondary history classroom. Throughout the process of using Photo Story 3, the participants displayed emotions in conjunction with both the content and the process of creating a digital history narrative. The participants' interaction with this software provided a portion of the emotional experiences that became my data.

Photo Story 3 was first made available to the public by the Microsoft Corporation in 2005. Intended for personal use, the program allows the user to import, arrange and edit images, as well as pair music, narration, typed captions and motion with the viewing of the images. While the program allowed users to add movement to still images, motion picture clips cannot be imported into the program. In some instances, this aspect of the program may be viewed as a limitation, but it is well suited to the purposes of this research project, because it places the burden of decision-making in the process of

narrative construction fully on the students by not allowing them to select or use sequences of images created by someone else.

Photo Story 3 required the user to create meaning through the editing and placement of the images they have chosen, as well as the pairing of images and sound. The software provided the user with a digital storyboard wherein images are imported and then rearranged by clicking and dragging the image back and forth along the story board strip (see Figure 4). Users may alter the sequence of images at any point during the development of the digital history narrative, allowing for continued evaluation of the meanings created in the iterative process of aligning and re-aligning images.

Figure 4: Computer screen image of the import and arranging function in Photo Story 3. Retrieved from: http://scavengerguides.com/creating-a-digital-story/creating-a-digital-story-with-photo-story-3/



Although Photo Story 3 allowed the user to add narration and or textual captions, Mr. York asked all students to focus on communicating their message visually rather than

verbally. Participants' choices of images as well as the editing capabilities of the software enabled them to convey meaning without relying on text. The capacity of the program to manipulate the viewers' focus both within an image and between images offered the opportunity to create visual emphases that worked to fashion meaning. This helped the user to create a digital history narrative that communicated their unique perspective rather than just a series of still images. The editing options such as motion, adjustable color levels and cropping available in Photo Story 3 offered additional tools to communicate the creator's interpretation of both the individual images and their collective meaning. The program's capability for audio additions allowed the participants to not only cluster images, but also align images with music, resulting in a highly personalized and multi-dimensional digital representation of history.

As the participants engaged in this complex process of image selection and narrative construction, I determined to join them in their experiences and see the projects through to fruition. I needed to gain an understanding of what the participants thought and felt as they encountered and moved through the unique achievement task of digital history narrative creation. Such an understanding required a cross-case analysis that included a variety of data collection procedures allowing for different views of the participants' interactions and experiences with digital history narrative creation.

Design for Cross-Case Analysis

As with most qualitative researchers, I was particularly concerned with understanding the details of the dynamic interactions between my participants and the phenomenon of interest, digital history narrative creation, and I sought to uncover those details by observing individual participants in great depth (Hussey and Hussey, 1997). I began by seeking the answer to the question, what do students experience when they create digital history narratives? Entering into a classroom setting allowed me to observe every aspect of the process with 14 individual students, or cases, gathering data that

would answer that initial question and the subsequent query of why, that is commonly answered by looking at case studies (Yin, 1994). The experience of each of these 14 students represents a case of the phenomenon of digital history narrative creation. It is not uncommon for qualitative researchers to work with a small number of cases when each case entails the consideration of multiple facets (Creswell, 1998). The examination of individual cases within a research setting is especially appropriate in situations where the researcher exercises little to no control, as in my investigation of digital history narrative creation in Mr. York's classroom (Yin, 1994). My decision to examine multiple cases of student interaction with digital history narrative creation is further substantiated by the fact that when comparing individual cases of the same phenomenon, the findings bear additional validity and generalizability, or credibility and transferability, as more commonly termed in qualitative research (Merriam, 1998; Miles and Huberman, 1994; Yin, 1994). Credibility is enhanced through achieving redundancy within the total data set, while transferability is increased when the findings represent data gathered from multiple, differing participants experiencing the same phenomenon (Merriam, 1998). Participants in this study represent both genders, and differing levels of interest and ability in United States history, increasing the variety of students that their experiences with digital history narrative creation might be similar to.

There are multiple strategies for analyzing and comparing data from individual cases in the qualitative investigation of a single phenomenon. The cases examined in this study are bound by time and activity (Stake, 1995), and illuminate the outcomes of the relatively new educational intervention of digital history narrative creation, making them exploratory (Yin, 1994). I chose to approach the data by looking for patterns in participant experiences (Yin, 1994). By constantly comparing data from discrete cases I identified common themes across participant experience. More specifically, I used the data gathered from multiple cases of student interaction with digital history narrative creation to develop a descriptive framework for explaining the relationship between

components of digital history narrative creation and my participants' resulting behaviors (Miles & Huberman, 1994; Stake, 1995; Yin, 1994). Themes emerged throughout data collection and analysis, preventing the interpretation of data from becoming deductive. This method resulted in themes, categories and subcategories of data changing and evolving throughout the study.

Data Collection Procedures

In this study, I employed triangulated methods of data collection: semi-structured interviews, non-participant observation, think-aloud observation and document analysis, as advocated by Merriam (1998). Incorporating a variety of data sources increased the information gathered in both quantity and perspective (Smith and Kleine, 1986). Additionally, working with multiple sources of data functioned as a way to check the authenticity of my interpretations of the data, and to enhance the internal validity or credibility and reliability of the study, not only through correlation of data, but through open discussion of inconsistencies (Mathison, 1988).

Each method captured unique elements of the participants' experience. Through the use of observations and interviews, I gathered data relevant to the observed display of emotions as the participants created their digital history narratives. With these methods I also gathered data on the participants' own interpretation of the experience and the emotions they felt. Subsequent analysis of the participants' process journals corroborated my interpretations of observations, and provided additional information about students' thoughts and emotions as they reflected on their experiences. I used think-aloud protocols to ascertain the interaction between the participants' emotions and their decisions while constructing their digital history narratives answering the question, how did emotions experienced by the participants in this study influence the history learning process via the construction of their digital history narratives?

The implementation of the various data collection methods took place in a linear fashion in conjunction with the progression of the participants' experience with digital history narrative creation in each of the two rounds of data collection. For example, non-participant observation took place prior to both rounds of data collection in order to collect data on the research site's characteristics - Mr. York's teaching style, and the general dynamic between Mr. York and his students. I conducted think-aloud protocols during the process of the participants' digital history narrative creation and took interviews with participants to garner their reflections on the process. I collected documents, including images, journals and completed digital history narratives, throughout the duration of the study.

All of the participants in this study were given the option of not allowing me to make audio recordings of their think-aloud observations or interviews. All participants, however, agreed to be recorded. Data collected during this study were stored in a locked cabinet in my office. I informed all participants that I assigned pseudonyms to them in the narrative of my dissertation.

Classroom Observations

As stated, for this study I engaged in two separate rounds of data collection during the 2008-2009 school year. Preceding each round of study, I visited the research site and conducted a full day of classroom observation. Each of these observations took place approximately one week before the onset of data collection and included all three of Mr. York's American history class periods. Mr. York's classes ran on a block schedule, meaning that each class period met for 80 minutes every other day. As the focus of my inquiry was not the student-teacher dynamic or even Mr. York's teaching style, but rather participants' interaction with digital history narrative creation as a history learning mechanism, I felt one full day of observation prior to each round of data collection was sufficient to ascertain the general dynamic of Mr. York's classroom.

The purpose of the initial classroom observations was twofold. I wanted to gain knowledge of the context in which my participants would experience the new history teaching method, digital history narrative creation. I recorded both the physical setting and as well as the body language and comments of the students and Mr. York. Digital history narrative creation requires active learning on the part of the student and encourages the creator to openly share ideas and interpretations in a creative fashion. I wanted to gain the sense of whether these requirements of digital history narrative creation were out of the ordinary for students in Mr. York's classes, and whether the classroom environment encouraged students to feel comfortable engaging in such tasks. Substantiation of observational interpretations took place during interviews with both student participants and the participating teacher, Mr. York.

These initial observations took place on the same day that Mr. York introduced the digital history narrative project to his students. I observed students' initial reactions to both viewing a digital history narrative using historical images as well as the notion of creating their own. During the last 15 minutes of the observations I took on the role of observer participant in the fashion described by Merriam (1998) as one whose "activities are known to the group" (p. 101). My primary role remained as an observer though I did interact with potential participants at the end of the observations when Mr. York and I explained the research I was conducting and distributed the consent forms for individual participation in the study. To remain as unobtrusive as possible, I sat off to the side of the class and took notes with pen and paper. I did not interact with the students until I explained the purpose and process of my research. I dressed casually in accordance with the attire of Mr. York so I did not stand out in any way.

Think-Aloud Protocols

Following the initial classroom observations I conducted one-on-one think-aloud protocols with individual participants. Erikson and Simon (1984) identified think-aloud

protocols as a valid method of gathering direct representations of a participant's cognitive processes. My protocols gathered data that, upon analysis, focused on emotions experienced by participants, and how these emotions directed action within the creation of a digital history narrative (Izard, 2009). Also referred to as verbal report protocols, think-aloud protocols have been widely used to investigate cognitive processes within the domain of cognitive psychology (Erikson and Simon, 1984; 1993). As a data collection method, think-aloud protocols involve participants verbalizing their thoughts and feelings as they completed a task (concurrent), as used in the study described here, or immediately after the task has been completed (retrospective) (Ericsson & Simon, 1984). This method allowed me to observe and record the participants' interaction with digital history narrative creation.

I completed a total of 13 think-aloud observations with six different participants. Think-aloud protocols could not be conducted with all 14 of the study's participants due to the nature of data collection method in which an individual participant verbalized their thoughts to me while other participants worked on their digital history narratives during the same class period. Consequently, Mr. York selected one participant from each of the three class periods to participate in the think-aloud protocols during each round of data collection. Mr. York provided all of his students with three 80-minute class periods to conduct research on their chosen history topic and create their digital narrative. This included looking for images and sound to construct their digital history narrative. During the first round of data collection, I completed three think-aloud protocols with 'Billy' and 'Bob', and two think-aloud protocols with 'Sophie'. The second round of data collection consisted of two think-aloud protocols with 'Jane' and 'Paige', and one think-aloud protocol with 'Ellen'. Each protocol lasted the entire 80-minute period during which the participants performed research and created their digital history narratives.

The think-aloud protocols took place in the computer lab at Westside High within the context of Mr. York's respective American history classes. While all the students

worked on their digital history narratives, one participant and I sat in the back corner of the lab as far from the other students as space permitted. I walked with each of the participants involved in one-on-one think-aloud protocols from Mr. York's classroom to the lab, a few minutes after the rest of the class. During the walk to the computer lab I reintroduced myself and explained that I needed them to talk me through what they did and why they did it as they made their digital history narratives. I reassured the participants that they were not being judged or graded in anyway with the information I collected. I also re-informed them that I assigned pseudonyms that would be used in this manuscript and any publications derived from it. After the initial think-aloud observation, the participants and I often engaged in casual conversation about activities they were involved in during the walk between the classroom and the computer lab. These conversations developed naturally and added to the rapport between my participants and myself.

Once in the computer lab I asked the particular participant if they had any questions. I explained that I would be taking notes as well as making an audio recording of the protocol. I informed the participant that if at any time they were uncomfortable with being recorded I would stop; this did not occur. Most of the participants had difficulty vocalizing their thoughts as they worked on their digital history narratives. If a participant remained silent for an extended period of time, I offered general prompts such as, "What are you thinking/feeling?", "Why did you do that?", or "Why did you make that choice?" Similarly, when participants expressed what they were thinking I occasionally requested further explanation. For example if a participant professed to like a particular image or editing capability of the program I probed for evidence to explain why. If a participant stated a photo made them feel a certain way, again I asked for further explanation.

In addition to the participants' vocalized thoughts, I manually recorded their body language and facial expressions as they reacted to the images on the computer screen and

the exercise of creating their narrative. When a participant demonstrated a reaction to a particular image or a function of the program, I made a note of that connection. When a reaction was evident, I prompted participants to explain what they were think/feeling in order to inform my own observations and interpretations. Daily reflection on these data in particular revealed the sheer quantity of emotional experiences taking place. The importance of emotion in my participants' experiences with digital history narrative creation emerged. I later clarified that the various body language and comments I collected in this manner fit well with Scherer's component process definition of emotion, making said definition an excellent model for identifying individual data units as expression of emotion.

Participants often desired my opinion on image selections and the construction of their narratives. This challenged my research-based decision to stay as unobtrusive as possible. As a former teacher, I naturally wanted to help the participants when they had questions, but as a researcher I politely responded that I couldn't be involved in their projects in that manner.

Interviews

For each round of data collection I conducted semi-structured interviews following the participants' completion of their digital history narrative projects. While I could only conduct think-aloud observations with three students per round of data collection, I carried out interviews with all participants. In total this resulted in 14 interviews, eight in the first round of data collection and six in the second round. I held the interviews in the privacy of one of Westside High's study lounges with one participant at a time. Interviews took place during Mr. York's class time and lasted between 8 and 25 minutes. I also interviewed Mr. York at the end of each round of data collection. I conducted and recorded the first interview in Mr. York's classroom. The second interview was done via e-mail in order to accommodate conflicting schedules.

I completed all the interviews with high school aged participants within a week of the individual participants' completion of their project. As with the think-aloud protocols, participants were again informed of the purpose of the research and their freedom to stop participating at any time. I again explained that I would be taking notes as well as making an audio recording of the interview. I gave participants the opportunity to object to being recorded, which none did. I also reminded the participants that they would remain anonymous through the use of pseudonyms (Bogdan and Bilken, 2003).

I asked all eight high school participants from the first round of data collection the same interview protocol questions (Appendix D). The interview began with general questions about the participants' attitude toward history and history classes, and then proceeded to questions that required the participants to specifically reflect upon both the process of creating a digital history narrative and using historical images and sounds rather than words. Devised and implemented as a semi-structured interview, the sessions included many follow up questions that either sought to propel participants to better explain their initial answers, or to expand upon a line of thought introduced by a participant's responses to my original questions (Merriam, 1998). In addition, I expanded upon the original interview questions between the first and second rounds of data collection in order to include two items that inquired whether participants felt as though they learned through this type of activity (Appendix D).

As previously stated, interviews conducted with Mr. York took place following each round of data collection. I held the first interview in the privacy of Mr. York's classroom during his end of the day preparation period. During the interview I took notes and made an audio recording for the 25-minute duration. Similar to the high school aged participants, I informed Mr. York of his option to refuse recording of the session or to end participation at any time. Mr. York also knew of my intention to use pseudonyms in any writing or publications pertaining to this research. The protocol used with Mr. York during the first interview included questions intended to elicit his overall teaching style or

methodology as well as what he hoped his students learned from his course (Appendix D). In addition, there were questions that addressed his interpretation of how different methodologies, including digital history narrative creation, affect students' learning and engagement.

The second interview with Mr. York took place after the second round of data collection. Due to the fact that this fell during the last few weeks of the secondary school year, Mr. York and I decided that it would best accommodate his schedule if I simply e-mailed him the protocol and allowed him to send an e-mail response. This mode of communication worked well, providing Mr. York the ability to answer the questions when convenient for him within the timeframe that I needed the information. The second protocol differed from the first as it consisted of fewer questions and addressed instructional changes he made between the first and second attempts at implementing digital history narrative creation. I also inquired about his perception of student learning and engagement during the process (Appendix D).

Informal conversations with Mr. York often took place before or after my interactions with the student participants. These exchanges typically consisted of Mr. York's ongoing evaluation of all his students' progress, interest/engagement and performance (relative to his expectations) while making their digital history narratives. Mr. York expressed self-evaluative comments as well, noting if he thought his students might have benefitted from additional or varied instructions. This sometimes included him voicing his intentions for instructional changes during subsequent use of digital history narrative creation as a teaching method in his classroom.

Document Collection

I collected various documents from both the high school aged participants and the teacher participant during both rounds of data collection. Participating students in my research contributed two main documents. Documents from the first round of data

collection included the participants' digital history narrative journals (Appendix B) and copies of their completed digital history narratives.

During the second round of data collection I replaced the digital history narrative journal with a packet Mr. York adapted from my original digital history narrative journal (Appendix B). In both instances the journal and the packet required the participants to reflect on the choices that they made during the construction of their digital history narrative. The participants explained in writing why they chose certain images, why they ordered them in the way they did (juxtapositioning), why they added motion or special effects and why they chose the music they did. For my research purposes, the journal/packet acted as a supplement to both the think-aloud protocols and the interviews because they had the potential to capture both the participant's decision-making process and their reflection upon it.

Following the completion of the projects, Mr. York made photocopies of the participants' journals or packets (depending on the round of data collection) keeping one for himself for grading purposes and giving the other to me for my research. One participant saved his completed digital history narrative to a disk and gave it to me while Mr. York emailed additional completed narratives. Finally, I saved the remaining narratives onto a portable flash drive during the final interview with the participant.

Mr. York contributed the instructions given to participants involved in both the second and first rounds of data collection as well as the more detailed rubric he gave to the second round participants (Appendix C). These documents informed me of the instructional parameters that potentially influenced participants' experience with digital history narrative creation.

Data Analysis and Synthesis

Phase I: Informal Analysis

I entered into the classroom of Westside High propelled by curiosity. I wanted to capture the emic understanding of the task. In the spirit of inductive research, I entered into the process of data collection and the subsequent analysis without preconceived hypotheses that I was trying to test. Rather, I sought to observe the unique process of digital history narrative creation in the hopes of gaining insight on how such teaching and learning methods affected students' experiences in secondary social studies education.

From the first day I entered Westside High, I wrote down everything. Positioned unobtrusively to the side of the teacher's desk, I noted interactions between the teacher and individual students, as well as the teacher and the whole class. I recorded and transcribed think-aloud observations of students' thoughts and decisions as they created their digital narratives. I also took notes during these sessions pertaining to body posture, nonverbal communication and the content of the images that students gathered. Following the completion of the project, I interviewed all participants. Interpretation of the data began in conjunction with its collection, as I informally noted my thoughts about participants' decisions and reactions. I recorded these initial interpretations as part of my field notes during observations and think-aloud protocols in the interest of the greatest accuracy of my refined analysis once removed from the research site in both time and space (Bogdan & Bilken, 1992; Merriam, 1998).

Typically, I either wrote my ruminations in a different color from the notes recording participants' thoughts and actions or I simply put my thoughts in the margins of the paper. Following individual observations or protocols, I wrote down brief summaries of my general interpretations of the session for later review. In addition, at the end of spending a day at the research site, I recorded my collected thoughts from the day into a digital voice recorder as I drove home. This allowed me to immediately document not

only the thoughts I had from individual sessions, but the connections and differences I saw emerging between them. I also maintained a journal in which I continually documented my interpretations of data, potential categories, and questions as they evolved.

From the onset of data collection, I spent time reviewing the data in my possession, searching for similarities and differences between participants' experiences with digital history narrative creation. As a qualitative investigation, I viewed each participant as an individual case of student interaction with the phenomenon of digital history narrative creation. By comparing these cases, I hoped to identify themes that would reveal the educational value of digital history narrative creation (Yin, 1994). This task involved reading and re-reading the interviews and observation notes countless times (Merriam, 1998).

Phase II: Open Coding of Data

The first level of data coding entailed creating a system by which I could later quickly identify the various categories of data within my field notes, interview transcripts and collected documents (Merriam, 1998). Because I undertook this study from an inductive standpoint, I did not have predetermined categories by which I sought to sort my raw data. My initial intent dealt with understanding the student experience of creating digital history narratives and how those experiences affect their learning process. In this interest, I began first with the reading and re-reading of both my field notes and interview transcripts, identifying behavior and commentary that occurred in responses to the experience of creating digital history narratives. Using simple asterisks, I noted participants' body language and remarks that indicated an interaction, any interaction, between the participant and the process of creating their digital history narratives. This made it much quicker to identify relevant data units during the process of analysis (Reid, 1992).

This phase of the process focused on data collected from the high school participants as I deemed that most relevant at early stages of analysis and coding. I analyzed data collected from the teacher, Mr. York, separately and then compared it to the rest of the data during the final stages of analysis. Upon more extensive data analysis, I noted that information on instructional decisions and guidelines became secondary to the investigative efforts. Mr. York served the purpose of providing greater understanding of the experimental setting and, at times, corroborated my interpretation of the participants' experiences with digital history narrative creation, and the observed levels of engagement with the achievement task.

During this phase of data analysis called open coding, I struggled to identify what I deemed to be evidence of digital history narrative creation's purpose in the classroom. Ultimately, I realized I had been disregarding the relationships that dominated the data set. I realized that maybe I had entered the research site with a bias, not towards my own experience of digital history narrative creation as a fun, engaging new way to learn history, but rather, against such a finding. I had hoped to stumble upon something in the students' reactions that would lead to the conclusion that digital history narrative creation was a justifiable teaching method, but somewhere along the way I rejected the idea of affective data having value. I realized that I had lumped in my own affective experience with digital history narrative creation with notion of subjectivity, rejecting their potential implications about the phenomenon. I admitted to myself that subconsciously I had been looking through my data searching for evidence of cognitive processes, historical thinking skills or something of that nature - anything but emotion. I considered the data measures I could have used, such as a pre- and post-test assessment that would allow me to measure a change in content knowledge, or historical analysis, or a way to formally document analysis of images as primary documents.

My obsession with validating the cognitive aspects of digital history narrative creation almost killed the project. I returned to the data once again this time truly letting

the data inform me rather than trying to mold the data into a preconceived notion of valuable learning activities based on cognitive processes alone. I gave in to the data. Suddenly the connections between cases were innumerable.

Phase III: Formation of Categories

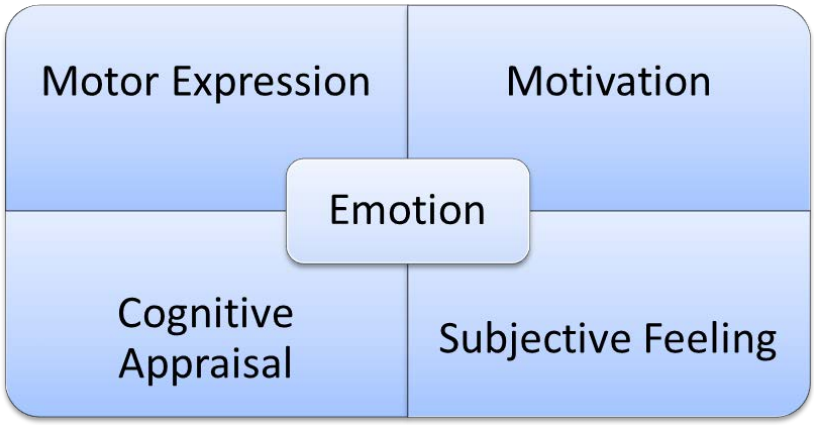
When deriving theory from data, utilizing the methodology termed "grounded theory", one begins by identifying categories within the data (Glaser & Strauss, 1967; Merriam, 1998). Categories essentially represent themes within the data, while subcategories characterize dimensions of a category (Merriam, 1998; Taylor and Bogdan, 1984). In general, I noted an overwhelming emotional response to the task of digital history narrative creation. The emotions might not have all been the same, or evident at the same point in the process, but the experience of emotion as a result of engaging with the phenomenon of digital history narrative creation was universal among my participants. I had labeled by first category.

Affective Response

Following my return to the analysis of the data, it became clear that a variety of responses and behaviors collected in the data fell under the umbrella category of affective response. The participants' reactions possessed an emotional quality instantly recognizable. Having identified this initial pattern in the data across participants, I reviewed the educational psychology literature to substantiate my interpretation of the participants' responses. I located the component process definition of emotion that previously established the physiological, behavioral, and cognitive experiences observable in the event of feeling an emotion (Scherer, 2005). Using this definition supported my identification of body language, facial and vocal changes, as well as participants' own appraisals and action tendencies as evidence of emotion. In order to accurately reflect the data collected by methods employed in this study, I did not address the physiological component in Scherer's definition, focusing instead on the remaining

four components that I observed through interviews, think-aloud observations and participant journals. Figure 5 provides the framework for a series of diagrams that appear in Chapter 4 to show specific data units as they matched up with the four components of Scherer's definition.

Figure 5: Original representation of Scherer's component process definition of emotion displaying the four components that represent subjects' categorized observed behaviors in the current study



Having established the initial data category, I re-examined relevant data units in order to identify similarities and differences within the category (Eisenhardt, 1989). I emerged with a list of layman's terms for emotions that encompassed a wide range. For example, a data unit from field notes indicated that a participant leaned in toward the computer and ignored classmates' attempts to talk received a positive affective title of 'interest', while a participant's comment about the process of digital history narrative creation being 'fun' would have been labeled 'enjoyment'. Once I completed the list, I went through it several times condensing emotions that possessed similar qualities. For instance, interactions labeled 'happiness' or 'liked' became encompassed by the

overarching label of 'enjoyment.' I organized this list into two larger subcategories of emotion, positive and negative.

Seven additional pre-dominant examples of emotion were placed within the subcategories of positive or negative after I completed my data consolidation: 'interest/engagement'; 'anger/frustration'; 'anxiety'; 'empathy'; 'boredom'; 'calm'; and 'pride'. Participants experienced the various emotions more than once and in reaction to different aspects of digital history narrative creation. At this point in data analysis, I returned to the literature of educational psychology to increase my understanding of what was already known about the role of emotion in educational settings.

First and foremost, I identified the term achievement emotion as a more suitable title for the initial category I previously termed affective responses. As discussed in Chapter 2, Pekrun (1992, 2006, 2007) identified achievement emotions as those that occur in response to an achievement activity or outcome. Achievement emotions describe the type of affective responses relevant to the attempt to understand the process of learning with a particular activity. Any affective responses observed during the course of the investigation became irrelevant once determined that it fell outside the subcategory of 'achievement emotion'. I therefore replaced the general term 'affective response' with the more specific label of 'achievement emotion' as the main data category.

I moved forward with a category of achievement emotion, divided into subcategories of positive and negative. The research in educational psychology indicated additional distinctive characteristics of the achievement emotions I observed in my participants. My initial subcategories of positive and negative were supported by the literature and labeled as the characteristic of valence (Pekrun, 1992, 2002, 2006, 2007; Ainely, 2007, Linnenbrink, 2007). I created additional, equivalent subcategories to reflect the level of activation created by each achievement emotion. Further evaluation of my data categories enabled me to condense these subcategories of achievement emotion. The resulting organization of data, therefore, began with the category of achievement

emotion, divided into the subcategories of activation (activating and deactivating), and valence (positive and negative).

At this point, the data categories effectively addressed the initial research question of what student's experienced when they created digital history narrative creation. I returned to the data once more. Looking at individual data pieces reflecting achievement emotion, I widened my analysis to include the specific event preceding the expression of achievement emotion. Here the second salient question of this research emerged – how does digital history narrative creation evoke achievement emotions?

Searching through the data, I noted the particular elements of digital history narrative that occurred in just prior to participants' achievement emotions. Following Pekrun's (2007) distinction between achievement emotions related to activity and those related to activity outcomes, I set about dividing the data into two additional subcategories in accordance to their antecedent being activity or outcome related.

After considerable deliberation, I concluded that the subcategory of 'outcome-related achievement emotion' did not find appropriate representation in the data pool, and therefore, eliminated it. Participants in this study expressed virtually no concern about traditional activity outcomes such as grades. Instead, typical outcome related achievement emotions, such as pride or anxiety, found focus in the participants' perceptions of a viewing audience that extended beyond Mr. York and me, though no such audience existed. I determined that the anticipation of a wider 'viewing audience' stemmed from the visual nature of the achievement task and participants' prior experience of an audience associated with similar visual media. This represented a distinct phenomenon whose exploration I encourage in Chapter 5 of this manuscript. Because the visual components represented part of the technological environment of the task, I deemed associated achievement emotions as 'activity-related'. Removal of the subcategory for outcome-related achievement emotion resulted in reconfiguring data categories once more. Essentially all data relevant to the study were considered to be

activity-related achievement emotions, rather than the broader categorization of achievement emotion. The main data category was thus aptly renamed.

The distinction of the activity itself as the antecedent of participants' emotions did not offer a detailed explanation to the second research question, how did digital history narrative creation evoke achievement emotion? To do this, I looked to that data and the emergence of additional categories revealing the specific aspects of digital history narrative creation that preceded the display of achievement emotion. Historical imagery and the technological capabilities the software emerged as antecedents of activity-related achievement emotion. I added these additional subcategories to the activity-related subcategory. I included emotion aroused by the unique component of 'perceived audience' within the category of technology related-activity-related achievement emotion. Figure 6 reveals the categorical representation of participants' achievement emotions in response to the antecedent of digital history narrative creation and its particular components. The framework used in Figure 6 is used in Chapter 4 to reveal the specific achievement emotions experienced by individual participants in relation to a particular aspect of digital history narrative creation.

Figure 6: Original representation of data categorization that reflects the relationship between subjects' achievement emotions and the achievement task of digital history narrative creation

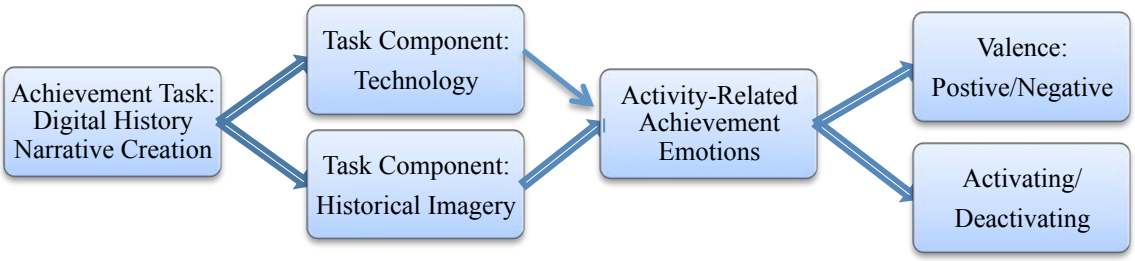
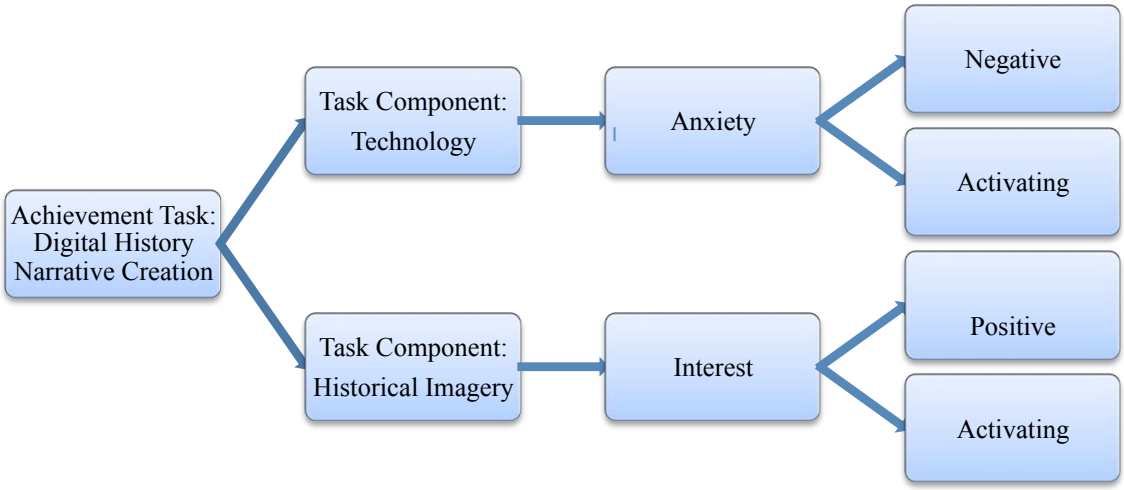


Figure 7 provides an example of how actual achievement emotions with differing valence and levels of activation, stem from one of the two antecedents in digital history narrative creation, and fit into the framework described in Figure 6.

Figure 7: Original representation of the valence and activation characteristics of achievement emotions added into the relationship between digital history narrative creation and emotion



Having completed categorization of the data involving achievement emotion, I reviewed the data yet again. I had identified data relevant to answering the initial research question, what do students experience during digital history narrative creation? I isolated the particular aspects of digital history narrative creation that acted to evoke these emotional experiences, answer the 'how' question. Looking at the categories of data, I felt as though some of the participants' behaviors did not fit well into the category of achievement emotion, though somehow, connected. Though the recorded observation looked very similar, (i.e. wide eyes), the context was different enough to require the creation of a second data category. The second major data category reflected these observed behaviors related to the participants' effort, concentration and time spent on the

completion of their digital history narrative projects, rather than emotions. The data units in this category represented participants' outward expression of motivation to complete the achievement task of digital history narrative creation. The following pages explain how I identified participants' behaviors as motivation, and support for that analysis based on research in motivation. This second major data category emerged in conjunction with the third and final question of this study – how did the emotions experienced affect the students' learning process?

Motivation

In addition to achievement emotion, I eventually induced 'motivation' as the second category the data indicated. I engaged in a similar process of annotating my field notes and interview transcripts when I coded the data relevant to this category, as I did for the category of affective response. Simply put, motivation means "to be moved to do something" (Ryan & Deci, 2000). Scherer (2005) viewed motivation and emotion as interwoven into one, difficult to separate, experience. Though this study regards the concepts of emotion and motivation as related but unique, it is helpful to employ Scherer's notion of motivation as observable through "action tendencies" to describe participant behaviors I interpreted to reflect not only emotional experiences, but motivational ones too.

Motivation consists of intrinsic and extrinsic motivation, as determined by the origin of the desire to 'do' a particular thing (Brandhorst, 2002; Pekrun, 1992; Vallerand et. al, 1992). A variety of definitions for intrinsic motivation exist (Heckhausen, 1989). Pekrun (1992) described intrinsic motivation as "any motivation directed at performing an action for its own sake", (p. 366). Because intrinsic motivation often exists in relationship with a particular activity and an individual, it plays a special role in the investigation of the potential outcomes of student interaction with digital history narrative

creation (Ryan & Deci, 2000). By analyzing and categorizing my data as activity-related rather than outcome-related, I effectively eliminated the concept of extrinsic motivation.

Current research relied on two measures by which to operationally define and identify intrinsic motivation within participants: the "free choice" measure, and self-reports of interest and enjoyment in the activity at hand (Pekrun et al., 2002; Ryan & Deci, 2000;). I employed both methods in my own identification of participants' experience of intrinsic motivation. Because intrinsic motivation centered on the notion of completing a task for the sake of the task itself, in rereading my field notes and interviews I reexamined participants' comments, (i.e. self-reports), and labeled the achievement emotions of interest/engagement and enjoyment as not only achievement emotions that stemmed from the achievement task of digital history narrative creation, but also as evidence of intrinsic motivation toward the achievement task. The final stage of data analysis, in which the two somewhat indistinct categories of data become connected in a more linear fashion, significantly sharpened the focus of the link between achievement emotion and motivation when seen as observable behavior.

The "free choice" measure referred to experimental conditions in which participants were not under any obligation (no reward or punishment followed) to engage in the activity before them (Ryan & Deci, 2000). Participants in the current study faced potential consequences for not completing their project, thus I modified the operational definition of "free choice" to fit the context of the current investigation. Though participants in my study received a grade from Mr. York on their digital history narrative, the requirements of the project were minimal (see Appendix C).

All participants fulfilled the parameters of the project within the class time given, leading to the conclusion that time spent outside of the classroom indicated the participants' enjoyment of the activity and the exercise of 'free choice' to extend participation in the activity. Participants' own explanations for the additional time spent on their projects validated these conclusions. In addition, all of the participants rejected

other positively regarded activities, such as surfing the web and chatting with classmates during class time devoted to digital history narrative creation. I coded such behaviors as more evidence of participants' exercise of 'free choice' to participate in the achievement task of digital history narrative creation, and by definition, indicative of intrinsic motivation.

As mentioned above, this process yielded some overlap between the categories of achievement emotion and motivation in regards to the subcategories of 'interest/engagement' and 'enjoyment'. Though qualitative research strives to consolidate individual units of data into distinct categories, in the current study participants' behaviors often reflected both identified categories of activity-related achievement emotion and motivation, as described by the research community (Merriam, 1998). Due to the close relationship between emotions in general and motivation (Ainley, 2007; Barrett & Bartunek, 2004; Boekaerts, 2007; Linnenbrink, 2007; Matsumoto & Sanders, 1988; Meyer & Turner, 2006; Pekrun, 1992, 2006), certain behaviors and verbalizations indicate what appears to be the simultaneous experience of motivation and achievement emotion in the form of interest/engagement and enjoyment.

The larger research context placed these concepts in a linear relationship with interest/engagement and enjoyment propelling motivation, and acknowledged their often concurrent outward expression (Ainley, 2007; Barrett & Bartunek, 2004; Boekaerts, 2007; Linnenbrink, 2007; Matsumoto & Sanders, 1988; Meyer & Turner, 2006; Pekrun, 1992, 2006). This supported my decision to use data reflecting interest/ engagement and enjoyment as evidence within both the category of achievement emotion and the category of motivation. Consequently, data units that represented an achievement emotion also served as evidence of motivation.

The data that substantiated the category of motivation consisted of behaviors and comments from my participants that indicated either increased or decreased motivation towards the completion of their digital history narratives. An example of this might be

the percentage of time a participant spent on-task in class or whether or not a participant worked on their digital history narrative outside of the class time given by Mr. York. I next used the cognitive-motivational model of achievement emotion in order to present a more linear interpretation of the relationship between the data categories and reveal the connection to overall student learning, making the data undeniably important within current research on history teaching and learning.

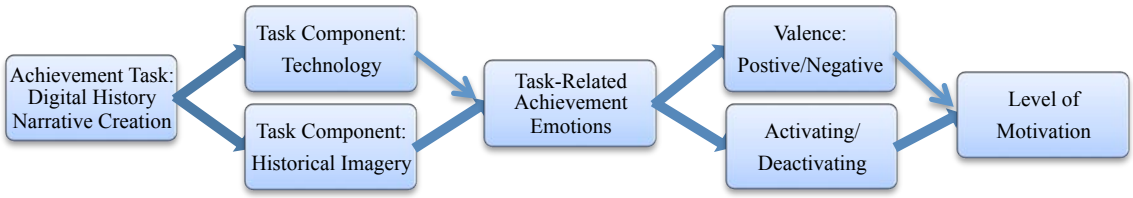
Phase IV: Connecting the Categories and Emergent Hypotheses

After I established data categories and laid out their respective subcategories I looked to identify the ideas or concepts that formed a bridge between affect and motivation. I did not have to look beyond the eight types of achievement emotion that I initially struggled to contain within one data category. Within the category of achievement emotion I isolated eight specific achievement emotions that resulted from participants' experiences in creating digital history narratives. Turning to the category of motivation, those same achievement emotions worked to either activate or deactivate intrinsic motivation toward the achievement activity of digital history narrative creation. The link between achievement activity, achievement emotion, motivation and overall learning emerged through the apparent causal relationships within and between the two data categories.

Pekrun's theory on cognition and motivation as mediators between achievement emotion and learning provided support for the framework I created to represent the connection between activity-related achievement emotions and resulting levels of motivation. The model posited that motivation plays a role as one of two mediating factors between achievement emotion and overall student learning. Previous studies conducted by Pekrun quantify 'learning' via various achievement measures, such as course and exam grades, as well as course completion. I did not measure learning

outcomes in the present study. I sought to identify what students experience when they create digital history narratives. Finding the answer to that question to be activity-related achievement emotion, I isolated the relationship between those activity-related achievement emotion and student motivation. Consequently, my framework differs from that of Pekrun. I eliminated the component of overall learning effects as an idea to be substantiated in future research. I also included the antecedent of the experienced achievement emotions, which in this case, consisted of the achievement activity of digital history narrative creation and its components, creating a more comprehensive model (Figure 8). In Chapter 4, data relating specific task components to specific achievement emotions and their effects on motivation replace the general representation in Figure 8.

Figure 8: Original example of the relationship between the achievement task of digital history narrative creation and resulting achievement emotions and characteristics



Ethics

Ensuring validity and reliability in qualitative research in part requires ethical conduct of the study procedures (Merriam, 1998). Qualitative researchers are "guests in the private spaces of the world" (Stake, 1994, p. 244). As such, much care must be taken to ensure the ethical conduct of individual researchers in the field. Ethical considerations form the lynchpin of trust between the research community and the

general population. The willingness of individuals to participate in the range of research projects conducted is safeguarded by measures taken to ensure the physical, mental and emotional well being of all research participants. Though there are differences between the potential risks involved in qualitative research as opposed to experimental research designs, nonetheless, the investigator still has a degree of power and control over their participants and steps must be taken to ensure that such power is not abused (Cassell, 1982).

Approval from the Institutional Review Board (IRB) constituted the first step in adherence to the ethical guidelines of the professional research community. Such approval involved a thorough investigation of research methods as well as potential participants' involvement and potential risks. I received IRB approval at the University of Iowa during the fall of 2008 (Appendix A). During the IRB application and review process I personally met with the principal of the research site, Westside High, in order to discuss the proposed research plan in detail. Our meeting resulted in written consent from the principal to proceed with Westside High as my research site. An additional part of the IRB review process involved the submission of consent documents. In accordance with IRB requirements, I created consent documents appropriate for each of my two categories of participants: adult teacher and minor students (Appendix A). I distributed and collected consent forms from all participants before individual data collection began. I also obtained parental consent from all student-participants.

Little to no risk of harm resulted from participant participation in this study. I took great pains to conduct my data collection in a way that did little to alter the participants' experiences from that of their classmates. Such measures included conducting the think-aloud protocols in the physical and temporal context of their normal history class period. In addition, Mr. York and I agreed that participants should not be required to complete extra work than their nonparticipating counterparts, thus resulting in the substitution of Mr. York's written assignment for my digital history narrative journal

during the first round of data collection and my use of his adapted version during the second round of data collection. Mr. York and I also went to great lengths to assure the participants both verbally and in the written consent form that participation in the study in no way affected their grade on the project. Finally, I masked the identity of the research site and all participants with pseudonyms and stored all data related to the study in a secure location.

Trustworthiness

Whether quantitative or qualitative, all research involves interpretation; "data do not speak for themselves; there is always an interpreter or a translator" (Ratcliff, 1983, p. 149). Researchers in either school of inquiry must show an effort to ensure consumers that steps were taken to remove subjectivity from the data collection and interpretation. Both research traditions attempt to establish internal validity, reliability and external validity in an effort to document the trustworthiness of their research and findings.

Internal Validity

In qualitative research, the question of internal validity becomes one of the congruence between research findings and reality (Merriam, 1998). Admittedly, the notion of reality possessed a fluid quality, owing to the subjective nature of interpretation. I implemented measures such as member checks, peer examination, triangulation and long term observation in this study to prevent the reporting of inaccurate research findings due to subjective interpretation on the part of the researcher (Lincoln and Guba, 1985; Merriam, 1998; Stake, 1995).

Triangulation

I used triangulation of both data sources and methods of data gathering in order to ensure that the interpreted meaning of the data collected represented "plausible explanations about the phenomena being studied" (Mathison, 1988, p. 17). Data source

triangulation involved collecting more than one type of data in order to compare and contrast the information and resulting interpretations. Such a process not only provided opportunities for a researcher to support their initial interpretations through observed consistencies in the data sources, but also to become aware of incongruent findings that reveal bias or incomplete analyses of the phenomenon.

I also collected several types of data in order to facilitate such comparisons: nonparticipant and think-aloud observations, interviews and documents produced by the participants during their experience of digital history narrative creation. Each of these data sources provided a different perspective on the participants' experience. Think-aloud observations allowed me to record participants' verbal and physical reactions, as well as the choices they made as they occurred during the process of creating a digital history narrative. Interviews provided the opportunity to capture participants' reflection on the process and check my own initial interpretations of what I observed during the process. Documents such as the rubric provided insight into instructional influences, while digital history narrative journals allowed me to examine the participants' personal reflections during the process but in between actual interaction with it. The completed digital history narratives, offered an opportunity for me to play the role of the audience and experience my own emotional reactions, while observing the images and effects that the participants had emotionally reacted to. The combination of three data sources helped me fashion a more holistic and accurate interpretation of the participants' experiences with digital history narrative creation.

Triangulation of data sources is facilitated through the triangulation of methods. Conducting interviews, whole class observations and think-aloud protocols yielded the various data sets that I analyzed. The process of collecting data through different means offered, in and of itself, the potential for new perspectives on the phenomenon. For example, had I only conducted think-aloud protocols I would not have gained insight into the participants' own interpretations of their experience with the phenomenon of digital

history narrative creation. I would have lacked understanding as to *why* participants reacted to the process in the ways that I observed, leaving me with only the behaviors and my own interpretations.

Long Term Observation

According to Merriam (1998), long-term observation can be defined as "repeated observations of the same phenomenon" (p. 204). During this study I observed six separate participants experience the phenomenon of digital history narrative creation a total of 13 times. These think-aloud observation protocols took place during two distinct time periods in which Mr. York incorporated digital history narrative creation into his course. Separated by five months' time, the two rounds of data collection allowed my own insights, interpretations and understandings of the phenomenon to evolve and shape my continued inquiry. Similarly, the phenomenon for the participants in the second round of data collection was no longer new. Time and experience added to the opinions and interpretations that they offered that would not have been present in my data collection had I ceased my investigation after the first round.

Member Checks

Member checking involved disclosing what I quoted and or interpreted from the data gathered from interactions with participants. This allowed the research participants to further explain themselves, correct any misunderstandings of things they said or did and even remove information/statements that they were not comfortable having included in research write up and subsequent publications. I gave my participants two opportunities to either correct or validate both the data I had collected and my resulting interpretations. The nature of think-aloud protocols offered participants the chance for continual clarification of their statements as I observed and recorded them. In addition, once I finished transcribing the interview recordings, I sent typed copies to the individual participants via Mr. York. I asked participants to read the transcripts of their interview

and make any corrections or omissions that they felt necessary, then return the copy in a sealed envelope to Mr. York who would pass it along to me. None of the transcript copies were returned, leading to the assumption that the research participants in this study had no objections to the statements that they offered up in the course of the investigation.

Peer Examination

Though the lone investigator in this study, I consulted with several colleagues when attempting to interpret of the data. The chair of my dissertation shared a particular interest in digital history narrative creation as an emerging method of teaching in the social studies. His analysis of interview transcripts and observation notes reaffirmed much of my initial interpretations and gave direction to reporting those findings in light of social studies educational research. In addition, a fellow educator with a Master's degree in social studies education and experience in both creating and teaching with digital history narratives offered his interpretations of my data, again corroborating my initial findings. Finally, I felt the informal conversations held with Mr. York about the participants' experiences and our individual interpretations of them further reinforced my findings of an emotive quality in the participants' experiences and my understanding of the significance of the data to the practice of social studies education.

Reliability

In a traditional experimental research setting, the term reliability refers to the ability to replicate the results of one study in subsequent studies (Merriam, 1998). When research focused on human behavior, as is the case with the current study and qualitative research in general, such replication of results is not necessarily expected or even desired. For this reason, Bernard (1985) states, "concern over reliability – in the positivist sense – is fanciful" (p. 303). Rather than the term reliability, qualitative research has turned to concepts such as the "dependability" or "consistency" of the findings derived from the data (Lincoln & Guba, 1985, 1988). Simply put, qualitative researchers must seek to

have those outside the study find that their results are consistent with and make sense in light of the data, not that others actually find the same results in their own data collection (Merriam, 1998).

In order to achieve reliability or consistency of findings, qualitative researchers can make use of three practices within their data collection: disclosure of the investigator's position, triangulation, and creating an audit trail. Le Compte and Preissle (1993) equated the disclosure of the investigator's position with an explanation of the theory behind the study, as well as a description of the research site and choice of participants. The use of triangulation for the purpose of demonstrating reliability or consistency of findings does not differ from the use of triangulation of data sources and other methods of establishing internal validity noted earlier.

An audit trail consists of detailed descriptions of the researcher's processes in both collecting and analyzing the data, so that all aspects of the study and its proposed findings might be scrutinized and understood by consumers of the research (Guba and Lincoln, 1981). I collected detailed observation notes and transcribed interviews as the beginning of the audit trail for the current study. The journal that I maintained throughout the data collection and analysis process documented the changing thoughts and interpretations that not only dictated my methods, site and participant choices, but also revealed my emerging interpretation of the data. The write up of reports such as this one further completed the audit trail with detailed narration of every step of the research process.

External Validity

External validity of research findings indicates the extent to which the findings can be generalized to other situations. This concept is often difficult to apply to qualitative research that doesn't involve the use of situational controls but rather seeks to understand "a single case or small, nonrandom sample…to understand the particular in

depth, not to find out what is generally true of the many" (Merriam, 1998, p. 208). Qualitative researchers identified conceptual counterparts for the less applicable notion of external validity. Concepts such as 'working hypothesis' (Cronbach, 1975), 'naturalistic generalizations' (Stake, 1978), 'concrete universals' (Erickson, 1986), 'user or reader generalizability' (Wilson, 1979), and 'transferability' (Trochim, 2006) all more accurately describe the ways in which qualitative research findings might help others recognize and understand similar occurrences in other situations. This study increased transferability by providing a thorough description of both the research setting and demographic characterizations of the participants involved. This information allows other researchers to evaluate the similarities between the context of this study and the context of their own research, judging the level of transferability to the setting and participants with which they are working (Trochim, 2006).

Qualitative research increased the ability to generalize findings to other situations by providing a detailed description of the research site and the participants to aid the comparison of the research context with new settings. In addition, utilizing multiple sites or instances of the phenomenon being studied increases the range of other situations that the findings relate to (Merriam, 1998). Again, I have incorporated detailed descriptions of both the research site and participants in this manuscript. I included two separate rounds of data collection in which each of the 14 participants offered their individual experiences of learning history through the achievement activity of digital history narrative creation as additional comparative data.

Preview of the Following Chapter

The next chapter described data and interpretations from observations, think-aloud protocols and interviews with participants collected both during and after their experiences creating digital history narratives. The focus of my data analysis rested upon the emotionally rich interaction that took place between the secondary school participants

and the combined use of historical imagery and digital storytelling software as they created a digital history narrative reflective of their own interpretations of history. My analysis of the data highlights the linear and causal relationships between the achievement task of digital narrative creation, achievement emotion and motivation in either increasing or decreasing history learning.

As documented in this chapter, qualitative research involves participative interpretation of the researcher. In the interest of achieving a high level of trustworthiness, the following chapter contained detailed descriptions and excerpts from the think-aloud protocols and interviews that were conducted. To demonstrate specific aspects of the achievement task that perpetuated affective responses, I identified and placed specific achievement emotions within the organizational structure presented in this chapter. In addition, I connected the characteristics of specific achievement emotions to the increase or decrease of intrinsic motivation and overall learning. I identified 'Sophie,' 'John' and 'Billy' as three participants who each exhibited profound and unique achievement emotions as a result of the various components of digital history narrative creation. I also included data from remaining participants that supported the study's findings and interpretations.

CHAPTER 4

FINDINGS: ACHIEVEMENT EMOTIONS AND MOTIVATION DURING DIGITAL NARRATIVE PRODUCTION

Introduction

> It's [digital history narrative making] more of an interesting way to do it [study history]…I got more into my topic than if I had been writing a paper.
>
> 'Paul,' Interview, December 16, 2008

Methods and findings are inextricably intertwined. In Chapter 3, I demonstrated how I categorized the data and constructed an empirically supported theoretical model that helped make meaning out of the data. In the current chapter, I employ the words and actions of the participants in order to demonstrate the lived experience of digital history narrative creation. I sought to understand the student experience of digital history narrative creation and, through that understanding, uncovered potential value of digital history narrative creation in the history classroom. The expression of emotion refined the initial research question of this study. I began this project seeking to understand what students experience when creating digital history narratives. Identifying emotion as the resounding response led me to ask, why? What about digital history narrative creation evoked emotion? Ultimately, the relevance of the experienced emotion became the third and final research question – how did the participants' emotions affect their behavior? Answering such questions speaks to the relative usefulness of digital history narrative creation as a method of history teaching, unique in its ability to arouse student emotion during history learning, and capable of increasing motivation.

Evidence of Emotion

My observation of students creating digital history narrative creation revealed that emotion was paramount to their experience. As discussed in Chapter 2, many educational psychology researchers subscribe to a dynamic systems component definition

of emotion. This definition describes emotion as an experience inclusive of cognitive appraisal, motor expression, subjective feeling, motivation and neurophysiological responses (Scherer, 2005). I used this definition to support how I identified participant behaviors as the experience of emotion. Of the five components described by Scherer's definition, I observed four, via the data collection methods employed in this study. I witnessed motor expression (body posturing; facial and vocal expression), subjective feeling (self-reported written and verbal descriptions of emotion via think-aloud observations, interviews and participant journals), and cognitive appraisal (participants' value judgments pertaining to specific historical images and the technical work environment of digital narrative creation). Scherer (2005) also recognized motivation as part of an emotion experience, expressed outwardly by action tendencies, such as those I witnessed in my participants toward the task of digital history narrative creation.

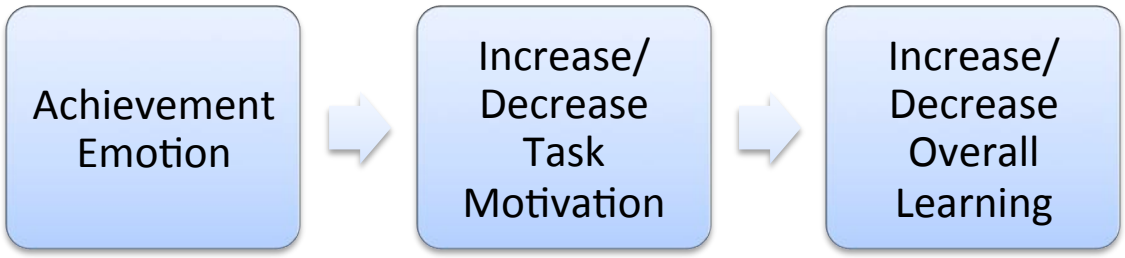
The data in the following pages reflect behaviors categorized as evidence of emotion. The comments of my participants, gathered through observation, interview and journaling indicate and label the emotional nature and quality of their experience creating digital history narratives. Their value-laden judgments reflected cognitive appraisal. The positioning of the body (i.e. slouching, leaning forward, etc.) indicated emotion, as well as facial and vocal expressions, which included the obvious examples of smiling or sighing. More subtle demonstrations of emotion involved behaviors such as increases or decreases in one's voice volume. Raised eyebrows and laughter also constituted evidence of an emotional experience. Among my teenage participants such indicators of emotion abounded. Think-aloud observations and interviews gathered many such signs of emotional experiences as a result of the participants' interaction with digital history narrative creation. The subjective feeling component was illustrated by the participants' own verbalized appraisals of the experience of creating a digital narrative as emotional. The component processing definition of emotion supported the recognition of the achievement emotions that were manifest in this study.

The Cognitive-Motivational Model of Achievement Emotion

Like most student populations, the participants in this study presented varying degrees of interest in history content and academic success. Despite these differences, participants displayed a similar range of achievement emotions during the task of digital narrative creation and demonstrated strong motivation to not just complete the task, but to meet a personal standard of excellence. The Cognitive-Motivational model of achievement emotion supported the framework I developed to analyze the participants' interaction with digital narrative creation. Offering a heuristic that tied together the concepts of achievement emotion, task motivation and subsequent learning, the model allowed for clear connections between the emotions evoked through the process of creating a digital narrative and the motivation exhibited by participants toward that projects' fulfillment. Pekrun's model further implied a positive impact of achievement emotion on overall learning and achievement via its impact on task motivation (See Figure 9) (1992, 2002, 2006, 2007). The theoretical framework I developed to interpret the data in this study diverged from the Cognitive-Motivational model on this point. This study focused on the presentation of achievement emotion and motivation. Data gathered in this study did not allow for comments on the potential effect on learning through including digital narrative creation in the secondary history classroom.

The activity related achievement emotions exhibited by participants' included those with positive and negative valance, as well as varying levels of activation, as recognized by the research of Ainley (2007), Linnenbrink (2007) and Pekrun (2007), described in Chapter 2. The distinctions between positive and negative emotions, and activating or deactivating emotions, provided greater detail in my framework and its power to explain the interaction between digital history narrative creation, achievement emotion and motivation (see Figure 9). Depending on whether they are positive or

Figure 9: Author's original representation of the relationship between achievement emotion, motivation and learning with motivation as a mediating factor as described by Pekrun's Cognitive Motivational Model (1992, 1998, 2007)

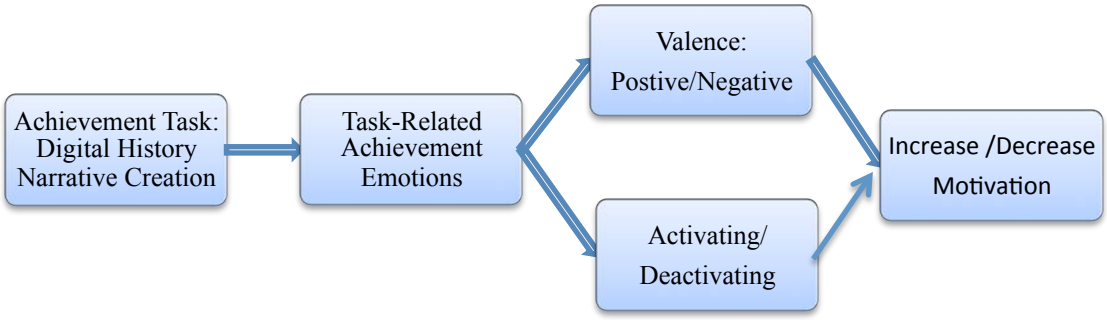


negative, activating or deactivating, emotions experienced in relation to an achievement task can boost motivation, or seriously inhibit a student's motivation.

In labeling the specific, tangible emotional expressions witnessed, I referred to a specific range of achievement emotions noted in the field of educational psychology (Ainely, 2007; Linnenbrink, 2007; Pekrun, 1992, 2007). These included the broad spectrum of emotions such as enjoyment, joy, anxiety, empathy, anger, boredom and hopelessness (Pekrun et al. 2002). Each of these emotions came to represent a subcategory in my data analysis. I documented all observed emotions as variations of those listed for the purpose of categorization. An emotion such as frustration might be identified as anger or hopelessness. In addition, state of interest, joined the list of achievement emotions observed as part of the participants' experiences creating digital history narratives and recognized as a data category (Ainely, 2007).

Later evolutions of the Cognitive-Motivational model included a task component as the antecedent of achievement emotion (2007). Similarly, I added the element of achievement task to my framework (see Figure 10). The intent of this study to illuminate students' experience of digital history narrative creation necessitated its inclusion in the framework.

Figure 10: Author's original representation of the relationship between an achievement activity, achievement emotion with relevant characteristics, motivation and learning with motivation as a mediating factor

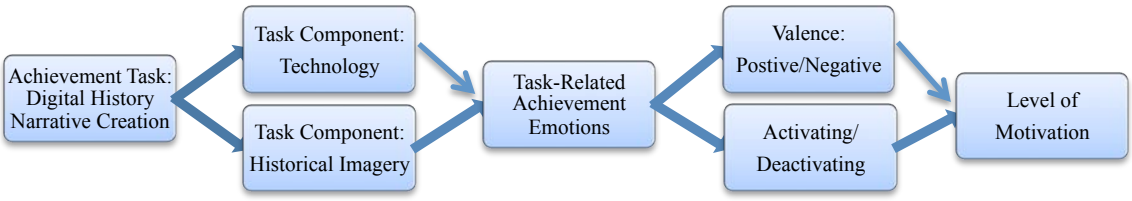


As explained in Chapter 3, after placing individual data units into categories that reflected the level of activation and valence of the emotion, I sought to identify the specific aspects of digital history narrative creation that preceded the experience of emotion. Identification of the specific facets of digital history narrative creation that evoked participants' emotions provides an in-depth understanding of the educational usefulness of the instructional tool.

Returning to the data, the participants' emotional responses emerged in correlation with two main elements of digital history narrative making – the various technological tasks and the historical imagery comprising the content of each narrative. Simply working with new technology and its various potentialities (i.e. audio tracks, motion, image manipulation, etc.) and communicating through new medium, elicited emotional reactions. Additionally, the preconceived notion of a viewing audience seemed to be schematically associated with the production of a film-like digital narrative. The anticipation of a viewing audience provoked achievement emotions, such as pride and frustration. The interaction with historical imagery, including the collection, examination and manipulation of images as historical documents, likewise resulted in the experience of achievement emotions ranging from joy and interest, to anger and empathy.

The forthcoming pages describe participants' emotions as expressed in relationship to these specific elements of digital history narrative creation. My framework for data analysis displays the link between the two specific emotional triggers in digital history narrative creation to the resulting achievement emotions, and the effect of those emotions on the participants' level of motivation (see Figure 11).

Figure 11: Author's original representation of the relationship between the specific achievement task of digital history narrative creation and its components, resultant achievement emotions and characteristics, level of motivation and overall learning



Historical imagery and the technological environment of digital history narrative creation evoked activity-related achievement emotions responses in all of the participants of this study. Data from all 14 participants involved revealed that their emotional experiences were also overwhelmingly activating, regardless of whether the valence of the emotion was positive or negative. Increase motivation towards the task of digital history narrative creation resulted from the experience of achievement emotions and was documented in the form of specific action tendencies. An analysis of cross-case data achieved redundancy, substantiating the aforementioned findings. Following the delivery of evidence gathered across cases, the journeys of three specific participants reveal, in detail, the benefits of the emotionally evocative learning experience of digital history narrative creation.

Cross-Case Data Analysis

The data categories discussed in Chapter 3 emerged from constant comparison of the individual cases of 14 participants all engaged in digital history narrative creation. Working to identify similar themes in the data, I recognized two major themes based on the redundancy of data units across the cases. The first major theme eventually became the category of emotion. After exploration of the literature, I refined this initial category, describing the data as activity-related achievement emotion. This label provides a detailed description of the exact type of emotion experienced by participants, and refers to their cause, as well. The data revealed important characteristics of activity-related achievement emotion that impacted the effect the emotions had on participant's behaviors. These characteristics of activation and valence, seen across individual cases, became subcategories of activity-related achievement emotion. The result of the experience of activity-related achievement emotion was demonstrated by the participants in the form of motivation toward the task of digital history narrative creation.

Evidence of Activity-Related Achievement Emotion

Data from all participants revealed evidence of activity-related achievement emotion. Participants provided an array of data indicating the experience of emotion. As seen in Scherer's component process definition of emotion, the experience involves appraisal, motor expression, action tendencies and subjective feeling (2005). The participants in this study readily offered their appraisal of the activity, "I liked the project," stated Sarah, matter-of-factly (Interview, 5/21/09). Lisa echoed these thoughts, "It was really kind of cool to do this kind of thing [project]" (Interview, 12/16/08). All 14 participants responded in similar positive affirmations when asked to evaluate digital history narrative creation as a classroom activity. Participants Lisa, Jeffrey and Paige agreed that digital history narrative creation is more fun and interesting than just writing an essay (Interview, 12/16/08; Interview, 12/16/08; Interview, 5/1/09). "I was kind of

excited 'cause I like that kind of stuff with pictures and everything" (Ellen, Interview, (5/21/09). These responses are at once subjective feelings about, and appraisals of, digital history narrative creation.

Motor expressions displayed by participants mirrored their vocalized expressions of emotion. When discussing digital history narrative creation in general, or referring to specific images or technological devices, subjects were seen to sit up, lean in and raise their voices. Wide eyes and raised eyebrows were visible on participants' faces as they described their individual experiences with digital history narrative creation. Likewise, during think-aloud observations, participants like Bob and Jane smiled and leaned in as they interacted with the process of digital history narrative creation (Think-aloud observation, 12/08/08; 5/12/09). Paige even laughed out loud and uttered phrases of support directly to the images she viewed of protesters in the 1970s, "Whoo-hoo! Look at them stand up for freedom! Awesome!" (Think-aloud observation, 5/12/09). Paige also voiced the experience of empathy as she described her choice of an image of a group of protesters, "I think this picture is good because they are standing up for what they believe it, they might not be liked because of it, but they don't care. I feel like that sorta [sic] defines me too" (Think-aloud observation, 5/12/09).

Participants revealed the experience of emotion through their action tendencies, as well. I viewed action tendencies as the presence of behaviors directed at completing the task, and the rejection of other behaviors that might interfere with completing the task. The participants in this study exhibited action tendencies by focusing on their computers, and rejecting distractions from other students in the library. During a think-aloud interaction, Bob was greeted by several friends that happened to be in the library, though not part of Mr. York's class. Bob furrowed his brow and frowned, telling his friends to "Knock it off, I'm busy" (12/8/08). Participants were observed or reported searching for images long after they had found the amount to satisfy the requirements of the project, "There is just so much to look at; I didn't want to miss something" (Hank, Interview,

5/21/09). Additionally, all participants in this study reported spending time outside of class on their projects, "It [the project] was interesting enough that I actually wanted to work on it at home!" (Ralph, Interview, 12/16/08).

The behaviors and appraisals of the participants indicated that they experienced emotion as they interacted with digital history narrative creation. The participants' emotions spanned from positive to negative in valence, but always possessed the ability to activate or propel students toward the task at hand.

Evidence of Activating, Positive and Activating, Negative, Activity-Related Achievement Emotion

Activating achievement emotions are described as emotions that cause someone to continue or increase their pursuit of an outcome rather than abandon the task mentally, emotionally or physically (Ainley, 2007; Linnenbrink, 2007). An achievement emotion can be either positive or negative and still possess the ability to propel an individual toward increased effort toward the task at hand. For example, multiple participants enjoyed the project: "I thought it was funner (sic). It wasn't so like, boring or trying to like get a page [written] for an essay" (Lisa, interview, December 16, 2008); "It [digital history narrative creation] was fun. Its a lot more creative [than writing]" (Jeffrey, interview, December 16, 2008). Achievement emotions such as enjoyment, described here as fun, has a positive valence and encouraged increased effort and involvement with the task of digital history narrative creation.

Another positive, activating achievement emotion is referred to as a state of interest (Ainley, 2007). Participants, like 'Paul' quoted at the beginning of the chapter, expressed high levels of interest and engagement: "It [the technology] was kind of like…it was interesting to see the different transitions that we could use and how we could do the motions to focus in on part of it [the picture]" (Hank, interview, May 21,

2009). Ellen related that, "The pictures were just so interesting…like all the little details you get…it's a better look inside of it [history]" (Interview, May 21, 2009).

Billy and John spent time and energy arranging and rearranging the images, concerned about whether others would understand their meanings (Think-aloud observations, 12/8/08). Though the anxiety they felt is assigned a negative valence (Ainely, 2007), Billy and John both responded by increasing their efforts toward the task rather than giving up. Bob reflected the same anxiety and concern for his audience that I witnessed in both Billy and John, "I used words, or like captions to sort of guide the view…I worried they might not get what I mean…" (Think-aloud observation, December 8, 2008). Again, Bob did not reject the activity as too difficult, but instead, increased his efforts toward completing the task successfully.

Participants also commented on the specific elements of digital history narrative creation that evoked emotion. Exploring historical imagery caused many participants to experience achievement emotions ranging from enjoyment and interest to empathy. "I like using pictures to say what I am thinking" (Paige, Interview, 5/21/09). Ralph liked using still images to communicate his ideas rather than text or even motion picture clips because, "It [using pictures] just made the project more challenging and interesting" (Interview, 12/16/08). Ellen related to the emotions felt by African-American kids during school integration at Little Rock:

> I see how sad and frustrated they [the school kids] are in these pictures and I understand what they felt, like not that I have been prevented from going to school or whatever, but everybody gets bullied. I get how tough that can be (Interview, 5/21/09).

Lisa related a similar emotional experience of interest and empathy as she described selecting images that reminded her of the stories told by her relative from the 1950s era, "I guess that the images I really liked, they sort of had an emotional tie to me or something, like it somehow reminded me of a story my grandma told" (Interview, 12/16/08).

The technological environment also sparked emotional responses from participants in this study. Sarah commented that working with all the different technological devices of the program made it a more, "hand-on project," and that she, "felt more involved in it [digital history narrative creation] than other projects" (Interview, 5/21/09). Sarah felt engaged and interested in the technological tasks involved in digital history narrative creation. Other participants thought the technological aspects of the project were just plain fun, "I used a lot of special effects…it was just fun to try all the different options and figure out what worked best" (Freddie, Interview, 5/21/09). Hank felt that, "it was really interesting to see all the different transitions that we could use and how we could use motion to focus in on parts of it [an image]."

Evidence of Motivation

In this study, motivation is defined not only by action tendencies, such as those described above, but also through the exercise of free choice (Ryan & Deci, 2000). The focus of Bob, despite distractions, and the efforts of Billy and John to attempt multiple sequences of images in search of the best combination to communicate their respective messages are action tendencies that represent motivation towards the task at hand. The decision made by all the participants including Sophie, Paige, Jane and Bob and Billy, to use every moment of the class period, not packing up their things until after the bell rang, further signals engagement and motivation toward the task (Think-aloud observations, 12/8/08; 5/12/09). Like the participants explored in the upcoming vignettes, Bob, Hank and the other participants in this study spent additional time outside of class working on their digital history narratives (Interviews, 12/16/08; 5/21/09). This free choice to allot personal time to completion of the project is indicative of motivation.

The corpus of data in this study achieved redundancy in respect to participants' experience of various types of achievement emotion in response to digital history narrative creation, and motivation toward the same task. Having provided evidence of the

data categories across all participants in the study, I now offer detailed vignettes that explore the interaction of three specific participants and digital narrative creation. The vignettes provide additional data support for the categories and framework that emerged during data collection. The participants selected represent the various characteristics of valence and activation in achievement emotion, as seen in the entire data set. The journey of each participant further reveals the aspects of digital history narrative creation found to be emotionally provocative, and the resultant motivation seen among participants.

The Digital Narrative Journey of 'Sophie'

A fourteen-year-old freshman in high school, Sophie, enrolled in Mr. York's American history class because it was a required course. All freshmen at Westside High take American history. When asked, she volunteered that she enjoyed history content though she waivered a bit when asked if she liked history class, "um…yeah, I think I like it a little more this year because the teachers are making it more interesting…by having us do different things instead of just reading" (Interview, December 16, 2008). A conscientious student, Sophie performed well in school, including in previous social studies classes. Though not yet speaking in direct reference to digital history narrative production, Sophie alluded to the emotional 'state of interest' attached to encountering historical content in ways other than reading text (Ainley, 2007). Such a statement reflected the engaging potentialities of the pictorial content and the technological framework of the digital narrative. Sophie's emotionally charged experience with the production of history, via the technological environment of digital narrative creation, reflects the motivational power of both the context of technology, as well as the historical imagery used to inhabit that space.

Every participant in this study encountered two specific tasks within digital history narrative creation. Each task involved the use of historical thinking skills such as critical analysis and interpretation of primary source documents - in this case, historical

imagery. Each task also produced emotional experiences in the participants I observed. In the following pages I describe the emotions I witnessed and subsequent effects they had on the motivation of Sophie, John and Billy.

Phase 1: The Search for, and Interpretation of, Historical Imagery

Having the discretion to choose any topic related to American history and 1950s culture, Sophie began her journey to create a digital narrative by casting a very wide net. Her personal preferences for music guided her initial search of online imagery. Though as yet unsure of what she looking for, Sophie already seemed quite engaged with the possibilities of historical investigation that lay before her:

> During the initial hunt, Sophie sat like a predator scanning the landscape for prey. On the edge of her seat, she leaned forward towards the computer screen, eyes narrowed in evaluation. Scanning a page of thumbnails she suddenly smiles and declares, "I see the connection! I know what I want to show about 1950s culture!" (Think-Aloud Observation, December 8, 2008).

Already the motor expressions (body language, facial expression and vocal utterances) of emotion abounded. Her alert position at the edge of her seat and the inclination toward the screen indicated the experience of a 'state of interest' or curiosity, as it would be more commonly referred to (Ainley, 2007). Her narrow eyes and evaluative statements pointed to interest and cognitive judgment, while her smile was infused in all of the above, indicating an enjoyable experience. Figure 12 offers a visual representation of the observed components of emotion in Sophie.

As explained in Chapter 2, interest and enjoyment/happiness have both been identified as positive, activating emotions (Ainely, 2007; Linnenbrink, 2007; Pekrun, 2006, 2007). In the example above, the experience of achievement emotions took place as Sophie initially interacted with historical images. The evaluation of historical imagery produced activating achievement emotions that worked to increase Sophie's motivation towards the learning task of digital history narrative creation (see Figure 13).

Figure 12: Author's original diagram of adapted component process definition of emotion applied to 'Sophie's' interaction with *historical imagery* (Scherer, p.31 & 69 of this manuscript)

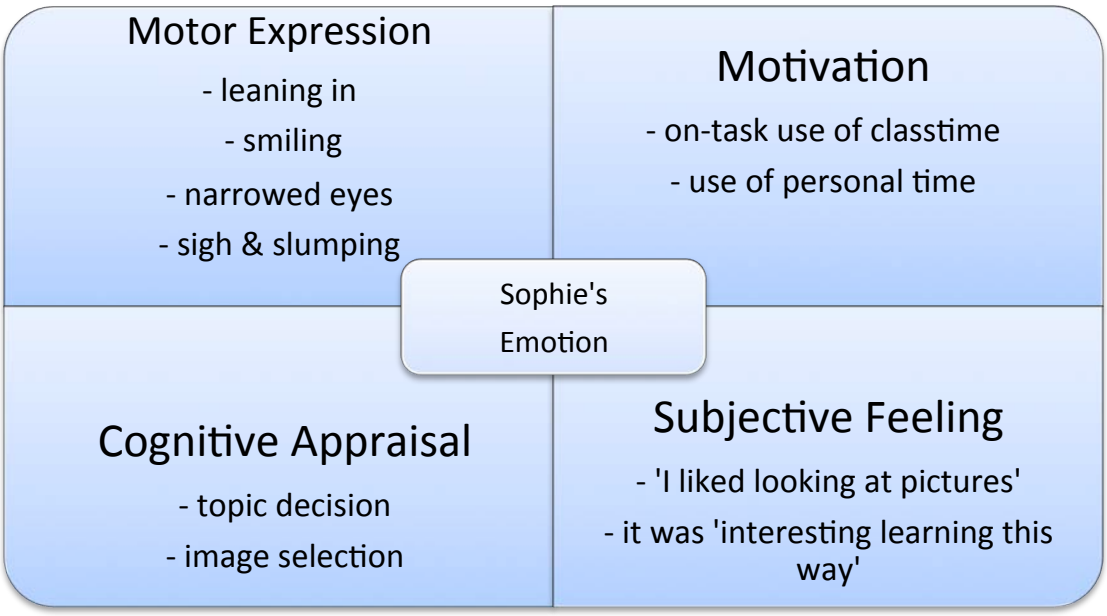
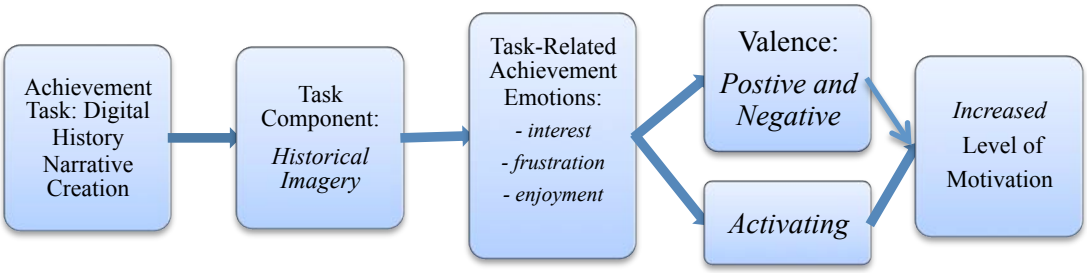


Figure 13: Sophie's encounter with the achievement task of analyzing *historical imagery*



Though, at first, she struggled to select a clear message for her project, Sophie was able to reflect back at how the theme of her digital narrative emerged from viewing the images online:

> There were all these pictures of Elvis and teenagers freaking out and stuff, and I remembered that we [Mr. York's history class] talked about how there wasn't really a 'teen' culture before [the 1950s] and so I started thinking about how I could connect Elvis to teen culture being made. That is when I decided to kind of try to show what was so special about him, ya know, his hair, his smile, his dance moves. It took me awhile to find the perfect pictures, but it was all worth it in the end (Sophie's journal, Dec. 14, 2008).

This passage from Sophie's journal reflects the achievement emotions of pride and frustration surrounding her search for images to suit her desired narrative theme. Despite the fact that pride and frustration possessed different valances (positive and negative, respectively), both possessed the quality of activation, increasing her motivation to work toward her goal (see Figure 13), (Ainely, 2007; Linnenbrink, 2007). Think-aloud observations also provided evidence of activating emotions like pride, frustration and enjoyment, as Sophie engaged with historical imagery:

> Sophie sighed and slumped in her seat. She sat back and stopped searching for a moment, appearing to collect her thoughts. Diving in again, she bounced from site to site gathering select pictures of Elvis while rejecting others. With each picture her thoughts were displayed on her face – wide eyes denoting interest, a smile when she found one worth keeping, pursed lips as she rejected an image (Think-Aloud Observation, December 8, 2008).

Sophie's body language, facial expressions and vocal expressions represented a variety of felt emotions as she encountered various images. When asked to explain the selection of various images, Sophie clarified that each picture needed to highlight what she felt was unique about Elvis - what made him an icon. She went onto explain that not just any picture would do: "Everybody can look at a picture different…I had to make sure that someone watching would see what *I* wanted them to, so they got my message." (Think-Aloud Observation, December 8, 2008).

Sophie's remarks about the difficulty of finding suitable images for her digital history narrative offer insight into her experience of achievement emotions and her subsequent behavior. Sophie's frustration with images that didn't fit her personal standards propelled her search, as did the pride and enjoyment she felt when she found a

picture that satisfied her needs. Her comments indicated the complexity of communicating ideas through primary documents, such as images, even for a successful student. Furthermore, the frustration she felt towards communicating with imagery incited her to work harder, rather than give up (see Figure 13). The benefit of challenging history students to construct historical narratives in such a meaning-laden format requires further investigation. The final chapter of this manuscript contains a proposal for such an investigation.

Throughout her collection of images, Sophie did not stray from her task. She kept her eyes on her computer monitor and talked to no one but Mr. York when he inquired how things were going. She continued searching right up until the end of the class period, hastily packing up as the bell rang. When we met again three days later, Sophie revealed that she had spent additional time at home searching, for what one might describe, as the signature characteristics of Elvis. As the assignment did not require additional outside time commitments, I wondered why Sophie spent additional time collecting images (Classroom observation, teacher instruction, 12/1/2008). Sophie stated that in fact, she "like[d] looking at pictures," and that it was "interesting learning that way" (Interview, 12/16/2008).

In addition to the interest and enjoyment Sophie experienced while interacting with historical imagery, she returned to the achievement emotion of pride, explaining that the extra work was necessary to make certain that people viewing her film truly understood her intended meaning. Sophie's statements provided additional evidence of the activating emotions she experienced as she engaged with historical imagery. Her comments, coupled with her choice to expend unrequired time and energy on her digital narrative, support the role of activating achievement emotions in advancing task motivation. Sophie experienced a range of achievement emotions during her interaction with historical imagery. She felt enjoyment, interest, pride and frustration as she searched for and evaluated various images. Additionally, she experienced engagement, which

represented an achievement emotion as well as motivation (Ainley, 2007; Pekrun, 2006, 2007; Ryan & Deci, 2000). Figure 13 details the connections between the achievement task of analyzing and interpreting historical imagery, Sophie's resultant achievement emotions, including the relevant characteristics of valence and activation, and motivation.

Though Sophie returned to her selection of historical imagery throughout the duration of the project, her interaction soon focused on how to manipulate her selected imagery by means of the Photostory 3 software operations. The exposure to new and unexpected historical imagery aided her decision about the message she intended to weave into the meaning of her digital narrative and evoked activating emotions that propelled her to continue her search and develop her ideas on 1950s teenage culture and its relevance to American history, "I didn't realize how much he [Elvis Presley] affected pop culture and the changes from the 1950s to the '60s. People should know that" (Think-Aloud Observation, December 8, 2008).

Having sorted through the barrage of images available on the Internet, Sophie turned to the more purposeful act of making meaning from the images she found through motion and other special effects available to her in the Photo Story 3 software. The next phase of her journey included emotional experiences more centered on the technological activities surrounding the task of communicating with historical imagery in the context of a digital history narrative.

Phase 2: Construction of the Digital Narrative: Communication Facilitated through Technology

Having gathered many images of Elvis Presley and related cultural trends, such as hair styles, clothing, dance moves and the pastimes of the emerging teen culture, Sophie set about the task of creating a digital narrative that would communicate her interpretation of the historically significant connection she saw between the two. When

asked to articulate the interpretation of Elvis she wanted to get across, she returned to the notion of a changing American culture,

> I want people to be able to see that even though it may only be hair and clothes, it changed America…he really impacted culture during the 1950's. It was really widespread, like around the world. I want people to get that (Interview, December 16, 2008).

Using the theme of cultural impact, Sophie decided to group the images into subcategories that represented the signature characteristics of Elvis. She imported the images from the file she had previously created, into the Photo Story 3 software. Once all the images were loaded in the program, they appeared in the filmstrip/storyboard tool at the bottom of the program (see Figure 14). From this point Sophie rearranged the images within the filmstrip grouping them according to her vision of the narrative.

During these moments of narrative creation, Sophie "…sat leaning in toward her computer screen, moving images into place then pausing and rearranging them. At times she would utter, "I like that…" or "that looks good", but would continue to try new combinations." (Think-Aloud Observation, December 12, 2008). As construction of her narrative proceeded, Sophie's body language continued to reflect her experience of positive activating achievement emotions, such as interest, while her willingness to attempt multiple arrangements of her images revealed increased motivation towards a task - in this case, history learning, supported by Pekrun's (1992, 2002) Cognitive-Motivational model and seen in my own framework (see Figures 15 and 16).

Once she arranged the images to her liking, Sophie delved more deeply into the technological possibilities available to enhance the communication of her interpretation of Elvis Presley's effect on the changing culture of the 1950s. The technological manipulation of the historical imagery held a great deal of interest and enjoyment, more so than any other aspect of the project:

> As Sophie experimented with the effects options, her increasing enjoyment and excitement was apparent. When she tested different transitions or employed the zoom options her eyes would widen and her face spread into a huge smile. The

Figure 14: A generic example of the screen seen by Sophie and other subjects when they imported images into the Photostory 3 software. The filmstrip display is located below the main image and allows for rearranging of images while still viewing the sequence of still images (http://pjnicholson.com/PhotoStory3/importandeditpics.html; 12/15/11)

pitch and volume of her voice increased with each repeated utterance of, "That's cool!" (Think-Aloud Observation, December 12, 2008).

Sophie spent an entire 90-minute class period selecting, previewing and altering the focus and motion on individual images and the transitions between images. Working with only 16 images, she put an immense amount of consideration into how to introduce, display and connect each screen to the next, using transition operations in order to best convey the meaning of her narrative. Using the option to zoom in on aspects of an image and then pan out, Sophie directed potential viewers' attention to what she considered iconic traits of Elvis and 1950s culture: "This is awesome! I can zoom in on his hair or hip moves and then fade out to show the girls freaking out and the boys with the same hair!" (Think-Aloud Observation, December 12, 2008). In terms of altering the actual image, Sophie chose to leave most of them intact, altering only the color to black and white,

Figure 15: Author's original diagram of adapted component process definition of emotion applied to 'Sophie's' interaction with the technological environment of digital history narrative creation (Scherer, p. 31 & 69 of this manuscript).

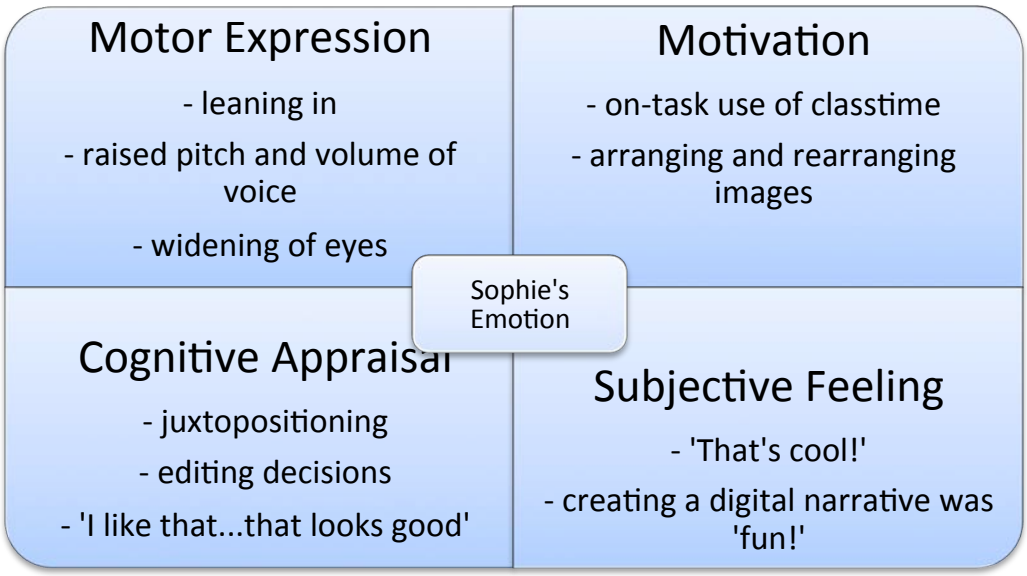
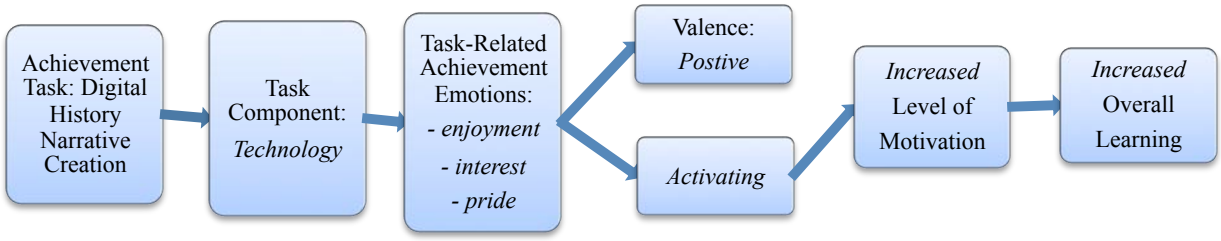


Figure 16: Sophie's encounter with the achievement task of communicating with the technological components of digital history narrative creation.



stating that, "…in the '50s they didn't have colored pictures so I tried to steer away [from that]…" (Interview, December 16, 2008). Throughout Sophie's technological

manipulation of images, her utterances and facial expressions revealed her subjective emotional experience to be positive and activating (Scherer, 2005). Sophie's experience using the technology involved in creating a digital history narrative resulted in positive activating achievement emotions such as enjoyment and excitement that, in turn, increased her level of motivation (see Figure 16). Various action tendencies, such as her engagement during class, as well as the additional time she spent working outside of class on her own accord (Ryan & Deci, 2000; Scherer, 1982, 2005), made it clear that she was motivated to perfect her interpretation and communication of history via her digital narrative. Additionally, comments such as, "I want to make sure they [viewers] understand what I am saying about how he [Elvis] affected our culture…and the world, really. I don't want them to just see a bunch of pictures of Elvis," reflected ownership of intellectual property and the motivation to ensure it was accurate and impactful (Think-Aloud Observation, December 12, 2008).

Sophie summarized her overall learning experience with digital history narrative creation in one word:

> Fun! It was interesting to actually *see* the impact he [Elvis] had on culture…I mean, some of the stuff I had heard of but didn't really get, like I didn't know what a pompadour really was, I mean I knew it was a hairstyle but that was it. I knew girls liked him [Elvis] but didn't imagine them acting the way some of the pictures showed. They acted kinda like we do (Interview, 12/16/2008).

In addition to the enjoyment and interest Sophie identified in the above statement, she also touched upon another important activating emotion - empathy. She related to the girls in the images. A personal connection to people and events of the past particularly motivates one to investigate and understand historical content (Barton & Levstik, 2004). Sophie went on to comment on the use of technology, "…it was really cool, all the transitions and stuff. It was actually harder than I thought it would be. I got stumped trying to put it [the images] in order. I had to really think about how it would come across to someone else…but it was fun to use motion and transitions and stuff to make my point" (Interview, December 16, 2008).

Sophie experienced a variety of positive activating emotions in response to both historical imagery analysis and the use of technology to communicate her interpretation of those images. Though the negative experience of frustration entered at times, it was no less activating than the more positive achievement emotions of interest, excitement, pride and enjoyment, all of which motivated and propelled Sophie's exploration and interpretation of historical content. Not all of the participants in this study experienced such a concentration of positive activating emotions. Some participants, like 'John', whose topics where of a darker nature, encountered disturbing emotions that while negative in valance, proved no less motivating towards task completion.

The Digital Narrative Journey of 'John'

At the time of data collection for this study, 'John' was a freshman at Westside High - Caucasian and fifteen years of age. Like Sophie, John expressed an affinity for history as a topic, but equivocated when evaluating history as a course of study in the classroom, qualifying his assessment with the statement that "it depends on what participants we are doing…" (Interview, December 16, 2008). John produced a digital narrative that asked his potential audience to reconsider the necessity of war in the modern world. He used imagery from the Korean War to exemplify his emerging understanding of, and beliefs about war in general, connecting historic experiences to his own philosophy. In doing so, John provided this study with valuable information about the power of historical images to evoke emotion and motivate historical inquiry. The technological capabilities of the software enabled John to communicate newfound historical understandings to others that might view his narrative. In particular, the expectation of presenting his digital history narrative to a viewing audience elicited activating achievement emotions and increased motivation toward the task.

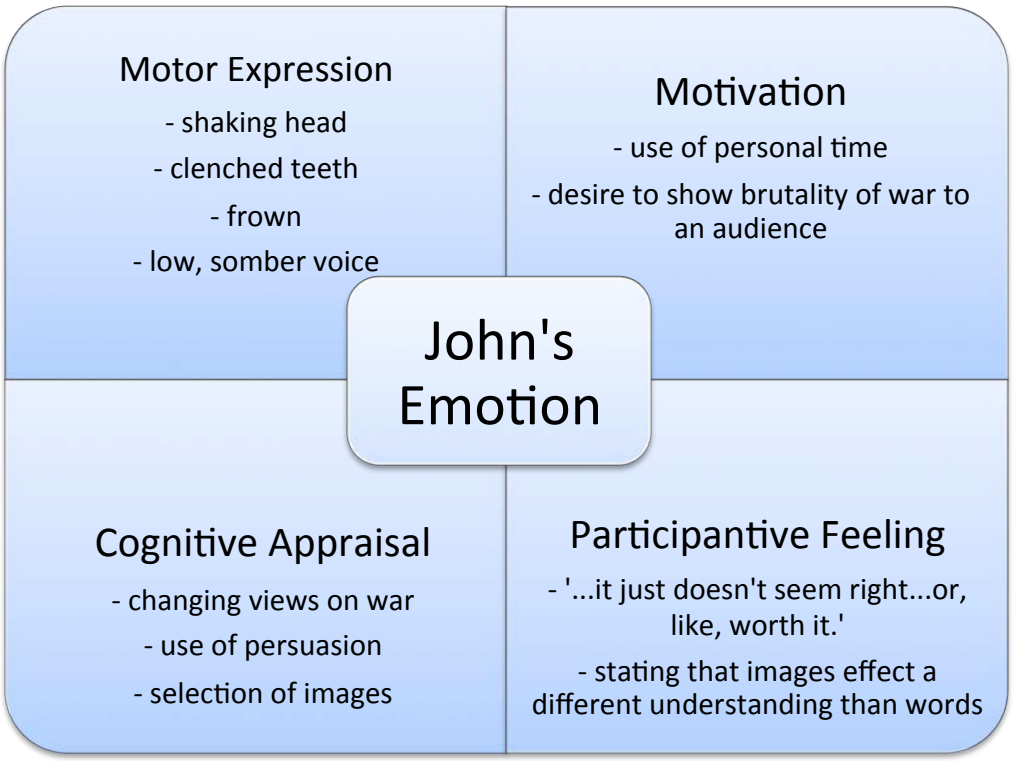
Phase 1: The Search and Interpretation of Historical Imagery

The post activity interview with John provided a succinct description of his encounter with digital narrative creation. We discussed the technological capabilities of this particular achievement task, but our conversation centered far more on the emotional impact of the historical images that became the substance of John's narrative. The theme of our discussion revolved around the emotions John experienced as a reaction to images of the Korean War and how these emotions changed his own viewpoint on war in general, which consequently motivated him to inform and influence others. The desire to inform translated into motivation and effort towards the completion of his digital history narrative (see Figure 17).

To identify and label John's emotional experiences, I employed the subjective feeling and cognitive appraisal aspects of Scherer's (2005) component definition of emotion. John verbally communicated these elements of his emotional experience to me during our interview. Although I was unable to monitor John's action tendencies and motor expressions (nonverbal body, facial and vocal expression) during his initial encounter with the historical images, I did note his recounting of these experiences (Scherer, 2005) (see Figure 17). In order to convey the findings, I presented specific images chosen by John and paired them with his emotional reaction to them.

At the outset of our conversation, I asked John to explain the intended meaning of his digital narrative. He stated that he wanted to show "how any war that we really don't have to go to, we shouldn't" (Interview, December 16, 2008). Having initially been informed that his topic was the Korean War, the broad scope and somewhat activist message confused me. I probed to find how he connected this specifically to the Korean conflict of the 1950s. John spoke of the images he encountered during his research and how, the more he learned about the human cost of war the more he "just didn't feel like it

Figure 17: Author's original diagram of adapted component process definition of emotion applied to John's interaction with *historical imagery* (Scherer, p. 31 & 69 of this manuscript)



[the Korean War] was necessary" (Interview, December 16, 20088). As he explained the evolution of his understanding and opinions on the Korean War, I realized the profound effect the historical imagery had on him,

> I used to agree that war was usually necessary to get it [the situation] in our favor, such as the oil crisis and anything that happened and then [I] kind of saw pictures of what really happens; its not just people shooting, its…they'll capture someone, torture them and might not even kill them, just leave them there.

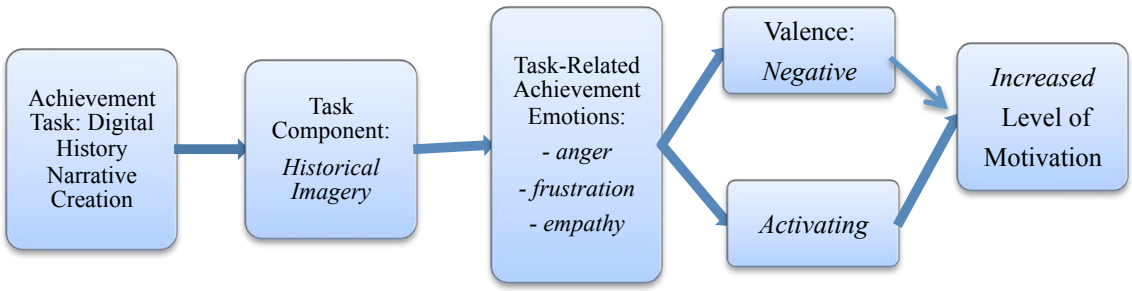
This last statement of John's led to a more targeted discussion of the power of imagery and some of the specific images he used in his digital narrative. The images disturbed and upset John. To him, viewing the historical images brought a reality to his understanding of war that reading about it could not:

> Well, if you're reading about something you, like you might hear about how many people died from the atomic bomb getting dropped but unless you see like

> what actually happened, like all the dead bodies and the people that are injured and living with…with skin cancer and stuff, you only know that that is what the book said. It doesn't like, affect you. When you see it [casualties and damage of war] you get that it was actually there, these people were real, they weren't fake or anything.

John's statements indicate that the subjective feelings he experienced affected the cognitive appraisal of the information he confronted via images, during the process of constructing his digital narrative creation, as supported by Scherer's component process definition of emotion (2005). Being upset by the images led John to change his appraisal of the necessity of the Korean War and war in general. Pekrun's model supports a connection between achievement emotions and levels of motivation (2002, 2006, 2007). It was clear that the cognitive appraisal and subjective feelings that represent the emotional experience stimulated by historical imagery increased John's motivation to create an original interpretation of an historical phenomenon to the best of his ability (see Figure 18). An examination of individual images reveals the relationship between historical imagery, achievement emotion and task motivation in greater detail.

Figure 18: John's encounter with the achievement task of analyzing *historical imagery*



As we looked at specific images, John's explanations for their selection related the emotions he had experienced as he viewed them. These emotions motivated John towards the successful completion of his history project so that others might understand

what he learned through his research. The image in Figure 19 depicts a trench filled with executed Korean POWs while additional captives await a similar fate.

Figure 19: Declassified image of Korean POWs in American war camps (Retrieved from subject's digital narrative, 12/20/08)

Some of the images in John's digital history narrative were declassified images depicting American acts of brutality against Koreans. These images prompted John to read at length about their origin and explanation. John expressed the shock and anger he felt when he learned that Americans executed prisoners of war instead of holding them for judgment, "I couldn't believe that we had like kill, well not kill camps but that they [the Americans] had like 100 foot long trenches and they did just line 'em up in there…to kill 'em and…" Here John just trailed off, shaking his head and clenching his teeth, indicating anger and conflict with what he saw. He emphasized his anger and the importance of people understanding that these were the actions of the Americans by raising his voice and putting stress on the word 'we' as he stated, "this is what was done

to prisoners of war that WE captured." Further discussion revealed that John felt this information was important because it countered the idealistic, heroic image of the American soldier that is often used to depict war as necessary (Interview, John, December 16, 2008). The images definitely stirred emotions in John, in this case anger, frustration and empathy, which are negative and activating (Ainley, 2007) (see Figure 18). These achievement emotions created a sense of urgency or motivation to share what was found during his research on the Korean War and his unique interpretation of this information (see Figure 18).

In light of his anti-war message, most of the images in John's digital narrative highlighted the human cost of war. The picture in Figure 19 showed the brutality of soldiers towards one another, but other images selected by John focused on what is often referred to as the collateral damage – the harm done to the civilian population. Figures 20-23 displayed various effects of war on the noncombatant natives of Korea, which were chosen by John for just that reason:

> I wanted to show the negativity, like all the bad things that happen [in war]. So I showed pictures of families that were affected by the bombs and the children that were affected by shrapnel wounds (Figure 20) and…kids with no parents (Figures 21 and 22). Families had to like, dig through piles of bodies to find their relatives (Figure 23). Their homes were destroyed…it just doesn't seem right…or, like, worth it (Interview, December 16, 2008).

As John led me through the specific images he had selected, describing what each picture meant to him, his facial expressions, tone and body language also revealed his emotional responses to the visual representations of war. I noted that his face, though not fully frowning, could be described as nothing but saddened, while his voice fluctuated between low and somber, and forcefully raised. His speech always held a note of intensity and urgency. In addition, his overall posture indicated interest and engagement as he leaned in toward me during his verbal explanation of his digital narrative (see Figure 17). These nonverbal components of Scherer's definition of emotion related positive and negative emotions. Though John experienced many negative emotions as a result of encountering historical imagery of the Korean War, such negativity actually produced an increase in

Figure 20: Wounded mother and child in destroyed village; Korean War (Retrieved from subject's digital narrative, 12-26-08)

Figure 21: Orphaned Korean children in the ruins of their village; Korean War (Retrieved from subject's digital narrative, 12-26-08)

Figure 22: Orphaned Korean children with the body of their mother; Korean War (Retrieved from subject's digital narrative, 12-26-08)

Figure 23: Korean civilians attempt to identify relatives among the dead bodies; Korean War (Retrieved from subject's digital narrative, 12-26-08)

task motivation (Ainley, 2007; Linnenbrink, 2007; Pekrun, 2007). In fact, the negative emotions of sadness and disgust at the human toll of the Korean War were activating and motivated John to look for just the right images and put them in just the right order so as to convey the notion that war should be avoided (see Figure 18).

Phase 2: Construction of the Digital Narrative: Communication Facilitated through Technology

As mentioned in recent pages, John's transformative experience with historical imagery dominated our post achievement activity interview. Despite this fact, John also had noteworthy comments to make about communicating his understanding of the Korean War in the format of a digital narrative. John spoke of several different aspects of the technology in particular. For instance, John chose not to use any text captions for his images, instead he used the program's ability to zoom and focus in order to communicate his message. In addition, the ability to arrange and rearrange his images to construct meaning gave John a sense of confidence and pride in his final product. "I feel very good, like people will get what I mean. Like when I focus on the face of a kid and then zoom out and you see that his body has holes in it…" (Interview, December 16, 2008). In this statement John expressed satisfaction and pride, as well as concern/anxiety for the potential audience that he associated with using the technology of digital narrative creation. John wanted to be certain that his use of the technology guided a potential audience through his understanding of the Korean War, and how war affected people. John's ordering the images, starting with soldiers and the 38th Parallel and then transitioning into civilian casualties, mirrored the evolution of his own thoughts on war, as discussed earlier in this chapter. In this way, the viewer takes the same journey John did, as he interpreted images and constructed his own understanding of war.

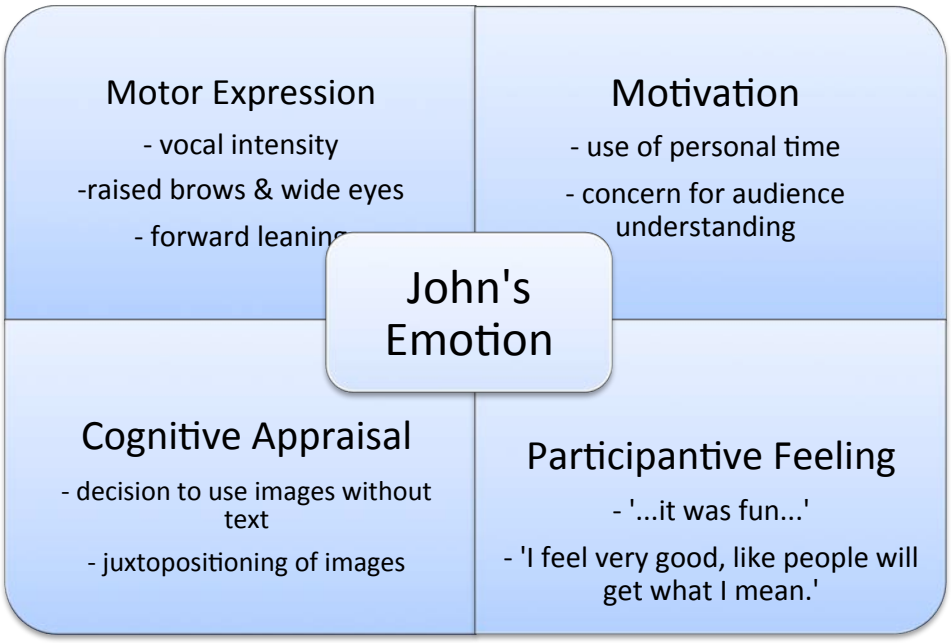
As I mentioned in the discussion of John's emotional encounter with historical imagery, the belief that an audience would see his digital narrative proved to be anxiety

provoking for John. The anxiety about audience comprehension propelled John's efforts towards his digital narrative. I did not attempt to explain how or why John and the other participants concluded that an audience would view their narratives. I did consider it a component of the technological environment of digital history narrative creation, thus emotions experienced in connection to an audience were seen as resulting from the technological aspect of the task. Further exploration between digital history narrative creation and the assumption of a viewing audience is discussed in Chapter 5. This study focused on the fact that the visual technology encompassed in digital history narrative creation held the unspoken promise of viewers that, whether real or imagined, resulted in activating achievement emotions, like anxiety, that increased participants' motivation towards the history project in order to ensure comprehension of viewers.

The technological tasks involved in digital history narrative creation made the overall learning experience productive and enjoyable for John, "I didn't feel like it [digital narrative creation] was like writing an essay at all…it was fun" (Interview, December 16, 2008). The enjoyment and pride experienced by John as he constructed his digital narrative represented positive, activating achievement emotions that directly correlated with the technological tasks he engaged (Ainley, 2007; Linnenbrink, 2007). Pekrun's (2007) cognitive motivation model connects the activating achievement emotions derived from a task to increased engagement and motivation towards that task. The vocal qualities and body language during our discussion on technology indicated such an engaged state (see Figure 24). John's vocal intensity, raised eyebrows, wide eyes and forward leaning body posture indicated engagement with the topic at hand (Scherer, 2005) (see Figure 24).

Overall, one could describe John's experience with digital history narrative creation as transformative. John's reactions to the historical imagery he encountered were highly emotional and caused a reexamination of his academic understandings and political beliefs on the topic of war, "…I read the information and I was like, yeah…but

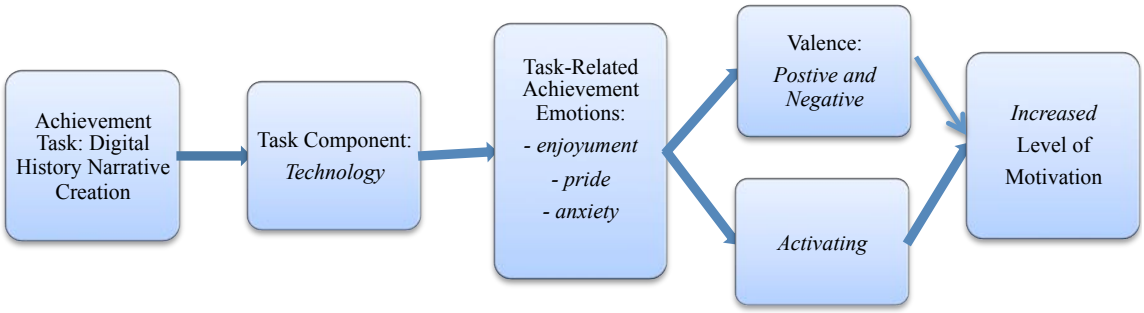
Figure 24: Author's original diagram of adapted component process definition of emotion applied to 'John's' interaction with the *technological* environment of digital history narrative creation (Scherer, p. 31 and 69 of this manuscript)



as I found the pictures I started seeing different views like on what actually happened, like it kind of opened my eyes more" (Interview, December 16, 2008). Although the achievement emotions experienced in relation to the images of the Korean War bore a negative valence, they motivated John to research, and to consider previously unknown or unconsidered consequences of war. In addition, the powerful nature of the achievement emotions John experienced propelled him to share his changing views with others. This desire to inform translated into motivation towards the successful completion of the history-learning task that included a presumed audience for his message. The interaction with digital narrative creation's technological environment provided the experience of positive activating achievement emotions. John described the process as 'fun'. He expressed pride in his digital history narrative, which increased his motivation towards the achievement task at hand, and likely instilled a positive regard

for, and increase in motivation towards future history learning tasks of a similar nature (Ainely, 2007; Linninbrink, 2007) (see Figure 25).

Figure 25: John's encounter with the achievement task of communicating with the technological components of digital history narrative creation



Thus far the featured participants' experiences with digital history narrative creation have demonstrated a range of achievement emotions. Whether positive or negative, all have been activating, increasing participants' motivation toward the history learning task. Sophie strongly exemplified the motivating power of interest and enjoyment in the task related to the technological activities involved in the production of a digital history narrative. Indeed, I observed an emotional response in the form of interest from Sophie in response to the historical imagery she collected, but with a more carefree topic as her subject matter, the excitement she expressed about using technology highlighted her vignette. John, on the other hand, served as a poignant example of intrinsic task motivation derived from achievement emotions resulting from his interaction with historical imagery. The final vignette introduces Billy, a young man who expressed less interest and less success in the realm of social studies academics than either Sophie or John. His encounter with digital history narrative creation reinforced the ideas proposed in this manuscript - that the technological aspects and imagery involved in

digital history narrative creation evoke emotions that increase motivation. Billy's experience also suggests the potentialities of digital history narrative creation to expand educational opportunities for a particular population of students in today's classrooms. Through Billy, I again witnessed achievement emotion and subsequent motivation at the hands of digital history narrative creation, but this time, more than ever, I witnessed joy with the use of this new learning method.

The Digital Narrative Journey of 'Billy'

> When words become unclear, I shall focus with photographs.
>
> Ansel Adams

Like John and Sophie, Billy took Mr. York's American history course as part of his freshman class requirements. A Caucasian male, Mr. York described Billy as:

> …a really nice kid. A little shy, but he opens up more one on one. He definitely struggles in class, mostly because reading and writing is not his strong suit. He isn't in special education, but he is one of those kids where you wonder if he might benefit from some extra help in language arts, and of course language arts skills are huge in social studies. There is lot to read and a lot to write (Informal conversation, December 7, 2008).

Meeting Billy on the first day of think-aloud observations confirmed much of what Mr. York had previously expressed. Friendly and quiet, Billy admitted that, "…most parts of history are ok, the stuff I kinda know, but the farther back you go it gets more boring...there is no connection" (December 12, 2008). Billy's words echoed Wineburg's (2001) assessment of the difficulty in history education to make the past more relatable to today's student. Would putting a face on a person from another time create empathy and understanding for the study of history? (Rosenstone, 2006; Wineburg, 2001). In further discussions, Billy stated that history class itself:

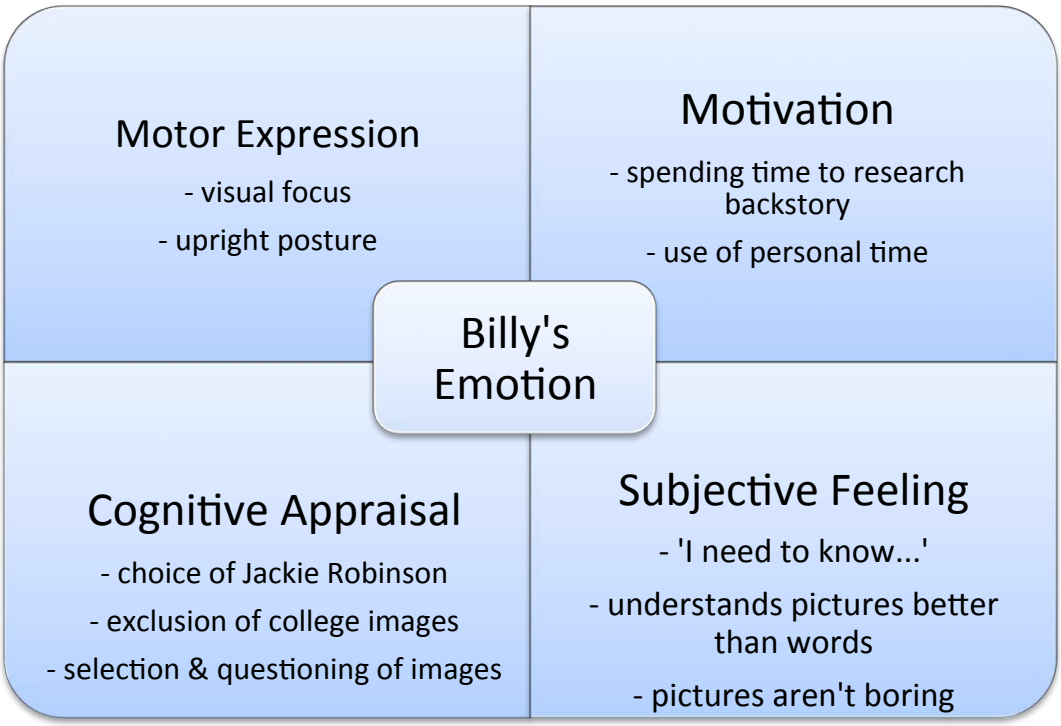
> It's, um, its ok. Um the notes, itself…'cause last year that's basically all we did was write notes, so the notes get a little long and sometimes like, we'll just have essays we have to write and sometimes those aren't as helpful [to learn from], and with this Photo Story its really helpful because you actually had pictures and can see what they [the text] are talking about (Interview, December 12, 2008).

Billy's assessment of history class distinctly linked his lack of enjoyment or enthusiasm for the class to the methods of instruction used and how much said methods aided his particular learning style. Educational psychology researchers Ainely (2007) and Linnenbrink (2007) linked negative, deactivating achievement emotions towards an achievement task to avoidance of similar achievement tasks in the future. Such findings suggested that Billy's long-term dislike of history education stemmed from teaching methodologies, rather than from the content of history itself, and how different methodologies such as digital narrative creation, possessed the potential to change Billy's disposition toward history learning.

Phase 1: The Search and Interpretation of Historical Imagery

Billy sat down at the computer with the vocalized intent of creating a digital history narrative about sports in the 1950s. Beyond that, he really wasn't sure. Perusing images on the screen, his eyes settled upon an image of Jackie Robinson, the first African-American to integrate major league baseball, and from that image, his eyes did not move. He immediately became absorbed in the task; he focused only on the screen looking to the images to teach him not just how Jackie integrated baseball, but first, who Jackie Robinson was, "I need to know where he [Jackie Robinson] came from…what he did before [joining the major leagues]" (Think-aloud observation, December 8, 2008). Such a statement indicated a great deal of the achievement emotion of interest in an historical figure beyond just the events that said figure is most famous for (see Figure 26). Indeed, Billy invested a significant amount of time investigating images that depicted Jackie Robinson as no stranger to sacrifice and trailblazing. Billy's intense search of images led him to discover a history of breaking barriers in college sports other than just baseball, which caused him to reconsider his theme, "I'm just not sure though…I mean, its [college history] good to know, but do I need to include it for them

Figure 26: Author's original diagram of an adapted component process definition of emotion applied to 'Billy's' interaction with *historical imagery* (Scherer, p, 31 and 69 of this manuscript)



[perceived audience] to get what he did in the 1950s…" (Think-aloud observation, December 8, 2008).

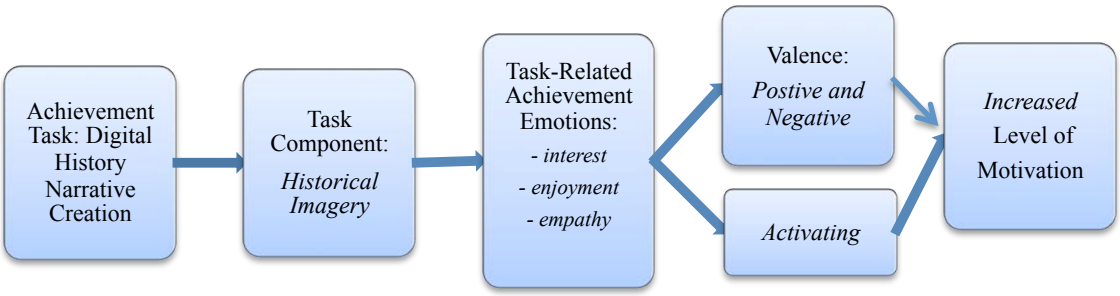
Eventually Billy decided not to include any pictures of Jackie's college days but remarked on the way that images in general expanded his knowledge and influenced his narrative by increasing his interest and guiding his investigation:

> When I searched for something and got all these different images, it like pointed out there were all these different ways to go and different parts of the topic I hadn't thought of and its just like right THERE [emphasis original]. When you are researching online with just words you don't see the connections and the ideas, its just a lot of…I don't know…words (Interview, December 12, 2008).

Billy's comment reflected a certain amount of residual frustration in tackling large amounts of text, which were relieved and replaced by enjoyment and understanding when

working with images. Like the Ansel Adams quote at the beginning of his vignette, Billy benefitted from turning to pictures, sharpening his focus in terms of understanding and his ability to communicate with others. These changes in Billy's educative experience resulted in activating achievement emotions that increased his motivation (see Figure 27).

Figure 27: Billy's encounter with the achievement task of analyzing historical imagery



Although Billy did not include the more obscure photos from Jackie's college days, he did showcase images that reflected the segregated conditions of Jackie Robinson's times. Billy felt that it showed both the difficulty of integrating baseball, and the difficulty of integration in society in general. Billy's investigation of a specific person led him to a greater understanding and greater empathy for an entire demographic group in the United States. For this reason, he also included an image reflecting that over half of the attendees at Jackie' debut were African-Americans, "Wow. That really shows how important it was to them. It was about them" (Think-aloud observation, December 8, 2008). Billy gained a greater understanding of the time period and the people that lived in it. He empathized with them and because of that he spent time at home to continue his research and make sure the story he told reflected an accurate interpretation, "It took a lot longer than I expected…on Sunday, I thought I would just spend a couple of hours but it ended up taking a lot more…" (Interview, December 12, 2008). Billy's focus

during class and his willingness to spend extensive parts of his weekend reflected a high level of pride and motivation indicative of task-related achievement emotion (see Figure 26).

Eventually Billy, so moved by the reality of a segregated America, even engaged in questioning the authenticity of images depicting a smiling Jackie surrounded by equally smiling Caucasian teammates, "I don't even know if this is real. Maybe they just made them smile to get a positive picture of the team…and integration. Not sure there was really a lot of smiling going on" (Think-aloud observation, December 8, 2008). This evidence of the cognitive appraisal Billy engaged in stood as a shining example of the value of working with images in history education. When asked about using imagery to research his project Billy stated, "…its helpful…and fun" (Interview, December 12, 2008). Billy clearly experienced interest and empathy for historical figures without the frustration he normally experienced when tackling research projects centered on reading text alone. In the next phase of Billy's emotional journey with digital narrative creation, he experienced the second side of the coin, he communicated his ideas via images with the help of technology.

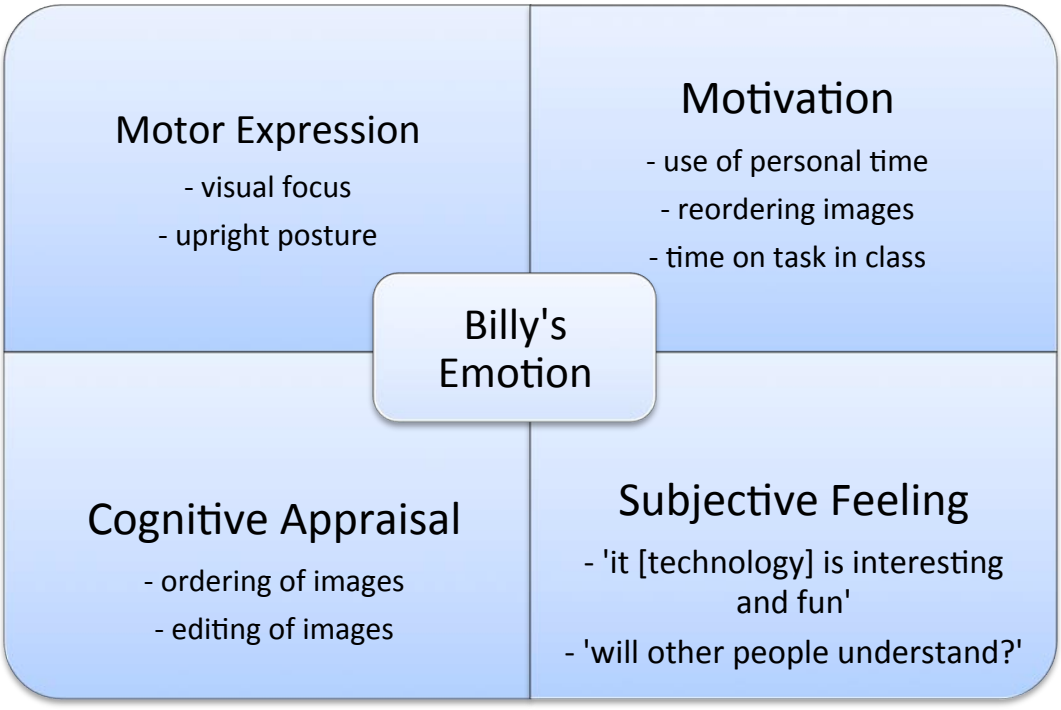
Phase 2: Construction of the Digital Narrative: Communication Facilitated Through Technology

When the time came for Billy to construct a meaningful message from the images he collected, his encounter with the technological environment of digital narrative creation began. Having enjoyed collecting and analyzing images about Jackie Robinson and integration during the 1950s, Billy did not hesitate to begin constructing his narrative. In looking back on the project as a whole, Billy reminded me that his generation is savvy with technology and that incorporating technology into the learning process helped him keep his attention, "…its more interesting 'cause we're [teenagers]

more revolved around technology, so it's easier for us to attack it [learning] that way [with technology]" (Interview, December 16, 2008).

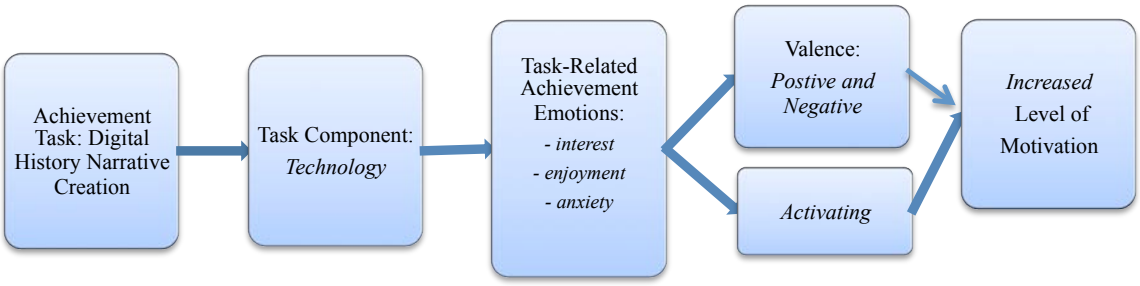
Billy decided to pair contrasting pictures of Jackie Robinson's skills with images of 1950s segregation. During the process he looked nowhere but the computer screen, completely focused on the task at hand. As he explored the technological capabilities of Photo Story 3, his emotional experience and many of the decisions he made centered on two things - his enjoyment of technology, and his concern or anxiety over audience understanding (see Figure 28).

Figure 28: Author's original diagram of an adapted component process definition of emotion applied to 'Billy's' interaction with the *technological* environment of digital history narrative creation (Scherer, p. 31 and 69 of this manuscript)



Billy expressed a great deal of concern for his perceived audience's interpretation of his digital history narrative, "I know what this is, but if I show it, will other people?" (Think-aloud observation, December 12, 2008). In spite of the negative valance associated with anxiety-related emotions, they activate, or increase motivation, as opposed to deactivate. These feelings of concern for his audience's understanding definitely increased Billy's motivation and efforts toward the completion of his digital history narrative. I observed him order and rearrange images multiple times in order to achieve the sequence he felt would facilitate audience comprehension (see Figure 29).

Figure 29: Billy's encounter with the achievement task of communicating with the *technological* components of digital history narrative creation



Having decided on an order for his images, Billy progressed to the stage of using various editing techniques. Billy definitely used a variety of technological tools to help make his message as clear as possible. In some images he cropped out unnecessary people or scenery to simplify the meaning and make it more direct, "I cropped this man out of the picture because I felt like he was distracting. I figured people would understand the part [of the narrative] that this picture is supposed to show better if I just took him out" (Think-aloud observation, December 12, 2008). In addition, Billy utilized

options like zooming in and out in order to draw focus within a picture and direct the viewers' understanding of the image. Billy described these tasks as "interesting," "fun," and "easy to not lose focus on" (Interview, December 16, 2008). The achievement emotions described by the participant connected to subsequent motivation and achievement as described by Pekrun (see Figure 29).

While both stages of the project required additional time at home, Billy pushed through and completed the project on time (Interview, December 16, 2008). He experienced empathy, anxiety, enjoyment, and in the end, pride, "I think people will understand what I mean. I don't always feel that way when I write a paper." Billy's experience with digital history narrative creation not only provided ample evidence that historical imagery and technology evoked achievement emotions that have positive benefits for teaching and learning history, but also suggested additional benefits for a population of students that, like Billy, often feel unable to communicate their ideas through more traditional means.

Summary

Each of the participants I focused on in this chapter displayed activity-related achievement emotions during the course of creating digital history narratives. Two aspects of digital history narrative creation in particular generated emotional responses: the analysis and interpretation of historical imagery and the use of technological capabilities to communicate those interpretations. Each of the participants in the vignettes presented in this chapter expressed varying levels of interest in history, as well as differing academic abilities, yet they all experienced activating achievement emotions in regard to digital history narrative creation. Moreover, though the specific achievement emotions experienced ranged in valence from positive achievement emotions, like enjoyment and interest, to negative achievement emotions, such as frustration and anxiety, I categorized all of the emotions as activating. The participants' experiences

included increased motivation towards history learning as witnessed through increased action tendencies such as time spent on task in class and the exercise of free choice when they chose to spend additional time outside class working to perfect their digital narratives.

The following and final chapter explores ideas such as the one mentioned above in regard to various potentialities of digital history narrative creation for meeting the unique needs of specific student groups within the general population. I also presented a summary of the findings offered in this chapter, as well as what they mean for history teaching and learning, and the future of both technology and emotion in the classroom. Multiple suggestions for future studies beyond the emotional quality of digital history narrative creations appeared in the data and discussed in Chapter 5. I also included acknowledgement and suggestions pertaining to the limitations of the current study.

CHAPTER 5
IMPLICATIONS FOR HISTORY TEACHING AND LEARNING: EMOTIONAL FACTORS IN HISTORY LEARNING VIA DIGITAL HISTORY NARRATIVE CREATION

Introduction

Human beings live emotional lives and form powerful emotional attachments to the past through various means, such as manipulating artifacts, viewing feature films, or visits to places of historical significance. Emotions, regardless of whether and how they are expressed, connect people across time, space and culture. The names and places that occupy history change, but the emotionality of human experiences do not. Today's students can relate to events and people of the past through this common aspect of human existence (Barton & Levstik, 2004; Wineburg, 2001).

Excellent history teachers have always had to deal with student disinterest and apathy in the secondary classroom. In response, they enact methods in their classroom that cohere with what researchers have documented about peoples "natural" (Lerner, 1997) attachments to the past. As Rosenzweig and Thelen (1998) observed, people cherish the past in many forms outside the classroom. The family genealogist connects the current generations to those that came before, weekend museumgoers participate in interactive exhibits, and the millions of people flock to the movie theaters to watch the newest blockbuster film about, say, World War II. The single element we call "emotion" draws people to these activities and those like them, despite the fact that so many recall their time in history classrooms as boring (Thelen & Rosenzweig, 1998). Emotion is relatable. Emotion is interesting. Rather than worry about the subjectivity of emotion, as did the historians of old, emotion might be the one element that transcends time, allowing those of the present to past.

Digital history narrative creation benefits the classroom experience by harnessing the power of emotion to connect human experience and make historical events relevant to current times. Whether enjoyment or anger, many emotions have motivating properties (Ainley, 2007; Izard, 2009; Linnenbrink, 2007; Pekrun, 2006, 2007). When emotions are associated with the learning content or the task at hand, they motivate students to work harder. Digital history narrative creation succeeds in captivating students with historical content, and the technological task of creating a digital narrative. As technology increasingly dominates all aspects of life, it becomes both a way to increase student engagement, and to recognize the skills required to succeed in the 21st century (Iowa Core Curriculum, 2012). Our modern world pushes steadily forward, so too must the field of teaching and learning. Adapting sentimental but antiquated educational practice through the integration of present and future technological innovation may be the only way to keep the past from dying in the hearts and minds of modern history students.

Implications

I embarked upon this investigation with one principal research question – what do students experience when they create digital history narratives? The corpus of data collected revealed overwhelmingly that participants experienced activating achievement emotions. Further analysis of the data revealed that the valence or positive/negative characteristic of achievement emotion didn't dictate the classification of the emotion as activating or deactivating. Participants experienced both positive and negative achievement emotions that were considered to be activating. The combined result of this initial finding is to suggest that certain activity-related emotions, both positive and negative, evoked in the course of history education can be advantageous in the classroom through their ability to activate students toward the task at hand.

Answering the initial research question led to the emergence of two additional questions – how did digital history narrative creation evoke emotions in participants, and

what effect did those emotions have on participants' behavior? Two elements of digital history narrative creation inspired achievement emotion – historical imagery and the technological environment. Achievement emotions stemming from these aspects of digital history narrative creation resulted in increased levels of motivation. These answers emerged from the data and offer pointed suggestions as to how digital history narrative creation might enhance engagement and motivation in the history classroom.

Use of Historical Imagery

This study provided multiple examples of interactions between secondary history students and the achievement task of digital history narrative creation that resulted in an increase in motivation. Aspects of digital history narrative creation evoked a range of achievement emotions (e.g. enjoyment, interest, anger, and anxiety) that presented different valences, but consistently bore activating qualities that revealed themselves via participants' time and efforts aimed at task completion. When examining the specific aspects of digital history narrative creation that prompted participants' emotional responses, I noted two key components of the task - historical imagery and communicating with technology.

The content of historical images used by participants represented a range of topics within the 1950s era of United States history. The emotions experienced as a consequence of these images varied. Although some participants experienced positive achievement emotions like enjoyment, others felt negative achievement emotions, such as sadness or anger, in direct response to their respective collection of images, all of the participants' achievement emotions were activating. Sophie experienced interest and enjoyment as she explored the development of teen culture that occurred in the 1950s, "Look at them scream at him [Elvis]! They act just the way we do [laughs]!" (Think-aloud observation, December 8, 2008). I watched as John wrestled with the sadness and anger he felt over the loss of Korean civilian life during the Korean War. Even though

the images depicted the misery of America's enemies, John related to their suffering and to the injustices perpetrated against them. Such was the extent of John's empathy that putting faces to the knowledge of civilian 'collateral damage' through imagery changed his entire outlook , not just about the Korean War, but war in general, "I just see it differently now. I don't think we should do it [go to war] unless we have to. Seeing pictures is a lot more real than reading about it" (Interview, December 16, 2008).

Being able to relate to the past through the people in the images created a situation in which my participants cared about those people and that past. They cared about and wanted to understand more about the lives of the people in those images. In practical terms this meant my participants spent more time investigating history. Researchers working in the fields of history education and educational psychology agree that such interest and the subsequent motivation it inspires are essential ingredients in learning.

Participants all experienced a high level of activating achievement emotions as a result of their experiences with historical imagery. Reactions to the historical images viewed ranged across the valence spectrum from positive to negative, but all the achievement emotions my participants experienced in response to historical imagery possessed activating qualities. Participants exhibited increased interest in their respective topics as documented through think-aloud observations, interviews and participant self-reports collected in their process journals (Ryan & Deci, 2000). Action tendencies were evidenced several specific behaviors displayed by my participants. Engagement and focus on collection and analysis of historical images signified activation and thereby motivation (Brandhorst , 2002; Pekrun, 1992; Ryan & Deci, 2000; Vallerand et al, 1992). Participants did not stray from the computer screen as they examined a multitude of images. Furthermore, they devoted unrequired hours outside of school to the search for and interpretation of images for their digital narratives. This use of time and energy, while a sign of activation, also signified exercise of free choice. Freely

choosing to spend one's time engaged in a task represented evidence of intrinsic motivation - a crucial component in learning and achievement (Ryan & Deci, 2000).

In this study, engagement and motivation towards the completion of a history project was facilitated by using historical imagery as a primary document. In many history classrooms, the use of historical imagery still takes a backseat to the more traditional text-based approach to history teaching (Wineburg, 2001). The positive effects on participants' interest and motivation imply that an increase in similar usage of historical imagery in the history classroom would benefit students.

Use of Technology

This study's findings augment arguments for classroom activities, such as digital history narrative creation, that embrace technology and evoke student emotion. In addition to facilitating emotional experiences that increase motivation and learning in history classrooms, digital history narrative creation drew upon skills and aptitudes needed for success in the 21st century global market. Competence and confidence in using technology is a necessity for students entering the job market. Familiarity with a wide range of technological environments and experience navigating new technologies is a requirement in today's world. To neglect to engage our students in a variety of such skills while still in our classrooms contradicts the preparatory purpose of the educational system. The field of history teaching and learning has a responsibility to find worthwhile ways of introducing students to experiences with technology in the history classroom. The research presented here helps to substantiate digital history narrative creation as just such a worthwhile exploration of history and technology.

Similar to the effects of engaging with historical imagery, working with the technological aspects of digital history narrative creation produced achievement emotions that increased motivation. The task of digital history narrative creation placed my participants in an environment in which they must have understanding and skills related

to emergent technologies. Rather than be daunted by such a task, my participants reveled in it. Participants in this study unanimously vocalized their enjoyment and interest in communicating their ideas and interpretations of historical themes in the technological environment. For some, it just fit with the mode of communication that dominated their life outside of school. For others it offered a change from the norm, the chance to try something new. Billy clearly expressed the fact that the technological means of delivering his ideas in a digital narrative provided him with an opportunity to feel academic success and accomplishment. Billy commented that he produced a good final product via digital narrative creation while also enjoying the process. He further remarked that he typically did not feel that way when working with tasks that involved only reading and writing.

The findings related specifically to participants' emotional responses to technology indicate that the inclusion of technology based teaching methods offer the prospect of increasing student engagement and motivation toward the task at hand. In total, these findings support and encourage the use of digital history narrative creation as a teaching tool that combines the engaging and motivating capabilities of both historical imagery and technology.

Additional Considerations for Inclusion of Digital History Narrative Creation

Educational researchers also acknowledged the existence of multiple intelligences, as well as multiple ways of communicating intelligence (Eisner, 2004; Gardner, 2006). Achievement activities such as digital history narrative creation integrated these ideas from educational theory into the practice of the history classroom. The achievement task of digital history narrative creation offered students new modes of learning and assessment that promise to reach more students like Billy, who might not experience as much success with traditional forms of history teaching.

Limitations of the Current Study

The current study represented an exercise in qualitative research. I sought to discover the potentialities and outcomes of history learning when conducted with digital history narrative creation. Due to the qualitative nature of data gathering methods associated with such an undertaking, I in fact gathered a lot of data that I eventually classified as irrelevant to the emerging theme of the study. At the same time, data potentially useful to the current study may have been overlooked due to the lack of focus at the outset of data collection. This suggested to me that future studies might employ altered and additional means of data collection in order to address this limitation. Guided perhaps by this study, researchers might add additional measurements to document and describe the experience of achievement emotion and overall learning.

Finally, any concept that the research community examines eventually needs to be tested with multiple samples in order to correspond to the entire population one hopes to represent. This study, in the tradition of qualitative exploration, focused on a small number of participants in order to gather data of great depth (Yin, 1994). The findings of this investigation lay a foundation for a theory on the capacity of historical imagery and technology to evoke achievement emotion that results in increased motivation. Future studies must take a different approach – increasing both the number and demographic diversity of participants in order to test this theory. The sample of participants in the current study represents the population of the high school they attended, but not the population of high school students in the United States. Future studies might rectify the discrepancy between the demographic make-up of the sample in the study and all students that might engage in digital history narrative creation.

Capturing and Recording Emotion

As detailed throughout this manuscript, I entered the research site without a specific research question or hypothesis in mind. Instead I sought to observe digital

history narrative creation in its entirety in the hopes of understanding how the process affected history learning in secondary students. As a result, during the data collection process I documented all participants' thoughts, behaviors, and reactions. I gathered a tremendous amount of data. Advantages of the qualitative approach included the ability to uncover the unexpected central role of emotion in the task of digital narrative creation, as well as a myriad of observations that pertained to potential future studies. I found, however, that this methodology also resulted in a lack of refinement of details in the initial data collection. To recreate this study with the intent to investigate participants' emotions would allow for a more focused approach to observed behaviors, utterances and nonverbal communications.

In addition to a more purposeful collection of data, intent to study emotion would have allowed for a more refined analytical focus. Had I completed a literature review pertaining to emotion in learning and specifically, emotion in history learning, it would have enhanced my ability to recognize, interpret and code additional relevant data. Likewise, it would have eliminated the collection of superfluous data units. With a greater understanding of emotion in education, I would have created more poignant interview and journal questions. I employed questions in interviews and journals that addressed a variety of aspects about the general experience of creating a digital history narrative. Instead questions could have directly asked participants about the emotions they felt during the task and any perceived effects on motivation towards history learning in both the immediate and future sense.

My status as a novice researcher played a role in limitations of the study as well. Inexperienced in both the collection of observational data and conducting interviews, I missed opportunities to probe deeper into participants' responses during think-aloud observations and interviews. At times during data collection I struggled with the conflicting roles of researcher and educator. With additional experience in research settings, I would feel more confident and focused in my role as researcher.

Selection Bias

Selection bias is a danger when working with small numbers of participants (Merriam, 1998). In this study, the choice of the research site was entirely based on the fact that implementation of the phenomenon of study, digital history narrative creation, was already taking place. Though this qualifies the student population as a convenience sample, and those that chose to participate, as self-selected, there is some concern as to the choice of participants that participated in think-aloud protocols (Merriam, 1998). These six participants were purposefully chosen by Mr. York for two reasons: first, he felt they represented a range of interest and ability in United States history; second, he felt they would be comfortable vocalizing. This second reason is the cause of concern. If in fact, these six students did possess a quality similar amongst themselves, but unique among the larger student population, this represents a bias.

Novelty Effects

During the first round of data collection in this study, I noted that this was the first time any of the participants had engaged in digital history narrative creation. Some of the participants, like Jeffrey, connected the newness of the task, in part, to their enjoyment of the task, "I really enjoyed the technology stuff; I had never done anything like a Photo Story [digital narrative] before" (Interview, 12/16/08). Judging by the methods used and data collected in this study, there is no way to know how much of an impact the novelty of the task effected participants' emotional responses. Only three participants made reference to the tasks' novelty in conjunction with their opinion of the task, however, that doesn't mean that other participants didn't experience a connection, as well. The question of the effect of novelty on the findings presented in this study is also the basis for future studies of a similar nature. This idea is revisited from that perspective in the following section.

Future Studies

The participants who took part in this study benefitted from their experience with digital history narrative creation. They experienced interest and enjoyment while they examined historical images and again while communicating their interpretations through the technology of digital narration. Their enjoyment of history learning increased. Their motivation towards history learning increased. They related to the past and in that process understood how history connected to their present and future. Did participants in this study learn more than they would have using traditional methods? Does digital history narrative creation offer additional benefits to the history classroom? Questions such as these remain. The answers wait to be uncovered through potential follow-up studies.

A plethora of ideas for potential future studies reside in the information collected in this investigation. Some data gathered in the current study suggested additional benefits to specific populations of students. Data also indicated additional properties of digital history narrative creation such as the perception of a viewing audience, which offered unexplored phenomena with the potential to enhance history teaching and learning. Others future studies might focus on continued improvement of data collection, addressing limitations to qualitative research methods discussed in the previous section on limitations of the current study. My post-data collection review of literature on emotion and the learning process uncovered a range of quantitative measurements that recorded emotion in participants and offered means to substantiate and broaden the data collected in the current study.

Addition of Quantitative Methods

In this study, I used an amended version of Scherer's component processing definition of emotion. Though the original definition contained five components to the experience of emotion, I focused on four: subjective feeling, cognitive appraisal, motor

expression and motivation. I observed these components through observations, interviews and participant self-report journals. I disregarded the neurophysiological component that included bodily reactions such as heart rate, respiration and pupil dilation due to data collection limitations (Izard, 2010; Lazarus, 1966; Scherer, 2005). Future studies might further substantiate participants' experience of emotion by adding data of a biophysical nature.

In addition to internal bodily functions that have been shown to correlate with the experience of emotion, outward expressions, categorized as motor expressions by Scherer (2005), might be recorded with measures of a more quantitative nature. Researchers have explored facial expressions and their capacity to communicate emotion for decades (Plutchik, 1962). Facial Action Coding System or FACS recorded over 40 distinct action units that correlated with the subjective experience of emotion (Ekman and Friesen, 1976, 1978a). The addition of a quantitative measure such as FACS would, again increase the amount of data gathered by recording subtle facial movements unnoticed by a researcher. A quantitative measurement would also provide more objective evidence of participant emotion than the researcher's interpretation alone.

This study gathered participants' self-reported opinions, actions and emotions about the process of digital history narrative creation through participant journals, think-aloud observations and interviews. Future studies also might employ computerized self-report measures that would record participant emotion as digital history narrative creation took place. Software such as *Between the Lines* allows participants to record their emotions or subjective feelings at different points throughout an achievement task (Ainely, 2007; Ainley & Hidi, 2002). This would increase the amount of data pertaining to affective experiences, as well as increase the effectiveness of correlating specific achievement emotions with particular components of the achievement task of digital history narrative creation. Additionally, this method would gather much of the data collected via think-aloud observations while removing the potentially behavior altering

presence of the researcher. An additional option for providing quantifiable data of achievement emotion, the AEQ or Academic Emotion Questionnaire is a self-report measure designed specifically for academic domains (Pekrun, et al, 2002).

Experimental and Quasi-Experimental Methods

Ideally the findings presented in this study would be tested in a variety of situations in which the researcher would be able to exercise some control. Experimental designs involving the examination of motivation outcomes between a control and experimental group where the treatment is the use of digital history narrative creation or either of its two identified components (historical imagery and technology), would be ideal. Such an experiment provides the opportunity to verify causal relationships suggested in this study.

Though a quasi-experimental design does not allow for the same level of control seen in experimental design, the former still offers the chance to focus on objective measurement of an identified dependent variable that can be compared against a baseline. In this scenario, a causal relationship might still be substantiated. These methods would be particularly beneficial in future studies related to digital history narrative creation's potential effect on student learning, and the use of historical thinking skills when working with historical imagery as primary source documentation.

Verifying Effects on Learning

Previous research carried out by Pekrun et al. (2002) verified that the experience of positive and some negative, activating achievement emotions positively correlated with better exam and course grades, while deactivating achievement emotions positively correlated with course and university drop outs. Participants in the current study indicated that they had learned about their historical topics through the process of creating digital history narratives. Some felt that the process allowed them to make new connections between materials learned in the class, while others felt learning through

digital narrative creation was a more in depth way to study the past, "I felt like I understand better what it was like to be there, like and live then…it [creating a digital narrative] was a better look inside of it [history], like the little details." (Interview, Ellen, May 21, 2009). Another participant proclaimed that he learned more about his topic through digital history narrative creation than he would have through traditional teaching methods, "…I think I learned it [history] a lot better than like reading it…I like had to almost become an expert to make a movie…you have to really understand it…" (Interview, Bob, December 12, 2008).

Despite this self-reported data on learning outcomes, this study did not employ measurements to record a change in content knowledge or learning. A variety of methods to collect such data could be used by future studies of this nature. Implementing content related pre- and posttest measurement would allow for quantitative data on an increase in learning. Learning that occurs during digital history narrative creation tends to consist of more subjective, thematic information rather than simple facts. Measuring such a growth in learning would have to include more subjective elements such as essays, in order to fully recognize a change in learning. This would be more difficult in a research setting such as Mr. York's class, where each participant selected individual topics to explore. Aside from content pre- and posttests, project grades could be correlated with measures of achievement emotions experienced by participants in order to see if correlations between activating and deactivating achievement emotions and learning outcomes were similar to those found by Pekrun et al. (2002).

Use of Historical Thinking Skills

Billy's speculation about the legitimacy of images of Jackie Robinson and his Caucasian teammates as friends provides evidence of the use of critical thinking skills in the analysis of primary source documents. This is a skill recognized as important among historians and standards setting groups, but lacking among today's students (Coventry, et

al., 2006; Iowa Core Curriculum, 2012; Rosenstone, 2006; Wineburg, 2001). An investigation of students' awareness of primary source document interrogation might be included before and after engaging with digital narrative history creation would offer findings as to whether or not such skills improved through engaging with this task. Other researchers might devise ways in which to compare the frequency of the use of such skills in a comparative study between student's completing digital history narrative creation and those composing a traditional written essay.

Potential within Specific Student Populations

Special Needs

In this study, my participants largely represented middle-class, Caucasian students. Amongst the particular sample I worked with, unique abilities and needs were revealed within the context of digital history narrative creation. Billy, a participant introduced in Chapter 4, struggled with the large amounts of reading and writing used in traditional methods of teaching history,

> I know I'm not very good at language so its almost harder for me to write the essay…sometimes its just so hard to say what you are thinking in words, then once you find a picture, then you can kind of show [it] (Billy, Interview, December 12, 2008).

Billy's feelings of academic inadequacy relative to traditional means of assessment were echoed by Ellen, "I was kind of excited [about the project] 'cause I like that kind of stuff with the pictures and everything 'cause sometimes with words I get kind of jumbled up and don't know what to say…" (Interview, May 21, 2009). Comments such as those shared by Billy and Ellen reflect negative, deactivating achievement emotions such as hopelessness found to correlate with decreased motivation and overall learning (Pekrun, et al. 2002; Pekrun, 2006, 2007).

Combined with participant comments that referred to history writing assignments as boring and digital history narrative creation as exciting, the effect of such emotions

should be investigated. In reference to mood/task schemas (Linnenbrink, 2007) and the development of dispositional states toward achievement tasks (Ainley, 2007) data from participants reflecting negative deactivating achievement emotions towards traditional history teaching methods such as reading and writing should be investigated. Future studies might address if such dispositions do in fact exist and how they correlate with academic achievement. Data on this matter is relevant to determining if certain teaching methodologies possess qualities more advantageous to for student learning, while others do not.

Gifted Learners

Often overlooked, gifted learners were also present in my sample participants and indicated distinct benefits from working with digital history narrative creation. High achieving students already excel at the traditional teaching and assessment methods of reading and writing. The experiences of gifted participants in this study expressed the challenge and excitement at the prospect of learning with a new method, "I struggled at first, I really wanted to use words and like, put captions on my pictures. I had to really think, and like, um, think in a whole different way to communicate my ideas through pictures" (Sophie, interview, December 12, 2008). Other gifted participants agreed with Sophie, such as Bob, who actually ended up using captions, and Jane, who stated, "…it's really hard to find the right image…I am so used to writing and that is just so easy" (Interview, May 21, 2009). These participants' comments reveal that digital history narrative creation potentially challenges gifted students while simultaneously accommodating needs of academically challenged students. While exciting to consider, these potentialities of digital history narrative creation require further investigation to substantiate and curriculum development strategies to capitalize.

Demographic Populations

Demographic considerations have a firm place in any discussion on best practices in education. The current study worked with a fairly homogeneous group of participants. Age, gender, race and socio-economic status all possess unique in-group factors that could result in additional information about the effectiveness of digital history narrative creation as a teaching tool. Future studies might target their examination of the use of digital history narrative creation and it components to specific demographic populations in mind. Studies that establish base-line information for individual demographic groups, as well as comparative analysis between demographic groups would all provide valuable data as to the outcome of implementing digital history narrative creation in the classroom.

Teacher Effects

Teaching methods are greatly affected during implementation. Regardless of the findings presented here or in subsequent studies on student outcomes from interaction with digital history narrative creation and its components, different teaching styles must be considered. With pedagogy as a focus, future studies might engage in a comparative analysis between classrooms with similar student populations, but different teaching styles.

Additional Content Areas

The discussion of literature presented in Chapter 2 acknowledged that digital narrative creation is being used in various educational content areas. Efforts to investigate the various implementations of digital narration have occurred, but have focused on factors and outcomes other than achievement emotion and the effects of those emotions on student behavior. This study focused on a course in United States history, but future investigations might explore other unique curricular contexts, such as a science course. Studies in additional content areas would add to our basic understanding of

student interaction with digital history narrative creation, and allow for comparison across content areas, isolating factors and outcomes unique to each setting.

Novelty

One such finding is related to the novelty or newness of digital history narrative creation. Many of the participants commented on how they had never created a digital history narrative before, or even worked with a software program like Photo Story 3. Jane expressed shock and interest when discussing the potentialities of the program, "I had no idea it [Photo Story 3] had…it was interesting to see all the things I could do with it" (Interview, May 21, 2009). These sentiments were shared by Hank, "…it was interesting to see the different transitions that we could use and how we could do the motions to focus in on part of it" (Interview, May 21, 2009). Though positive and activating, interest in an achievement task needs to be maintained in order to be truly beneficial over time. If implemented, would digital history narrative creation continue to generate positive activating achievement emotions that increase motivation, as this study found or, once the novelty wore off, would the academic benefits fade away also? This question provides a starting point for future investigations of the productivity of digital history narrative creation in the classroom.

The Creation of Learning Dispositions

Employing ideas based in classical conditioning, some educational psychology researchers have pointed to cases like Billy as examples of how achievement emotions associated with particular achievement tasks have the power to motivate an individual toward task accomplishment, and encourage engagement in similar tasks in the future (Ainley, 2007; Linnenbrink, 2007). For all my participants, digital history narrative creation increased their motivation towards the project at hand and toward engagement with similar assignments in the future. This held even greater promise for students like Billy, who benefited not only from the addition of positive associations with history

achievement tasks, but also from the removal of negative, deactivating emotions associated with repeated past failures in more traditional forms of history teaching and learning.

Technology and Its Audience

An additional element of the task of digital history narrative creation evoked interesting responses from the participants in this study: the perception of a viewing audience. As discussed in previous chapters, the participants in this study experienced strong activating achievement emotions in response to a viewing audience that essentially didn't exist. Sometimes negative, such as anxiety, sometimes positive, such as pride, the participants showed great concern and motivation to successfully communicate their ideas to their perceived viewing audience. Future studies might explore the relationship between working with visual media and the perception that such communications always include a viewing audience, as well as the power of an audience to evoke achievement emotions and motivation toward learning.

Summary

This study found evidence that the visual and technological elements of digital history narrative creation evoked positive and negative activating achievement emotions. I presented further evidence that said achievement emotions brought about an increase in motivation towards learning. Future studies should investigate these claims in order to substantiate and quantify them by means adding more focused and quantitative methodology. Additional findings suggested that digital history narrative creation might hold particular abilities to meet the needs of specific populations of students ranging from gifted to special education. Finally, unique data units posed interesting questions such as, "Is there a schematic relationship between visual media and a perceived audience, and if so, how does that impact digital narrative creation as an educational tool?" and "How does the novelty of a task effect the achievement emotions and subsequent level of

motivation evoked by that task?" Studies answering these questions will deepen and refine the understanding of the potential for digital history narrative creation as a teaching method, as well as the nature of the relationship between historical imagery, technology with achievement emotion, and motivation to study history.

APPENDIX A:

IRB DOCUMENTATION

Human Subjects Office
340 Medicine Administration Building
Iowa City, Iowa 52242-1101
319-335-6564 *Fax* 319-335-7310
irb@uiowa.edu
http://research.uiowa.edu/hso

IRB ID #: 200811713

To: Amy Jones

From: IRB-02 DHHS Registration # IRB00000100,
Univ of Iowa, DHHS Federalwide Assurance # FWA00003007

Re: Student-Produced Desktop Documentaries in the History Classroom: A 21st Century Medium for Student Thought and Decision Making

---

Approval Date: 11/21/08

Next IRB Approval Due Before: 11/21/09

Type of Application:	**Type of Application Review:**	**Approved for Populations:**
☒ New Project	☐ Full Board:	☒ Children
☐ Continuing Review	Meeting Date:	☐ Prisoners
☐ Modification	☒ Expedited	☐ Pregnant Women, Fetuses, Neonates
	☐ Exempt	

Source of Support:

This approval has been electronically signed by IRB Chair:
Janet Karen Williams, PHD
11/21/08 1517

OFFICE OF THE VICE PRESIDENT
FOR RESEARCH

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APPROVED BY: IRB-02
IRB ID #: 200811713
APPROVAL DATE: 11/21/08
EXPIRATION DATE: 11/21/09

INFORMED CONSENT DOCUMENT

Project Title: Student-Produced Desktop Documentaries in the History Classroom: A 21st Century Medium for Student Thought and Decision Making

Principal Investigator: Amy L. Jones, MAT

Research Team: Amy L. Jones, MAT; Bruce Fehn, PHD

Research Team Contact: Amy L. Jones, MAT, 319-325-1573, N290 Lindquist Center, Iowa City, IA 52242-1589

- If you are the parent/guardian of a child under 18 years old who is being invited to be in this study, the word "you" in this document refers to your child. You will be asked to read and sign this document to give permission for your child to participate.
- If you are a teenager reading this document because you are being invited to be in this study, the word "you" in this document refers to you. You will be asked to read and sign this document to indicate your willingness to participate.
- If you are an adult student (18 years old or older) who is being invited to be in this study, the word "you" in this document refers to you. You will be asked to read and sign this document to indicate your consent to participate.

This consent form describes the research study to help you decide if you want to participate. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research subject.

- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should discuss your participation with anyone you choose such as family or friends.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

This is a research study. I invite you to participate in this research study because you are a student in a class for which your teacher is including an activity called desktop documentary making.

The purpose of this research study is to learn about the thought processes that students engage in through historical desktop documentary making. The findings from this study will help educators understand this new mode of historical production and its potential for enhancing secondary history teaching and learning.

As many as 200 people will participate in this study conducted by researchers from the University of Iowa. The study's procedures will take place in your social studies class during and for the amount of time your teacher gives you to complete the desktop documentary.

If you agree to take part in this study, your involvement will last for the length of the class assignment for the completion of the desktop documentary.

I would like to observe you in your class as you make your desktop documentary. I will ask you to keep a journal during the time you are making your desktop documentary.

The journal you keep will address the following information:

- Bibliographic information about the documents that you choose to include in your documentary.
- Why you put your documents in the order you did.
- Why you used the special effects that you did.
- Why you used the music you did.
- The intended message of your desktop documentary.
- Your evaluation of the learning process involved in making a desktop documentary.

Demographic information that will be collected from you includes:

- Age
- Year in school
- Gender
- Ethnicity

I would also like to conduct a maximum of three interviews with you before, during and after you create a desktop documentary as part of your social studies class work. During these meetings we will do the following:

- View your desktop documentary as you create it and once it is done.
- Discuss the decisions you make as you create your desktop documentary.
- Discuss your understanding of the historical content of your desktop documentary.
- Discuss your opinions about the process of making a desktop documentary.
- Discuss your journal where you record your thoughts and decisions as you make your documentary.

The study procedures will take place in your social studies classroom or in a school room that has a computer available to use.

I would also like to record these discussions on audio tape to make sure that I accurately record your comments on the topics listed above. If you do not wish to be recorded, you may still participate in the study. Please indicate your decision by placing your initials next to your choice below:

[_____] Yes [_____] No I give you permission to make audio recordings of me during this study.

You may experience one or more of the risks indicated from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study. You may be concerned that your decision whether or not to be in this study will affect the grade you receive for the course. Your participation in the study will not be used to determine course grades.

You will not benefit from being in this study. However, we hope that, in the future, other teachers and

students might benefit from what is learned through this study about history teaching and learning.

You will not have any costs for being in this research study. You will not be paid for being in this research study.

The University and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

- federal government regulatory agencies,
- auditing departments of the University of Iowa, and
- the University of Iowa Institutional Review Board (a committee that reviews and approves research studies)

To help protect your confidentiality, I will not collect any personal identifying information. I will use a false name to identify your study information. The false name assigned will be linked to your name. The list linking your name and your name will be stored in a separate location that is accessible only to the researchers. All records will be maintained in locked offices and on secure computer systems in password protected files. I will not use your name or any identifying information about you in any publications or reports of this study.

Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify. Your decision to participate or not to participate does not affect the grade you receive on your desktop documentary by your social studies teacher.

We encourage you to ask questions. If you have any questions about the research study itself, please contact me at 319-325-1573, or at N290 Lindquist Center, Iowa City, IA 52242-1589 Dr. Bruce Fehn is also available to answer questions at bruce-fehn@uiowa.edu, or at N285 LC, Iowa City, IA 52242-1589, 319 335 5367.

If you have questions, concerns, or complaints about your rights as a research subject or about research related injury, please contact the Human Subjects Office, 340 College of Medicine Administration Building, The University of Iowa, Iowa City, Iowa, 52242, (319) 335-6564, or e-mail irb@uiowa.edu. General information about being a research subject can be found by clicking "Info for Public" on the Human Subjects Office web site, http://research.uiowa.edu/hso. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

This Informed Consent Document is not a contract. It is a written explanation of what will happen

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APPROVAL DATE: 11/21/08
EXPIRATION DATE: 11/21/09

during the study if you decide to participate. You are not waiving any legal rights by signing this Informed Consent Document. Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subject's Name (printed): _____

Do not sign this form if today's date is on or after EXPIRATION DATE: 11/21/09 .

_____ _____
(Signature of Subject) (Date)

Parent/Guardian's Name and Relationship to Subject:

_____ _____
(Name - printed) (Relationship to Subject - printed)

Do not sign this form if today's date is on or after EXPIRATION DATE: 11/21/09 .

_____ _____
(Signature of Parent/Guardian (Date)

November 1, 2008

Dear Students and Parents:

My name is Amy Jones and I am a graduate student in the College of Education at the University of Iowa. I am writing to invite you to participate in a research study. The purpose of the study is to learn more about how students engage with history by observing and talking to students as they compose their own desktop documentary. I hope to take this knowledge and use it to improve the way history is taught in our schools.

I am inviting students in the history class at Albia High School to participate in my study. This year, your teacher has incorporated just such a documentary making activity in the plan for the class. Enclosed with this letter are two copies of a consent form. The consent form provides additional details about the study. Students in the class are NOT required to participate in my study.

Please read the consent form and discuss participation in the study. If you both agree to participation in the study, I ask that you both sign one copy of the document and return it to the teacher. You may keep the second copy for your records.

If you do not wish to participate in the study, please return both copies of the consent form without signing them.

If you have any questions about the research study itself, please contact Amy L. Jones at 319-325-1573 or N290 Lindquist Center, University of Iowa, Iowa City, IA 52242-1420.

Thank you very much for your consideration.

Sincerely,

Amy L. Jones, MAT
Doctoral Student
Teaching and Learning
University of Iowa

APPENDIX B:

STUDENT SELF-REPORT DOCUMENTATION

Desktop Documentary Journal

Name: _____
Date: _____

Title: _____
Historical Era or Topic: _____
Theme or Question Being Addressed:
_____
_____

For Each document you include in your documentary, please relate the following information:

1) Date of the document's production (approximate).
2) Provide a description/summary of the documents' content.
3) Why did you include this document? How does it advance the message or understanding of your documentary?

- Write a 3-5 sentence paragraph describing the music you selected for your documentary; how it complements the visual components of the film and how it advances the message or understanding of your film.

Each day you work on your documentary, please:

- Discuss instances in which you added special effects to a picture or focused o certain parts of a picture and explain why you did those things (how they advanced the message or understanding of you documentary).
- Discuss instances in which you intentionally manipulated the amount of time your viewers would spend with a document and explain why you did so.

Reflection: Read through these questions after each day of work. Record your thoughts in relation to each days thoughts and experiences.

- Describe any new information gained through this project, as well as prior learning that was enhanced.
- What do you hope your audience will learn and experience by watching your documentary?
- What did you enjoy about this project?
- Were there parts of this project you felt were difficult? Easy? Why?
- What skills did you use in creating this project?
- How is this activity different from other history class activities?
- How is your role in this activity different than your role in other history class activities?

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

This exact picture of him I used over the others because I like the way it looks and it gives another example

Why did you use the effects that you did? Include the motion & transition.

focusing on the name then widening makes you notice the name more and creates more interest.

3. Image:

Describe picture in one sentence: Comic book cover with accusing calling folksingers communist

***URL:** backissuecomics.co.uk/store/images/wildstorm/DC597E-1-1.jpg

What part of your story are you telling with this image?

this image shows how if folksingers had been as outspoken in the earlier times, they would be accused of being communists.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

It's still pretty and it shows the part of folk singing having to do with the red scare.

Why did you use the effects that you did? Include the motion & transition.

I moved from the the bit that says "Commie songwriter" to mccarthy to make it more a conversation

4. Image:

Describe picture in one sentence: A movie poster called the Red Menace

***URL:** Tinyurl.com/redmenace

What part of your story are you telling with this image?

This shows the red scare more.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

I liked this one because it was so much dramatic and showed what a message people would finally was

Why did you use the effects that you did? Include the motion & transition.

I focused it on the blood splash or where it ever and zoomed out so you could see the words and the rest of the poster

5. Image:

Describe picture in one sentence:

Music and artwork for the song Barbara Allen

***URL:**

www.Tinyurl.com/barbaraallen

What part of your story are you telling with this image?

I'm showing an old folk song that people would sing.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

I like it looks old which shows people just how ancient these songs are. I also chose it because it's the song in the background

Why did you use the effects that you did? Include the motion & transition.

I didn't use much of anything because I didn't want to cut out anything

6. Image:

Describe picture in one sentence:

Mother goose book cover maybe

***URL:**

www.Tinyurl.com/l99vk8a

What part of your story are you telling with this image?

I'm showing that folk singers would perform lighthearted childrens' songs some of the time.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

This one is quite obviously criticism and it's a recognizable folk face.

Why did you use the effects that you did? Include the motion & transition.

I moved from the explanation up to the version the image. Someone's showing there to tell the story.

7. Image:

Describe picture in one sentence: A picture of the singing group the Almanac Singers.

***URL:** www.thealmanacsingers.com

What part of your story are you telling with this image?

I'm showing another folk group

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

This was a nice picture of all of them, it's one of Pete Seeger's bands.

Why did you use the effects that you did? Include the motion & transition.

I didn't move it around at all because the frame was already full enough.

8. Image:

Describe picture in one sentence: A picture of the singing group the Weavers

***URL:** www.mugwumps.com/weavers.jpg

What part of your story are you telling with this image?

This shows another of Pete Seeger's bands — just to give more examples.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

Gives more pictures of folk singers to show what the [illegible] were like.

Why did you use the effects that you did? Include the motion & transition.

I didn't move this one at all because there was enough going on and there wasn't much being told with the image

9. Image:

Describe picture in one sentence:

The Kingston Trio performing/recording

***URL:**

Tinyurl.com/kingstontrio

What part of your story are you telling with this image?

I'm starting to tell that the Kingston trio won the first grammy put aside for folk music

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

it also starts to show how folk was gaining popularity.

Why did you use the effects that you did? Include the motion & transition.

I went to the name first because that's how all the others started, then I moved so the part introducing the grammy bit was able to be seen.

10. Image:

Describe picture in one sentence:

Title of catagory of grammy surrounding the award.

***URL:**

tinyurl.com/king grammy

What part of your story are you telling with this image?

it continues telling how a catagory was made for folk.

Why did you use this specific image? How do you think it helps the viewer understand your main idea?

A picture of a grammy award conveys that a grammy was given out pretty well.

Why did you use the effects that you did? Include the motion & transition.

I moved downwards to make it sort of easier to read and showing the rest of the award.

Photostory Summary questions

1. **Explain why you put the images in the order you did (how does it help the viewer understand your story?).**

   I arranged it in chronological order a little bit, which helps because I was trying to tell the progression of the movement

2. **Explain why you chose the music it did (how does it help tell your story?).**

   I used Amazing Grace because it's one of the most covered traditional songs. And I used a bunch of different covers to show that songs were passed on and on, that and I like the song.

3. **What was the most challenging part of putting the movie together?**

   I think the most challenging bit was trying to get the words to show up on the pictures. The ability to change colors and placements is pretty limited.

4. **What did you like about this project?**

   I liked that you could choose your own topic and that it was an alone sort of thing. I also liked most everything about this time period so it worked out well.

5. **What did you dislike about this project?**

   Filling out this packet

APPENDIX C:

TEACHER INSTRUCTIONS AND RUBRIC

Postwar America Photo Story

You will be using *Photo Story 3* from Microsoft to portray your subject. We will be doing most of the work in class, but feel free to work on it at home. If you don't have Photo Story on your computer at home, it is a free download and can be found by going to www.microsoft.com. Search "Photo Story 3".

Here are the Details:

1. Do research about any topic from the 1950s or 1960s
2. Create a Photo Story using pictures and audio to tell "the story" of your topic.
3. Fill out your packet as you go or before you turn the project in. **PROJECT WILL NOT BE ACCEPTED W/OUT PACKET!!!**

	Excellent (10)	Good (7)	Average (4)	Unsatisfactory (1-0)
Citing	The description and URL are provided clearly for all 10 images	The description and URL are provided clearly for 7 images	The description and URL are provided clearly for 4 images	The description and URL are provided clearly for 1 or 0 images
Narrative	The portion of the story each picture represents is described for all 10 images	The portion of the story each picture represents is described for 7 images	The portion of the story each picture represents is described for 4 images	The portion of the story each picture represents is described for 1 or 0 images
Pictures	An appropriate description of the images impact on the story for all 10	An appropriate description of the images impact on the story for 7 images	An appropriate description of the images impact on the story for 4 images	An appropriate description of the images impact on the story for 1 or 0 images
Motion	The effect, motion, and transition are appropriate and described for all 10 images	The effect, motion, and transition are appropriate and described for 7 images	The effect, motion, and transition are appropriate and described for 4 images	The effect, motion, and transition are appropriate and described for 1 or 0 images
Overall	Slideshow is very creative and professional looking. The technical aspects are very consistent and well done.	Slideshow is creative, professional looking. The technical aspects are consistent and average. Some default settings left.	Slideshow is not creative or professional looking. The technical aspects are not well done. Most of them are not changed from the default setting	Slideshow is not creative or professional looking at all. The technical aspects are not well done or are not changed from the default setting.

Total: **/50**

Postwar America Photo Story

The 1950s was a decade full of change, fear, and the birth of modern American culture. The 1960s was full of revolt, change, and individual rights. There are so many interesting things about so many subjects that the subject of your project is going to *be your choice*.

You will be using *Photo Story 3* from Microsoft to portray your subject. We will be doing most of the work in class, but feel free to work on it at home. If you don't have Photo Story on your computer at home, it is a free download and can be found by going to www.microsoft.com.

Goal: Use photos, music, words, and special effects to show knowledge of content about your topic.

Some possible topics:

1950s/1960s clothing
Music of the 50s/60s
- -any specific artists
- -genres: Motown, Rock n' Roll
- -British Invasion
- -Jimi Hendrix, Janis Joplin, etc.

Art Movements
- -Pop Art
- -Abstract Expressionism

Literature
- -Beat Movement
- -Books (ie. Catcher in the Rye)

50s/60s Movies
Television shows
- -I Love Lucy
- -Honeymooners
- - Micky Mouse Club, etc.

Sports
- -any sport/ star in the time period

Technology
- -Space Race
- -Automobiles

Medicine
- -Polio vaccine
- -1st Heart Transplant

Assassinations
Anti- War Movements
Feminist Movement
Civil Rights Movements
- -events or leaders

Political Leaders
Intellectual leaders
Woodstock
Hippies
- -Leaders, events, or way of life

APPENDIX D:

INTERVIEW PROTOCOLS

Semi-Structured Interview Protocol: Teacher

1. What other curriculum methods do you incorporate when teaching history?

2. How do students typically respond to these other curriculum methods?

3. How does the students' response to desktop documentary making differ from their response to other curriculum methods?

4. How is your role as the teacher different when using desktop documentary making then other curriculum methods?

5. How do you feel desktop documentary making has affected your students' attitudes toward learning history content?

6. How do you feel desktop documentary making has affected your students' learning of history content?

7. How do you feel desktop documentary making has affected your students' ability to use historical thinking skills?

8. Why did you pair this curriculum with this particular unit?

9. What are your learning objectives for this unit?

10. What goals do you have for your students in regards to history learning in the context of this course?

*Researcher may also inquire as to the teacher's appraisal of subjects' past and present performance in history class.

*Researcher will follow the discussion as initiated by the subject.

Semi-Structured Interview Protocol: Teacher

Added Questions for Round Two of Data Collection

1. How were your instructions/directions different for your second and third times than your first implementation of visual historical narratives (desktop documentaries)?
2. How would you evaluate the level of student engagement with this project relative to other projects in history?
3. What type of knowledge/learning did you hope your students would gain (new knowledge, reinforced knowledge, or corrective knowledge) ?
4. Which of the above did you witness more of?
5. Please give me relevant information on the participating students: special needs, gifted, behavior, typical performance level in your class...

Semi-Structured Interview Protocol: Student

1. Describe what you learned about your history topic while making your desktop documentary.
2. Describe how you learned about your history topic while making your desktop documentary.
3. Why did you choose certain documents over others?
4. What did you want to accomplish with your desktop documentary (what was the intent of your message)?
5. Do you feel like you were successful in communicating your message to your audience through your desktop documentary?
6. What surprised you about the process of making the documentary?
7. In what ways was the making of your desktop documentary different than other assignment or projects you do in history class?
8. In what ways was the making of your desktop documentary the same as other assignments or projects you do in history class?
9. How did you express your thoughts and ideas in the documentary making project?
10. Did you enjoy the project? Why or why not?
11. How well do you typically do in history courses?
12. Do you like history?

The researcher will follow up the discussion initiated by the subject and the subject's journal writing.

Semi-Structured Interview Protocol: Student

Round Two: Additional Questions 13 &14

1. Describe what you learned about your history topic while making your desktop documentary.
2. Describe how you learned about your history topic while making your desktop documentary.
3. Why did you choose certain documents over others?
4. What did you want to accomplish with your desktop documentary (what was the intent of your message)?
5. Do you feel like you were successful in communicating your message to your audience through your desktop documentary?
6. What surprised you about the process of making the documentary?
7. In what ways was the making of your desktop documentary different than other assignment or projects you do in history class?
8. In what ways was the making of your desktop documentary the same as other assignments or projects you do in history class?
9. How did you express your thoughts and ideas in the documentary making project?
10. Did you enjoy the project? Why or why not?
11. How well do you typically do in history courses?
12. Do you like history?
13. Do you feel like you learned anything from this project?
14. Do you feel like the knowledge you gained was corrective knowledge or reinforcing knowledge you already had?

The researcher will follow up the discussion initiated by the subject and the subject's journal writing.

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